

Woman in Mohamed
Qol, Sudan. From
project 21-019.
Credit: T. Chekchak



June 2015 Newsletter



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

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- 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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Women from a migrant fisher camp in the North of Mozambique. From project 20-023. Credit: OSOL

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Morro, a typical village on Maio, Cape Verde. From project 21-021. Credit: Sophie Benbow/FFI

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



Wai Lwin Aye - school girl
Hsithe village, Myanmar. From
project 21-012 Credit: P. Bates

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 those featured in this newsletter, 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 funding. This is important as it helps us to ensure the Darwin Initiative retains a high profile and helps us to secure continued Government funding.

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


A word from Darwin

This is a very exciting time for the Darwin Initiative as we have just launched Round 22. You will find all the information you need to [apply here](#). Please read the guidance and finance notes carefully before beginning your application. We look forward to receiving your applications! We also hope to launch Darwin Plus in due course, please keep an eye on the website for more information.

This edition of the Darwin Newsletter focuses on the contribution Darwin Projects have made to gender issues and promoting gender equity, one year since the introduction of the International Development (Gender) Act in May 2014. Thank you to all those who have contributed, they make for a very interesting read. The range of different projects documented in this newsletter highlight many of the important links between gender and biodiversity conservation. Amongst other things these diverse projects highlight the disproportionate impact of environmental degradation on women, the different roles of men and women in biodiversity conservation, and the importance of inclusive natural resource governance systems. What all of these projects have in common, is that by openly addressing conservation issues through a gendered lens they are able to improve the equity and effectiveness of project activities whilst improving overall project impact.

Such issues further highlight the links between biodiversity conservation and poverty reduction, something we are considering in the on going Thematic Review. We hope these topics will inspire you with your application writing. To continue the discussion on gender, please visit the [Darwin blog](#).

Good luck with your applications!

A close-up photograph of a woman in Cape Verde. She is smiling broadly, showing her teeth. She has a large, dark, cylindrical bucket balanced on top of her head. She is wearing a dark headscarf with a white paisley pattern, gold earrings, and a dark necklace. She is wearing a black top. The background is slightly blurred, showing what appears to be an outdoor or semi-outdoor setting with some wooden structures.

Gender and the Darwin Initiative

'Daily chores' in Cape Verde. From project 21-021. Credit: J. Wilson/ FFI

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

Gender equity and coffee conservation in Ethiopia

In Ethiopia making coffee, the national drink, is primarily women's work, one imbued with cultural significance. Making sure that women benefit equally from the activities of the Darwin Initiative funded Wild Coffee Conservation (WCC) project in Ethiopia has been an important concern from the start. The project is testing a new approach by using Devolved or Participatory Forest Management (PFM) in the conservation of wild *Coffea arabica* in the Afromontane forests of south west Ethiopia.

Women bear the burden of deforestation due to its impacts on firewood and water collection, both female responsibilities. This project aims to preserve forest biodiversity, preventing deforestation and improving degraded forest by adding value to the forest through active forest management, silviculture and the development of Non-Timber Forest Products (NTFPs) - particularly wild coffee, honey and spices and their supply chains. At the same time, Forest Management Associations manage and monitor forest health and protect the forest from outsiders at the community level. Importantly, women can be members of these in their own right. Forest Management Agreements give legal

rights of access and a sense of ownership to communities, whilst also protecting against illegal activities.

Gender equity was part of the initial project design initially and all data collection has been gender disaggregated. From a gender perspective, the challenge for the project has been to ensure that women benefit equitably from the development of NTFP value chains and are included as active participants in the Forest Management Associations.

The use of a participatory methodology as a core tenet of the project has facilitated the inclusion of women, though lessons were learnt early on about the need to have separate meetings for women at different times of day from men so that women's domestic responsibilities, particularly child and home care, could be addressed. Subsequently, women have been in all teams engaged in forest demarcation, assessment, forest management plan preparation, byelaw formulation exercises and on the implementation process. At the got (village) level a minimum of one of the five places on the PFM committee is reserved exclusively for women, while one is also reserved for forest-dwelling minority groups.

Women Carrying firewood in WWC project area, South West Ethiopia. Credit: I. Getachew



Despite these efforts, so far only 9% of total PFM group members are women, including some who are from female-headed households. To address this situation the project has taken advice from senior women in an adjoining project area who have been involved in PFM from the earliest days. Women like Birhane Geremew (pictured), a member of the Ganiti Forest Management Association (FMA) General Assembly and part of the PFM work in the south west since 2008. Says Birhane “awareness and training have shown them, [women] they can participate and benefit like men”. Women such as Birhane have not only provided advice but also acted as role models in their communities, participating in conferences and workshops with government and encouraging other women to get involved. There is evidence to suggest that once women realise the approach is going to generate benefits, and be long term, there is a greater willingness to invest time in becoming an FMA member.

At present women make up 11% of the membership of the forest enterprises developed by the project. Women’s involvement in forest enterprises for coffee, honey and spices has

enabled them to benefit economically from the development of all three value chains. Women have significant roles in the coffee value chain, particularly in the harvesting and drying processes which create job opportunities for women.

