



Credit: Paul Colley

ARCADIA MARINE INITIATIVE

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Coral and a school of fish, Myanmar. Credit: Michelangelo Pignani/FFI

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Sea slug, Myanmar. Credit: Paul Colley

EXECUTIVE SUMMARY

Marine ecosystems across the globe are among the most important natural systems on earth, contributing to local livelihoods for millions of people, sustaining local and national economies, supporting significant levels of biodiversity (a lot as yet undescribed), and playing a critical role in regulating the earth's atmosphere and climate. They are also some of the most threatened ecosystems on the planet, with decades of over-exploitation and neglect seriously degrading and depleting many marine areas, putting both associated biodiversity and human dependencies at risk.

In response to these threats, Fauna & Flora International (FFI) developed an ambitious marine conservation programme, underpinned by support from Lisbet Rausing and Peter Baldwin in 2010 and subsequently from Arcadia – a charitable fund of Peter Baldwin and Lisbet Rausing in 2012-2016. With this funding, we supported 34 initiatives, through which we engaged with a network of over 88 partners in 18 countries. Key outcomes included:

- strengthened management at 38 marine sites in 18 countries;
- the establishment of new Marine Protected Areas catalysed in 10 countries;
- changes in government approaches to marine management in 10 countries;
- corporate behaviour impacting on the marine environment influenced in the fisheries, plastics and oil and gas sectors, and
- enhanced capacity of 35 community-based organisations.

In general we would expect biodiversity impacts from these outcomes to take a number of years to be apparent; however, we can already demonstrate positive biological responses following a reduction of illegal fishing and poaching threats at 10 sites, with local stakeholders reporting perceived improvements in marine resources and habitats at a further four sites.

Renewed funding from Arcadia for 2016-2018 is enabling us to continue and extend our successful engagement at site- and policy- level across our whole marine programme. Our plans for this three year period include:

- consolidating achievements at our existing sites;
- where appropriate, building on these to scale-up impact through replication at neighbouring sites or other important marine areas within the same country;
- developing initiatives in a limited number of new geographies (we have already scoped out strategic opportunities in Georgia and Cuba);
- increasing the attention we give to threatened species within our marine portfolio, focusing on species where there is a need for direct targeted measures to ensure their conservation;
- continuing to work towards targeted policy reform in key countries of operation, particularly on some of the most damaging fishing methods such as bottom trawling;
- continuing to engage with the corporate sector to reduce their impact on the marine environment, building especially on the leadership we have established on the issue of microplastic pollution;
- building the capacity of our partners, including the development of marine conservation champions.

An additional specific focus for this phase of Arcadia funding is to strengthen the evidence base around outcomes and impacts for both biodiversity and local communities within the projects in our marine portfolio. We see the ability to demonstrate these impacts as a central part of ensuring the ongoing commitment from communities and governments towards improving marine management, and to the wider up-take and replication of marine management models.

In 2016, the new Arcadia marine grant has continued to underpin FFI's global marine programme, which consists of 35 projects (of which 21 are currently active), and through its support to programmatic marine expertise and the catalytic impact this continues to have for marine conservation across FFI.

Some highlights from the programme in 2016 include:

- o official designation of new marine protected areas (MPAs) in Cambodia and Scotland, totalling 185,500 hectares, with three Locally Managed Marine Areas (LMMAs) in Myanmar close to designation;
- o new permanent or temporary no-fishing zones in two countries (Tanzania and Turkey), totalling 1,136 hectares;
- o a complete ban on purse seining in the inner zone of one MPA in Turkey, removing a significant threat to fish stocks in the protected area;
- o decision by the UK Government to introduce legislation banning the use of plastic microbeads in personal care products, with the potential that this legislation will be extended to include all down-the-drain products.

Over the last year we have benefited significantly from Arcadia's decision to commission a review of the investment in FFI to date, including in the marine

programme. A final report from the review was produced in September, and we are building the findings from this into our work going forward. We also received significant and valuable informal input and feedback from the consultants as they conducted the review. We would like to thank Arcadia again for providing this unparalleled opportunity to objectively consider and reflect on our work.