An interesting outcome of the Wild Coffee Conservation project’s work on gender issues has been the discussions between this project and its Ethiopian implementing partner, Ethio-Wetlands and Natural Resources Association (EWNRA), on how to facilitate women’s engagement, with quotas, meeting arrangements and awareness raising all subject to debate. The development of a Gender Policy by the partner organisation has led to the introduction of gender training for staff, the adoption of organisation-wide targets in this area, and the implementation of gender awareness training for community-based organisation in the work of EWNRA and the WCC project.

For more information on project 19-025 [click here](#) or contact project Leader Adrian Wood, a.p.wood@hud.ac.uk

Women assessing threats to marine resources they depend on for their living. This exercise will give some keys to secure their livelihood and protect marine biodiversity in Mozambique. Credit: OSOL/ ZSL



Our Sea Our Life, Mozambique

This Darwin funded project, Our Sea Our Life (OSOL), develops mechanisms to sustain the co-management of marine and coastal areas in northern Mozambique. It diversifies the livelihood base of fisher men and women, specifically addressing the empowerment of women to increase gender equity. The OSOL project works to share equitably the decision-making positions within fisher councils, resource user groups (RUGs), and village savings and loan association (VSLAs). The project's aim is that, by 2016, at least 30% of fisher council members and elected officials in the six project villages are women.

Octopus is the primary source of cash income for many of the women in the project area. However octopus stocks are dramatically decreasing as a result of the use of unsustainable fishing practices by community members and migrant fishers. With limited financial resources, access to education and health services is limited. Women are also normally excluded from fisheries management and decision making, further increasing their vulnerability.

The OSOL project addresses gender equity issues to improve women's livelihoods as well as communities' buy-in in relation to the co-management of the marine resources the social groups depend on. A gender officer has been hired to lead on this.

Men and women are invited to participate in the process that will lead to the management of the marine resources through discreet age and gender-specific groups. This strategy is accepted by the women, the village leaders and social groups. Therefore, the OSOL project approach enables all community members to provide inputs on an equal basis. It also demonstrates the importance of constructing an appropriate theory of change that will lead to a fair and equitable co-management plan of marine resources in each community, livelihood security and poverty alleviation.

More specifically, the OSOL project works with intertidal harvester groups, of which representatives are members of fisher councils. All communities have intertidal harvester groups

(IHGs) and most are made up of women. The OSOL project works with IHGs to improve women's work and health conditions. Business skills assessments and market surveys including for octopus, oysters, and vegetables are undertaken. This information gives essential data on how to increase and diversify incomes and direct training on business skills. Intertidal harvester groups are also to be incentivised to use the appropriate fishing techniques to further improve livelihoods. VSLAs are designed to support investments in small-scale businesses with many actions specifically targeted at women: from oyster farming to mosquito net fisheries and the use of proper latrines, to guarantee the quality of intertidal products.

To date the fisher councils have, on average, 20% female membership. This reflects the strong social pattern anchored within communities that mainly appoints men in decision-making positions. These figures are still evolving as

the project works to promote gender equity in these communities, and develop an equitable governance framework for the fisher councils.

For more information on project 20-023 [click here](#) or contact Project Leader Nicholas Hill, nicholas.hill@zsl.org



This lady is reluctant at first to manage fisheries. She'd rather deplete local fish stock and keep on migrating along the coast than take the risk. Credit: OSOL

Increase yields in a farm installed with a moat. Credit: J. Bett/ WWF-Kenya

Community-based conservation and livelihood development in Kenya's Boni-Dodori ecosystem

In pursuit of gender diversity, this Darwin-funded project was designed to streamline social aspects of development such as gender and governance issues. This was achieved through raising awareness that success and sustainability in conservation cannot be achieved without addressing these important issues. All project activities were designed to include both women and men as far as possible, while respecting local cultural norms. For example women within the Aweer community typically do not venture far into the forests nor travel alone to events or training, for both cultural and safety reasons. Additionally, leadership positions are typically filled following transparent nomination and voting processes, by men. Similarly, the vast majority of government agency NGO and CSO (Civil Society Organisation) staff in the local area are male.

A Monitoring, Evaluation and Learning (MEL) framework was developed for the project shortly after commencement, provided indicator data disaggregated by gender. For instance one of the goal/impact level indicators aims to measure the number of vulnerable households in 4

villages reporting increases in agricultural yields and number of diversified livelihood strategies/ initiatives initiated which are being sustained by women and men living in poverty.

Benefits to both men and women are tracked within the activities to diversify livelihoods i.e. beekeeping and village community banks (VICOBA). It should be noted that membership of the pilot VICOBA initiative is currently 100% women and the project aims to ensure that the staff team now includes at least one woman. One of the lessons learnt so far is that generally men are slower in adopting new initiatives or technologies. In Kenya, savings initiatives resembling VICOBA are typically seen as women's affairs and most men shy away from them, despite the benefits they bring to the household. In other areas, men often joined the VICOBA much later when benefits have been clearly seen and their roles and functions clearly defined. In these cases women are quicker to show willingness to adapt to new practices and activities.

The project is directly contributing towards the alleviation of poverty by addressing human wildlife conflict and promoting alternative livelihoods strategies. This has resulted in a significant reduction in crop loss and a five-fold increase in agricultural yields for both men and women farmers. The promotion of new activities such as modern beekeeping for honey, is used as an additional income generation tool. The women participating in the VICOBAs have taken loans to invest in expanding or establishing their own small businesses which generate profit and thus contribute additional income at the household level.

This project is also indirectly addressing poverty by empowering the Aweer to better represent their rights and culture and lobby for services, leading efforts to better protect the forests and the natural resources upon which they depend. This has led to discussions around the heritage and culture of the Aweer, focusing particularly

on sacred groves which are now under consideration as National Monuments which provide legal protection from encroachment. Mitigating human-wildlife conflicts through the establishment of beehives and game moats around the farms have significantly reduced crop raids and crop yields have increased. The inclusion of logframe indicators disaggregated by gender, enables the project to demonstrate how its activities have impacted differently on men and women.

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

Participant of women in agricultural activities.
Credit: J. Bett/ WWF-Kenya



Building capacity of women micro-entrepreneurs in Cabuya Costa Rica. Credit: SoliDar R.L.

Building capacity for participatory, ecosystem-based marine conservation in Central America

Women are critical to the socio-cultural fabric and economic wellbeing of coastal communities. The work of Fauna and Flora International (FFI) and our local partners in coastal communities across Central America (Nicaragua, Costa Rica and Honduras) has demonstrated that artisanal fishing and fish processing is predominantly viewed as a male livelihood. Nevertheless women are paramount to the overall wellbeing and food security of the fishing household and therefore an important social group to engage in the participatory governance and management of marine resources. Additionally, where women do clearly have a role in fishing or gleaning, fish processing or fish selling, they are often among the most overlooked and/or marginalized within this sector.

“We women work in the kitchen, and others work on the beach...the work that we have to do, we do. If we need to sell fish, we sell fish; if we need to cook fish to sell it, we cook it too. I think that in the future Pie de Gigante will be very different because we have tourism in the community, because the women work more and we have

access to more [types of] work. The future depends on us because we have our children, our grandchildren, our brothers and our families further away, all of whom work in the ocean, all of whom fish.” Aida Cortés, Member of the Pie de Gigante Fishing Association, Nicaragua.

To address the important and unique role of women, efforts have been made by this project to help build women’s understanding and abilities in marine resource management and governance. Activities to strengthen existing community-level women’s organizations, including small enterprise development, and build self-esteem and leadership skills are being developed and implemented.

In Cabuya, Costa Rica, much care has been taken to ensure that both women and men are equally well-organized and prepared to represent the community fishing and marine resource use interests of Cabuya, both within the community and externally when interacting with Government and other stakeholders. Along with a male and youth representative, a female

representative from the women's association in Cabuya engages in the network of responsible fishing areas, an initiative to bring awareness to and improve learning among communities that manage their marine resources.

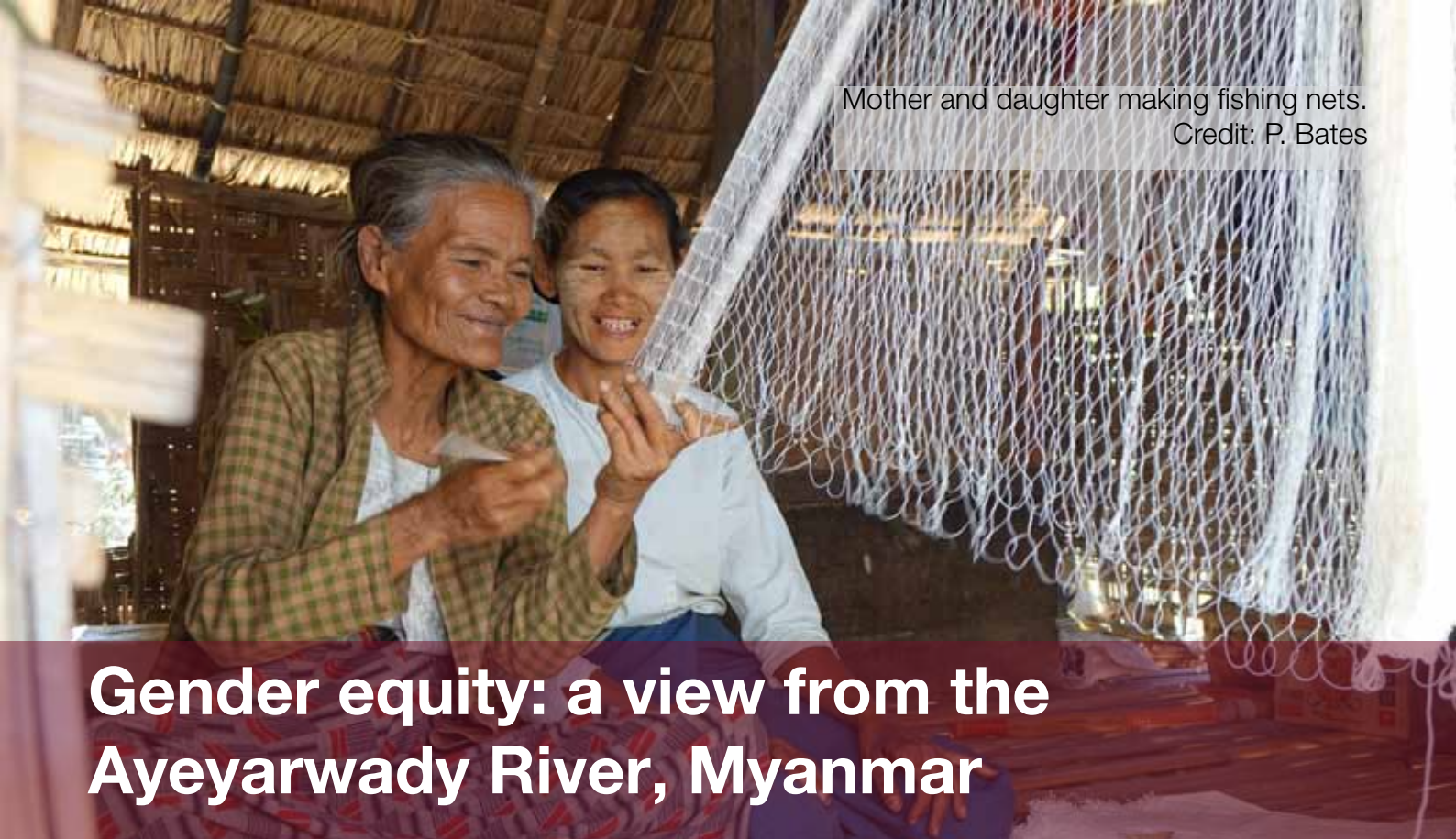
Women micro-entrepreneurs in the community of Pie de Gigante play an important role in supporting household income and ensuring food security, particularly when fishing is less productive. Through the project, many of these women have undergone training to build new skills in marketing and business planning. This is already impacting on the way some are pricing their products. Coastal fishing communities within Cuero y Salado Wildlife Refuge have strong community tourism committees that help bring supplementary income sources to fishing households and help preserve cultural heritage and customs. These committees rely heavily on women, including as organizational leaders, as tourism service providers and as marketers.