Prioritising staff time to contribute to the review over the course of the year, and actively putting investment decisions on hold to await the review's conclusions, has led to a delay in implementation of some elements of the new grant. In addition, due to two maternity absences within the marine team, the new position focused on strengthening impact assessment has been delayed (as the selected candidate has been covering a key maternity leave position). However, we have robust plans to pick up work apace in 2017, with a full staff team in place and a strong pipeline for both consolidation and new investments, incorporating the findings of the Arcadia review into our work as we move forwards.

Credit: Michelangelo Pignani/FFI





Credit: Paul Colley

BACKGROUND

The world's oceans and coasts are host to some of the most productive ecosystems on earth, providing food and livelihoods for one billion people living in local communities, and sustaining local and national economies.

However, the threats to our oceans and coastlines are severe and increasing. Past decades of neglect and over-exploitation have proved that the marine environment is not only vulnerable but becoming increasingly and rapidly degraded.

The unprecedented rate of change and the scale of the threats necessitate urgent and coordinated global action. In response, FFI is committed to increasing our conservation impact on marine and coastal habitats

With the generous development funding from Lisbet Rausing and Peter Baldwin (LRPB) in 2010, the marine grant from Arcadia in 2012-2016, and the renewed Arcadia marine grant for 2016-18, FFI has developed a diverse and effective marine conservation programme.

OBJECTIVES OF GRANT

The objectives of the Arcadia marine grant 2016-18 build on FFI's marine strategy¹ and on the objectives of the previous Arcadia grant. In addition, there is a specific new

objective focusing on demonstrating the impacts of our approach. The objectives of the grant are to:

- deliver effective site-based marine management (MPAs, fisheries and species focused conservation at focal sites);
- improve policy and practices in order to address wider-scale threats to species and habitats (national fisheries reforms, responsible business practices);
- develop the capacity of in-country organisations to enhance their operations and help them to deliver effective marine conservation;
- build a strong evidence base for dissemination and further replication of successful approaches.

The Arcadia support is realised not just through project level funding, but through the programmatic support it provides across the full range of marine activities undertaken by FFI (a value specifically recognised under the recent review). As the impact of conservation funding takes several years to become clear, this report continues to integrate results from projects funded under previous Arcadia and LRPB grants with those funded under the current grant, as well as projects in the wider FFI marine portfolio, catalysed by Arcadia's central programmatic support.

¹ Our marine strategy has three core pillars, focused around (i) securing important areas of marine biodiversity, (ii) informing and influencing policies and practice affecting the marine environment, and (iii) supporting key national local institutions to help them deliver effective marine conservation. More details can be found at (<http://bit.ly/2hsgRZC>).

The projects featured within this report have been arranged under objectives i-iii of the grant for ease of presentation, but these are illustrative groupings, and many of our projects deliver outcomes across more than

one of these objectives. The table below lists the projects within our current global marine portfolio, and which of these objectives that they have been designed to respond to.



Securing marine sites	Policy and practice	Strengthening partners	Investment 2016-18 grant	Project ²
				Gökova Bay, Turkey
				Cambodia's first MPA
				Seahorse conservation, Cambodia
				Maio Island, Cape Verde
				Myeik Archipelago, Myanmar
				Marine conservation, Nicaragua
				Atlántida, Honduras
				Co-management of marine resources, Tanzania
				Aceh Small Islands Initiative, Indonesia
				Galera San Francisco, Ecuador
				Turneffe Atoll, Belize
				Lake Piso, Liberia
				Caribbean island MPAs
				Nicaragua turtles
				Cuba
				Georgia's Black Sea coast
				Ridge-to-Reef, Halmahera, Indonesia
				Croatia
				Reducing the extent and impact of destructive shrimp trawling practices
				Towards new policy on bottom trawling, Costa Rica
				Supporting Scotland's first Demonstration and Research MPA, Fair Isle
				Documenting the impacts of No-Take Zones on Fisheries, Firth of Clyde, UK
				Improving policy and practice to reduce plastic pollution
				Sustainability rating for the fisheries sector
				Marine Stewardship Initiative
				Impact investment, Aceh, Indonesia
				Community institutions in the Firth of Clyde, UK
				Improving capacity for effective MPA designation and management in Scotland, UK
				Marine conservation in Tana Lamu, Kenya
				Community conserved areas, south Kenya coast
				Marine conservation in Central America
				Marine conservation in the Philippines
				Marine conservation in Bali, Indonesia
				Conservation Leadership Programme
				Blue Marine Foundation

² Projects in italics have not proceeded beyond initial scoping or planning phases (although some may in the future).