The project has helped not only to support these committees, but also to build stronger connections between community tourism and fishing. In one community, for example, the fish collection centre and its freezers are shared between fishers and a women's collective, which sells cold beverages and snacks. This project will continue to ensure that the unique and important role of women in marine conservation in Central America is at the heart of project activities.

For more information on project 19-017 [click here](#) or contact Project Leader Robert Bensted-Smith, Robert.bensted-smith@fauna-flora.org



Training on participatory governance and socio-environmental conflict negotiation and transformation, El Porvenir, Honduras. Credit: LARECOTURH



Mother and daughter making fishing nets.
Credit: P. Bates

Gender equity: a view from the Ayeyarwady River, Myanmar

Recently, we (the Harrison Institute) attended an international conference in Nay Pyi Taw on Asian ecotourism. Amongst the many issues discussed was the theme 'Women's empowerment at the frontline of adaptation'. Although the title is rather opaque, the message behind it is simple. How can women adapt their lifestyles and livelihoods to cope better with environmental and economic changes?

This question is particularly interesting in the context of ecotourism and nature tourism in Myanmar and especially at our project sites on the Upper Ayeyarwady River. Here, our UK-Myanmar team is developing village-based destinations for cruise boats in order to provide alternative income sources to those traditionally linked to fishing and farming, and to support the conservation of threatened and endangered wildlife.

In our work, we observe the skill sets of both men and women. It is apparent that in the fishing villages of Hsithe and Myitkangyi the women

generally appear to be better educated, have better developed people skills, more diverse craft skills and more business experience, including simple book-keeping. Therefore considering gender is key to the success of this project.

The reason for this is cultural. In Myanmar, it is the women who have traditionally conducted business. So in our villages, it is the women who sell the fish. It is the women who are most often the tailors, the cheroot makers, the fishing net makers, and the weavers. It is the women who distill the toddy palm liquor, so loved by their men-folk! Even some 40% of the 'fishermen' are actually women, with many husband and wife teams.

Women are also the school teachers and are actively inspiring a new generation of girls. So, for example, Ms Wai Lwin Aye, aged 10, lives in Hsithe village and is the daughter of a fisherman. Like her female cousin, she wants to go to university and train to become a school teacher.

In Myanmar, we feel that the future is bright for many women. There are role models and there are roles to be played. Perhaps, a more serious question mark hangs over the role of men. At Hsithe, we watched one of the first 'cheap' Chinese tractors ploughing a paddy field in preparation for the monsoon rains. We could not help wondering what the future holds for the traditional village male, who is strong in arm but finds little interest in education and has few value-added skills. What is his role in the new Myanmar?

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

Co-operative fishing team.
Credit: P. Bates





Family life on Maio.
Credit: J. Wilson/ FFI

Developing opportunities for women in Cape Verde

The Cape Verde archipelago is recognized as a global hotspot for marine biodiversity, but is also one of the most threatened biodiversity hotspots in the world. The island of Maio is currently being used as the pilot site for the government's first protected area network, the management plan for which has been developed collaboratively with a range of local stakeholders. Strengthening the management of these important protected areas will provide critical services to both marine biodiversity and the local people who live from the sea.

Nearly 80% of the 6,952 people on Maio Island depend directly on marine resources. Fish is a major source of protein for many households, and the high numbers of female-headed households are especially vulnerable to the depletion of marine resources. The unemployment level on the island is over 50% putting additional pressure on marine and coastal habitats through increasing prevalence of illegal activities, and female unemployment is higher than it is amongst men. With the majority of

fishers earning less than US\$6 per day, this Darwin Initiative funded project has focussed on developing livelihood diversification activities, and specifically targets the most vulnerable female-headed households.

A series of community outreach workshops were held over the first year of the project, timed and promoted to ensure equal participation of local men and women. As a result, a homestay model has been developed to provide much needed tourism infrastructure on an island which has largely been neglected in the tourism booms of the last decade. The newly-developed homestay scheme is empowering local women from Maio to acquire new skills and increase their ability to support their families by generating additional income from new revenue sources. This community-based venture is directly linked to the promotion of the Maio protected area network as a tourist destination to increase visitor numbers to the island and provide them with activities and places to stay.

To date the model has been introduced to over 100 households, and initial trials in year 1 of the project (33 houses in 12 villages) have been largely positive, enhancing the wellbeing of local women to address gender equality issues in local communities. Women have been receiving direct financial income from these homestay opportunities and there is increasing and continued interest in the scheme. The daily fee charged for a homestay is the equivalent of the transport costs of sending one child to school for one month, so the scheme represents a very valid opportunity for women to support and help develop their children's future.

Gender-focused income generation activities will continue over the next two years of the project, and will work to establish more formalised women's groups amongst the homestays to provide them with a strong voice in local stakeholder forums. Understanding the social and gender related components of a project site

is critical for the conservation and sustainable use of natural resources. Moving forwards we will continue to be as practical as possible, listening to local communities, building trust and involving them as equal partners in project implementation where possible, with a special focus on women.

For more information on project 21-021 [click here](#) or contact Project Leader Sophie Benbow sophie.benbow@fauna-flora.org



Women cleaning the catch landed by their husbands.
Credit: S. Benbow/ FFI

Sok San People.
Credit: J. Holden/
FFI

Engaging women and men in the establishment of Cambodia's First Marine Protected Area

Infectious laughter rippled through the group and was carried off on the breeze across the beach as we sat chatting with local stakeholders from the communities of the Koh Rong archipelago in Cambodia.

As a non-Khmer speaking visitor, I smiled somewhat puzzled and turned to look questioningly at Phalla, one of the Fauna & Flora International (FFI) local team working on these islands.

Before she could explain, one of the Fisheries Administration staff eagerly shared the cause of their laughter. We were with an all-female group of villagers discussing zonation plans for a prospective marine protected area (MPA).

What had surprised the government officials – and delighted the women themselves – was their shared realisation that the women recalled previous MPA consultation discussions more accurately than many of the male fishers with whom we had been talking earlier.

My own smile broadened as I heard this – what a great example of how a gender-sensitive approach can challenge assumptions about

the respective knowledge, skills and interests of women and men!

As is common in many rural communities in developing countries, female members of the villages of Koh Rong rarely attend formal meetings, such as those of the Community Fisheries Institutions (CFIs). This would be the usual fora for consultations on management of marine resources, such as MPA establishment.

This can be for a variety of reasons, including a lack of female representation in the structure of such institutions, or meetings being held at times and in places that conflict with women's productive and caring roles. Even if women do attend such meetings, social norms may make them uncomfortable in voicing their views in front of men.

This is particularly true in fora concerned with marine resource management as the roles of women in the fisheries value chain are often 'invisible', and their concerns as members of fishing households and communities are often over-looked as fishing is seen as 'men's business' since the majority of fishers are male.

Women crab fishing.
Credit: G. Ghataure/
FFI



To address this issue, FFI has been supporting the Cambodian Fisheries Administration to establish the first MPA in Cambodia, and has sought to ensure that considerations of gender are integrated into project design, implementation, monitoring and evaluation. So, in the anecdote noted above, women were consulted separately from men on both the vision for the MPA and the location, rules and regulations of different management zones. To monitor the participation of women and men in the MPA development, attendance lists for all project activities were designed to collect gender-disaggregated data.

As the project progresses and relevant institutions and processes are strengthened, the minutes and reports from these activities are used to analyse the degree to which women's, as well as men's, knowledge, concerns and aspirations are voiced and addressed in decision-making around marine resource management. For example, half of the participants in meetings raising awareness of CFI committee elections were female and subsequently 46% of the 614 people who actually voted in the elections were women.

Through the use of a variety of qualitative and quantitative socio-economic assessment methods, the project team have been able to analyse gender-disaggregated data on the livelihoods strategies, environmental awareness, cultural values and governance roles of community stakeholders. This revealed a number of previously unreported roles of women - for example in gleaning for molluscs to meet household food security needs during lean times, and in caring for wild-caught crabs while awaiting opportunities to transport them to get the best price in mainland markets. Such knowledge is being used to inform zoning regulations and the design of livelihoods enhancement support, such as crab banks, benefit sharing mechanisms and facilitation of equitable access to markets. Considering gendered aspects in this way will help to improve the project's overall outcome and ensure a positive impact on the local community.

For more information on project 19-005 [click here](#) or contact Project Leader, Rachel Austin Rachel.Austin@fauna-flora.org

Marine turtle tag-and-release program.
Credit: Reef Doctor.