SECURING MARINE SITES FOR CONSERVATION

OUR APPROACH

Marine Protected Areas (MPAs) are among the most effective tools for tackling many of the threats and pressures on the marine and coastal environment and its resources. Evidence suggests that when combined with other management strategies (such as integrated coastal management and ecosystem-based fisheries management), appropriately placed and well managed MPAs can restore the health of marine life inside their boundaries, and have lasting economic benefits for human societies.

FFI believes that increasing the area of the oceans under effective protection needs to be a central part of international efforts; however, equally important is the need to tackle the recognised limitations that many existing MPAs face around governance, enforcement, funding security, effective community development programmes, infrastructure and maintenance, and communication.

Through a suite of site-based projects at local and sub-national scale we are showcasing approaches to effective governance of marine and coastal resources, crafted to suit the local situation. These projects are delivering multiple benefits and are supported by enabling policies and interconnected structures. Effective demonstration of marine management models is a critical step in building the resilience of natural ecosystems, and in shifting the balance in favour of conservation. Our work is proving to be particularly catalytic in demonstrating the relevance and benefits of management in challenging coastal areas, where people rely most heavily on biodiversity, and where the threats to biodiversity are the highest.

Over the past six years, we have worked at 38 sites to secure better protection and management for marine resources. With this renewed phase of Arcadia funding,

we are consolidating our work with existing partners at current sites, ensuring they can develop appropriate and effective management systems and the capacity they need to continue their work when our support ends. One element of this is the development of financial sustainability, so establishing models of sustainable financing for marine management is a core part of several of our current site-based projects (e.g. Turkey, Cambodia, Cape Verde).

Where appropriate, we are also seeking to scale-up our impact through replication of our approach at neighbouring sites or other areas in existing countries of operation. In a number of our projects (e.g. Honduras, Tanzania), we will be working to link adjacent communities, increasing social connectivity to support better protection for ecologically connected areas.

We are also exploring new site-based initiatives in a limited number of new geographies, and initial scoping has been undertaken in Cuba and Georgia.

Recognising that some particularly 'at risk' marine species need targeted interventions to ensure their protection and recovery, we are increasing our focus, under this new phase of Arcadia funding, on the needs of specific vulnerable and iconic marine species, including turtles, seahorses, sharks and rays. We will be developing specific measures to address threats to such species over the next two years. Highlighting the value of so-called 'flagship species' and their conservation not only delivers direct conservation benefit to these species, but can also be an important way to communicate broader messages about marine conservation to target audiences. Where species are of particular cultural value to communities, this can be an effective way of building local support for conservation measures.

Jellyfish in coral reef. Credit: Michelangelo Pignani/FFI





Monk seal in waters off Gökova Bay, Turkey. Credit: Zafer Kizilkaya

PROJECT OUTLINES

GÖKOVA BAY MARINE PROTECTED AREA, TURKEY



The Gökova Bay Marine Protected Area (MPA) is located in a biodiversity hotspot and was established to offer protection to globally important seagrass beds, commercially important fishing grounds and nursery habitats for Critically Endangered sharks. Insufficient capacity within the management authorities, however, has meant that efforts to uphold the MPA restrictions have been ineffective, allowing overfishing and illegal fishing to continue unabated, damaging sensitive habitats and species.

Development funding from Lisbet Rausing and Peter Baldwin in 2011 helped FFI to establish key partnerships and identify opportunities for strategic intervention in this location to better manage illegal fishing activities and halt the decline of fisheries resources and associated biodiversity impacts. In 2012 FFI started a new project with a local partner Akdeniz Koruma Derneği (AKD) to develop a community-based model for management of Turkey's first network of strictly protected No-Take Zones (NTZs) at Gökova Bay, comprising six sites.

This programme has since enabled the design and adoption of a community-led patrolling and enforcement system,

provided training and equipping local fishers to take responsibility for the management of their natural resources.