Conservation and sustainable use of marine turtles, Southwest Madagascar

For generations, the Vezo communities of Southwest Madagascar have relied heavily on the bounty of the sea for their livelihoods, benefiting from the rich coastal resources provided by one of the largest barrier reef systems in the world, the Toliara Barrier Reef. Today, the ever-growing fishing pressure has degraded much of the reef, and the once productive fisheries are steadily declining.

In this context, this project funded by the Darwin Initiative was designed to provide mariculture skills, materials, and technical support from production to export, as a means of providing an alternative to fishing, and bring poverty alleviation benefits to Vezo fishing-families of the Bay of Ranobe. Given the high demand to participate in the project, a selection process is strategically implemented to achieve biodiversity conservation and gender equality objectives, following a multi-tiered and multi-faceted approach.

In tier-1, the 6 largest fishing villages of the Bay were selected, and within the 6 villages, priority given to the households (tier-2) of fishermen

practicing harmful / destructive fishing methods. At the tier-2 level, biodiversity conservation objectives are incorporated into project activities by effectively reducing hunting pressure on endangered and critically endangered marine turtle species, and by reducing general fishing pressure within this fragile coral reef ecosystem. At the household-level (tier-3), gender equality is ensured by asking selected households to nominate one man / one woman, usually the heads of the household, who then become the direct beneficiaries of the Darwin project.

In traditional Vezo culture, men spend their days at sea fishing, and women play an important shore-based role in collecting the day's catch and quickly getting it to the market to ensure the best prices are paid for their products. The traditional gender roles in Vezo culture are largely based upon water depth or, in the other words, the need for a boat. Women often work in the intertidal zone gleaning, or collecting edible organisms, but seldom venture into waters more than waist-deep, with the men conducting all

boat-based activities. In the present Darwin project, for households participating in sea cucumber (*Holothuria scabra*) mariculture, the roles are more-or-less interchangeable, as these activities occur in shallow waters. In the case of seaweed (*Eucheuma cottonii*) mariculture, seaweed lines are installed in deeper waters, requiring access by boat. Here, the women prepare all the lines and loops required to attach the seaweed cuttings, and the men install and maintain the lines at-sea. Then, once harvested and brought back to shore, the women clean, dry, and prepare the seaweed for collection.

In addition, given that seaweed is a good source of iodine and other nutrients, we have taken the project one step further. In working with the women of the community, we are currently testing and trialling different recipes and methods for incorporating seaweed into the local cuisine. If successful, the participating households will be able to eat, sell locally for others to eat, or export

their products, thereby providing greater flexibility to those struggling to make ends meet.

For more information on project 21-018 [click here](#) on contact Project Leader Shane Abeare smabeare@gmail.com

One of the selected households from the village of Ifaty harvesting an initial crop of seaweed. Credit: Reef Doctor



Biodiversity conservation, poverty alleviation and gender equity in Sudan's Marine Protected Areas

Still in the early stages of implementation, this Darwin-funded project is showing promise of becoming an excellent example of the links between biodiversity conservation, poverty alleviation and gender. In the process, it will strengthen Sudan's Marine Protected Area (MPA) management capacity, increase knowledge and awareness of marine biodiversity and Sudan's flagship species, and ensure dividends from safeguarding marine biodiversity accrue to the local communities resident within the MPAs.

The villages of Mohamed Qol and Dungunab lie some 120km north of Port Sudan, the capital city of Sudan's Red Sea State. Cousteau, through the support of Darwin Initiative, is working with local institutions and people to ensure dividends from safeguarding marine biodiversity contribute to poverty alleviation and address gender disparities among local coastal communities.

Red Sea State is one of Sudan's most marginalized and under-serviced regions. Poverty and infant mortality rates are high and gender disparities evident in the exclusion of women from economic activities and the harmful

traditional practices such as Female Genital Cutting that have rendered women extremely vulnerable.

The Red Sea State of Sudan also boasts some 750km of the most pristine and ecologically diverse marine habitats in the Red Sea and Gulf of Aden region. The coral diversity is among the highest in the world, with more than 313 species identified. One of the most outstanding features of Sudanese waters are the extremely healthy populations of globally threatened shark and ray species. Of particular importance, scalloped hammerhead sharks form large schools on all offshore reefs in winter, and manta rays aggregate in high numbers inside the Dungunab bay.

Recognizing this marine heritage, the Government of Sudan designated two marine protected areas in the Red Sea. Dungunab Bay and Mukawwar Island National Park (DMNP) in 2004, and Sanganeb Atoll Marine National Park (SMNP) in 1990. Yet the potential of these MPAs to benefit and empower the local communities, create alternative livelihoods, and improve

Mantas feeding.
Credit: M. Priest



services and social, educational and cultural benefits has not yet been realised.

The community livelihoods assessment team from Cousteau's local partner SUDIA, have been trying to identify effective opportunities and approaches for livelihood diversification and improvement of communities resident in the MPA. Within this context, recognizing the importance of addressing the needs of the local community and their well-being and working towards a state of inter-reliance between these communities and the well-being of the marine and natural environment is paramount to the sustainable conservation of the park's biodiversity.

SUDIA is training the local community to manage a community-based microfinance fund that provides access to small loans for Income Generating Activities (IGAs). Specific IGA products have been identified through the livelihoods assessment. Gender considerations have also been incorporated into the design of the IGA products to be supported through microfinance. IGA products that were identified by the women in the community include:

ecotourism development, fish-processing, poultry production, and vegetable gardening using drip-irrigation techniques.

A number of experienced and enthusiastic divers come to Sudan to enjoy the sharks, rays, corals and associated fauna. The potential for ecotourism is high, and the majority of the international tourism in the Red Sea State revolves around the dive industry and the live-aboard dive boats. A major down-side of the current dive tourism sector is that the industry generally has very little interaction with local communities and contributes little to the local economy, mainly because it is boat-based and internationally-organised. Currently, shark and ray tourism brings in \$314 million annually worldwide, and the sector is expected to continue growing. At its core, this project aims to address these important issues.

For more information on project 21-019 [click here](#) or contact Project Leader Tarik Chekchak t.chekchak@cousteau.org

Women from the singing group supported by the project bringing social and financial benefits to the community. Credit: L. Birchenough-FFI

Supporting women and men to improve their livelihoods in Kyrgyzstan's walnut-fruit forests

The walnut-fruit forests of Kyrgyzstan are of global biodiversity and genetic value, containing the wild relatives of fruit and nut species, and also playing a vital role in local livelihoods providing goods and services to thousands of people across the region. Current use of the forest is unsustainable, resulting in serious habitat degradation, and Fauna & Flora International (FFI) and Kyrgyz NGO Bioresurs, are working to address this on a number of fronts including encouraging sustainable and diversified livelihoods. In these remote areas there are few employment or income generation opportunities available, often meaning no alternative to this heavy reliance on forest products exist, particularly for the poorer members of the communities.

Project activities have been guided by information gathered through a series of small group discussions, community meetings and individual interviews, during which the project team explored current livelihood strategies with local women and men. Discussions were held

both with men, women, and in mixed groups. Participatory tools were used to facilitate discussion with and between community members, including stakeholder analysis, wealth ranking, livelihoods ranking, and resource access and control. Data was collected separately on how women and men use resources and their perceptions regarding the control of resources. In subsequent meetings local women and men were helped to appreciate their strengths, consider livelihood opportunities and obstacles, identify training requirements and develop plans for small enterprises.

Throughout the project, data collected has been gender disaggregated, including participation at workshops and training events. Engagement with women has been high, facilitated to a large extent by the recruitment of female local coordinators from the project communities in order to encourage women to participate in project activities and to seek additional advice if necessary.

With project support, 40 small community-based

organisations were formed and have developed and implemented their own initiatives (18 with Darwin Initiative funds). Nineteen of the groups were led by women, with a total of 60 active women members. Whilst 30% of the groups were mixed, the others were either all women or all men. Livelihood activities undertaken tended to be divided on traditional gender roles, with women undertaking sewing and baking for example whilst men engaged in beekeeping and fish farming.

Towards the end of the Darwin funding period a participatory impact assessment was conducted with small group discussions and individual interviews, again using a range of tools, to explore women and men's perceptions of change within their communities since the start of the project and how these have impacted upon people's lives. Women and men gave similar responses, including increased income as well as a sense of achievement, greater confidence