Daily patrols of priority NTZs by community rangers, supported by the Coastguard, were initiated in 2013, and all six sites are now under regular surveillance or patrol. The addition of a new boat in 2016 has supported these efforts, while new surveillance cameras help capture evidence of illegal activity to support prosecutions. Patrols appear to be having a deterrent effect, with illegal fishing incidents reduced by over half during the past year, from 117 in 2015 to 51 in 2016 (with the majority of incidents now involving amateur or recreational fishers).

To understand the impacts of the NTZs, we have been monitoring fish populations within and outside the areas since 2008. This has shown that fish biomass in the NTZs is up to six times higher than in unprotected sites, with numbers of apex predators and commercially important groupers also significantly greater. The causes of this rapid increase within the NTZs are not yet fully understood and are likely to be attributable to a complex range of factors (which will form part of our ongoing investigations as the project progresses).

The project has also monitored fisher income, which has increased almost four-fold since the project started, boosting community support for the management measures. During 2016, the use of mobile technology by the local fisheries cooperative has started to improve monitoring of fish landings data, enabling more robust evaluation of interventions and facilitating adaptive management strategies.

On the back of these successes, in 2016 the Government agreed to a 700 hectare extension to the existing NTZs in Gökova Bay, to include important coralline and rocky reef habitats and extensive seagrass meadows. In September this year, a complete ban on purse seining within the inner zone of the Gökova Bay Special Environmental Protected Area (SEPA) was introduced, removing an important threat to fish stocks in the protected area.

Recently the project has been working to mitigate the impact of a national ban on catching two species of grouper, which has affected the target fishing communities in Gökova. Data gathered through the project shows that there has been considerable recovery of the white grouper (one of the two banned species) in Gökova Bay since the NTZs were set up, and presentation of this evidence to the Government resulted in them indicating that the ban is likely to be repealed for fishers in Gökova.

We have also continued to investigate and monitor the area for other signs of ecosystem recovery. In 2014-15, Endangered juvenile sandbar sharks (*Carcharhinus plumbeus*), loggerhead turtles (*Caretta caretta*) and wild Critically Endangered Mediterranean monk seals

(*Monachus manachus*) were observed in the bay for the first time for many years. Further monitoring this year revealed 33 records of sandbar sharks, 19 sightings of loggerhead turtles and 16 sightings of monk seals (along with four monk seal images captured by underwater cameras installed in caves within the bay). The project is now lobbying for the protection of these caves from disturbance.

The project has also focused on opportunities to generate sustainable financing for the management of the MPA, an issue highlighted as a priority during the Arcadia review field visit to this project. One promising option being explored is to establish chargeable moorings for yachts in a popular part of the bay. Discussions with the Government for the development and long-term management by AKD of a mooring scheme are underway, with a detailed feasibility study planned for 2017.

Impressed by the results from the NTZs in Gökova Bay, the Turkish Government has invited AKD to propose further sites for protection. Five additional sites for new NTZs were put forward, both in Gökova Bay and further along the coast, and initial consultations on these are underway. FFI also recognises the opportunity to extend the community management approach more widely along Turkey's Mediterranean coast and expand it to the Black Sea coast, building on the Government's stated interest in initiating marine management there. Scoping for this expansion is underway.

Area of conservation impact: 307,000 hectares

UNDERPINNING THE DESIGN AND MANAGEMENT OF CAMBODIA'S FIRST MPA



In April 2012 we started a project to support local partners in the planning and establishment of Cambodia's first Marine Fisheries Management Area (MFMA) around the Koh Rong Archipelago. The aim was to reduce the degradation of critical biodiversity (such as coral reefs and seagrasses) by improving the sustainability of fishing practices, reducing fishing pressure by involving local communities in resource conservation, and limiting impacts from emerging tourism developments through partnership with coastal concession holders.

From 2012-2016, priority areas for conservation and management were identified within the proposed MFMA,

and a zoning plan was designed in participation with local communities, which includes strictly protected No-Take Zones. These were informed by comprehensive surveys of coral reefs and the generation of updated distribution maps for mangroves and seagrass. Important biological and socio-economic baselines and monitoring indicators were also identified to help measure the impact of the MFMA, once designated. The project has also provided opportunities for student research at the site to not only help increase local capacity for marine science, but also to increase capacity for marine management within the Government Fisheries Administration.