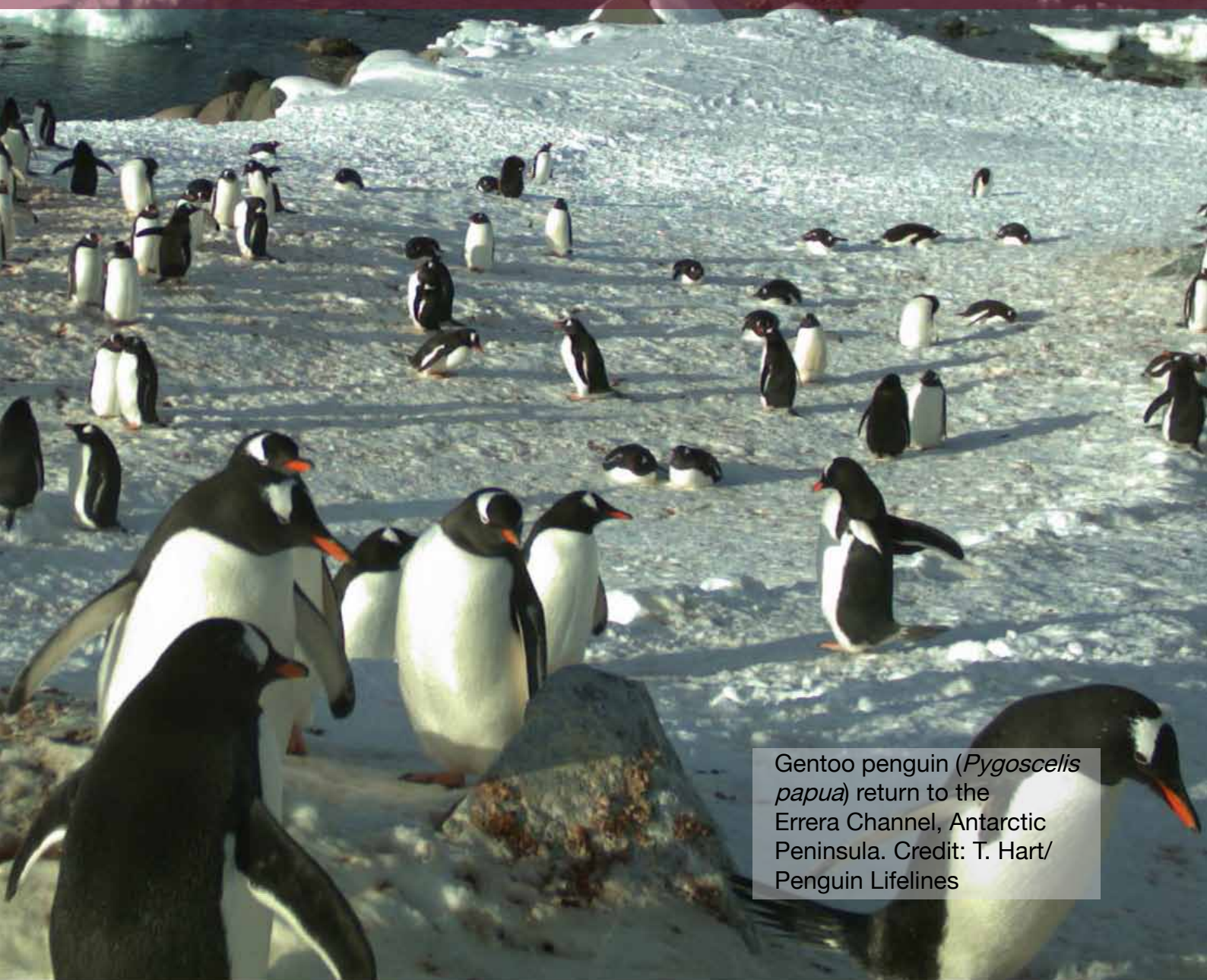
in their own abilities and a feeling of respect from their neighbours. However, such changes are perhaps most significant for women, and in particular younger women. For example, a young woman stated that the most significant change for her was the freedom she now has to spend some time away from home. Initially this was to participate in training events organised by the project but through her participation in a sewing initiative she now has the opportunity to see and engage with other people outside of the home, whilst earning an income for her family. The project has enabled her to turn a hobby into a business, people are now showing an interest in her work, and this makes her feel empowered and successful.

[For more information on project EIDPO043 click here](#) or contact Project Leader Liesje Birchenough liesje.birchenough@fauna-flora.org



Woman engaging in participatory impact assessment, evaluating change as a result of the project activities. Credit: L. Birchenough/FFI

News from the UK Overseas Territories



Gentoo penguin (*Pygoscelis papua*) return to the Errera Channel, Antarctic Peninsula. Credit: T. Hart/ Penguin Lifelines

King penguins (*Aptenodytes patagonicus*) moulting on freshwater ice, St Andrew's Bay, South Georgia. Credit: T. Hart/Penguin Lifelines



Penguin Monitoring in the UKOTs

The UK Overseas Territories (UKOSs) represent some of the most remote and yet ecologically diverse and important places on earth. They are understudied and under monitored not by design, but due to logistical difficulties and expense. Imagine the result if you could put a CCTV system onto your colony or breeding site of interest and watch it from your office. This Darwin Initiative funded project aims to produce such a system by creating a network of cameras (some satellite linked and some standalone) and seeks to automate large-scale data extraction and conversion into policy-ready metrics for the most remote wildlife populations on earth.

With support from the tourist industry, we have now completed a network of over 60 cameras at forty sites around the Scotia Sea, including the Falklands, South Georgia, the South Sandwich Islands and the Antarctic Peninsula. These cameras now record 40 images per day in normal mode and up to a photo every 30 seconds if we want to monitor foraging trips. These cameras allow us to record the

arrival, breeding times and breeding success of King, Macaroni, Gentoo, Chinstrap and Adelie penguins and we are trialling the system on flying seabirds and seals.

With great data comes great data challenges. We're working to automate the data extraction using computer learning techniques, and engaging the general public to help. In September 2014, we launched Penguin Watch (www.penguinwatch.org), a citizen science portal built by the Zooniverse (www.zooniverse.org) team. Since then, we've had well over 2 million images classified by an unknown number of users. We are now collecting data from between 5 and 20 individual classifications (count of an image) and clustering this to remove individual error. Preliminary data suggests that this approach, with validation, is at least as accurate, on average, as the experts! From these data, we can calculate the first arrival, laying date and success on the nest level, or whole colony. We can also measure the feeding rate of chicks and foraging trip duration of adults.

One of the main aims of this project has been to develop and prove these methods so that they can be rapidly applied to other Overseas Territories and seabird monitoring in the UK. If you think this is relevant to your site, please be in touch at the address below; we'll happily help!

For more information on project DPLUS002 [click here](#) or contact Project Leader Tom Hart tom.hart@zoo.ox.ac.uk

To contribute to the next newsletter
please contact us at:

darwin-newsletter@ltsi.co.uk

Two cameras overlooking a small colony of Gentoo penguins (*Pygoscelis papua*) at Petermann Island on the Antarctic Peninsula. The lower camera is set to the conventional 20 images per day. The upper camera is taking one photo every minute to establish foraging trip durations in a non-invasive proxy for tracking. Credit: Tom Hart/Penguin Lifelines