Throughout the project, we have worked closely with communities, specifically three Community Fishery Institutions (CFIs), helping them to play an active role in the delivery of the MFMA. Each of the CFIs now has a legally recognised local management plan for specific areas within the MFMA, including No-Take Zones and fish refuges. The CFIs lead the monitoring, surveillance and enforcement of their local areas and conduct regular patrols; they are supported by the Fisheries Administration to issue warnings and fines, confiscate illegal fishing gear, and prosecute offenders. Patrols also collect information on fishing activity using the Spatial Monitoring and Reporting Tool (SMART) system, and this is used by the Fisheries Administration to track fishing activity (including illegal fishing) within the MFMA. This information allows patrols and the Fisheries Administration to focus enforcement effort on areas where the threat of illegal fishing is highest.

In June 2016, the MFMA was officially designated by the Ministry of Agriculture, Forestry and Fisheries. The 40,500 hectares area is established as a multiple use marine protected area, the first of its kind in the country. This designation is a direct outcome of five years of support from FFI to the Fisheries Administration and other stakeholders. Although it is very early days, data collected so far suggest there have been fewer infractions by trawlers inside the MFMA since its declaration. Awareness of the MFMA boundary has been widely promoted (including through a poster distributed along the coast) and anecdotal reports suggest that fishing boats from outside are refraining from entering the area. More data will be collected over the coming months to corroborate these initial findings.

A monitoring plan is in place to evaluate the impact of the improved management on reef and fish recovery, relative

to a 2013 baseline. Initial results from seagrass bed monitoring indicate the habitat is recovering, with no signs of recent damage from anchoring or trawling. An exciting find this year was traces of dugong (*Dugong dugon*) feeding trails from within the last couple of years; this species, listed as Vulnerable, has not been recorded live in Koh Rong for 15 years. The impact of the MFMA on local livelihoods is also being monitored through socio-economic surveys.

Developing sustainable financing for management of the MFMA is critical, and in collaboration with a range of stakeholders, FFI has supported an assessment of potential financing options. An action plan has been developed to diversify and expand funding sources for the CFIs and the wider MFMA. One idea - voluntary donation boxes (for visiting tourists) - is currently being trialled, with the aim that any income would support CFI activities.

Local tour operators, dive shop owners and hoteliers all benefit from the improved management at Koh Rong. The level of support for more environmentally sound management among small-scale tour operators was demonstrated this year when they approached the project for assistance with the deployment of demarcation buoys at popular dive and snorkel sites, so that they can fasten boats safely without anchoring and damaging the reef. They have also agreed to assist in the demarcation of two conservation areas, by providing boats, fuel and other in-kind support.

The project also provides ongoing training and capacity building to the Government Fisheries Administration. The application of skills learnt to date is evident – for example in their analysis of patrol data from the SMART system.

Fishing among mangroves in Cambodia. Credit: Paul Colley



In 2015, we supported the Government to develop a draft National Action Plan for Turtles, while in 2016 we are supporting the drafting of a National Action Plan on Illegal, Unreported and Unregulated (IUU) fishing. The pressure to address this issue has already resulted in some positive changes; in September it was announced that foreign-owned ships would no longer be able to fly the Cambodian flag as a “flag of convenience”. Moves are also underway to register the Cambodian national fishing fleet, a priority action identified in the draft National Action Plan.

While our support will continue to be needed in Koh Rong in the short term, we are confident that, as sustainable financing options are realised, the increased capacity of our partners will enable them to independently manage the site effectively. Our work at Koh Rong has earned FFI a reputation in Cambodia for

marine conservation, and we remain the only international NGO working on marine issues in the country. Building on this, we are examining more closely the specific needs of targeted species groups (see pg.10) and, as the need for our input at Koh Rong decreases, we will be assessing opportunities to expand our efforts to other priority areas - we have already identified the Koh Sdach Archipelago as an important area in need of improved marine management. We also have ambitions to support the Government with marine spatial planning, in order to facilitate the eventual establishment of a network of MPAs along the Cambodian coastline.

Estimated area of conservation impact: 40,500 hectares

SCOPING FOR COMMUNITY-LED SEAHORSE CONSERVATION IN THE KOH RONG ARCHIPELAGO, CAMBODIA



Seahorses are vital components of shallow-water marine ecosystems, occurring in seagrass beds, mangroves, reefs and estuaries in temperate and tropical waters, where they prey on bottom-dwelling organisms. They are a chronically under-researched group: 12 species are listed as threatened by IUCN, but 27 of the 48 currently recognised species are listed as Data Deficient (insufficient evidence to make an assessment). It is clear, however, that they are highly vulnerable to the destruction of coastal habitats, and large numbers are caught as by-catch in trawl nets. There is also a known global trade in seahorses for traditional medicine, aquariums, souvenirs and tonic foods - each year, an estimated 15-20 million seahorses are caught and traded around the world.

The Koh Rong Archipelago in Cambodia, with its sand and mud flats, seagrass beds and coral reef habitats, is

thought to be a hot-spot for seahorses, with five species recorded. Little is known about the seahorse populations, but trawling has been identified as a threat and there is a known seahorse trade in the country, although data on its nature and extent is lacking.

In 2016, work has started within the newly-declared Koh Rong MPA (see pg.12) to understand seahorse populations and to identify threats, including the local seahorse trade, thus enabling the development of locally relevant conservation solutions. Seahorses are charismatic species, and their potential as flagships to generate support and pride in the new MPA will also be explored.

Estimated area of conservation impact: 40,500 hectares

Koh Rong beach. Credit: Jeremy Holden/FFI





Credit: Jeff Wilson/FFI.

PARTICIPATORY RESEARCH AND ACTION FOR CONSERVATION ON MAIO ISLAND, CAPE VERDE



The archipelago nation of Cape Verde is a marine biodiversity hotspot, supporting a wealth of globally important and endemic marine species, including 17 species of whales and dolphins, more than 60 species of sharks and rays, and five species of marine turtle (including one of the three largest nesting populations of loggerhead turtles in the world). As the closest island to the capital Santiago, Maio Island is under increasing pressure from tourism, coastal habitat destruction, and unsustainable and illegal fishing. However, there is a lack of basic data on the occurrence and distribution of species, poor awareness of the importance of these species to ecosystems, and limited local capacity to develop strategies and to address conservation needs.

Through development funding in 2013, FFI initiated a series of small-scale activities to support local partners to plan the first effective protection measures for species and habitats on Maio Island. These included contributing to consultations with local stakeholders to inform the development of a management and zoning plan for an island-wide protected areas network (which would see existing terrestrial protected areas expanded and connected, and new protection measures developed for important marine habitats), and helping partners to

consider research data and local community perceptions in the design of management measures.

Although a network of five marine and terrestrial protected areas exists, covering a marine area larger than the island itself, much of the area was only gazetted in 2014 and a five-year management plan for the sites submitted to the Government in 2014 has not yet been approved by the National Assembly. This is thought to be due, in part, to a competing national aquaculture plan. A new Government was elected in 2016, resulting in some restructuring of departmental roles and responsibilities which might help move the approval forward. Our partner in Cape Verde, Maio Biodiversity Foundation (FMB), is engaging closely with relevant government departments to progress the protected area issue. Their ability to influence the Government was demonstrated in June this year when they successfully lobbied for the relocation of a construction project away from a Ramsar Site on the island.

In the meantime, we are continuing to support FMB to build the foundations for protected area and marine resource management, providing training for community representatives, partner and government staff in a range of management and survey skills.

Despite the lack of an approved management plan, in 2016 the project led the development of a monitoring plan for the MPA sites, which will, in time, assess the ecological and social impact of the protected areas. Coastal patrols by rangers (currently employed by FMB but soon to become government staff) became more frequent in 2016, with key areas being patrolled between three and six times a week. Encouragingly, patrol data indicates a decrease in the incidence of illegal activities in the past 12 months; for example, sand extraction incidents have decreased by 26.5% and sport fishing by 63%. Rough sea conditions offshore often preclude at-sea patrols, but in 2017 FMB will be working with fishers to launch a 'Guardians of the Sea' initiative, involving local fishers in patrolling in-shore fisheries against industrial foreign fishing fleets. In parallel, the project is identifying, and where relevant supporting, coastal communities to diversify their income, including the development of ecotourism homestay opportunities.

In 2014, surveys confirmed the presence of nursery sites and breeding grounds for sharks in the area, and highlighted the threats posed by local fishing activity (sharks comprise 72% of non-target catch). A code of conduct for the safe handling and release of sharks was developed for use by sport and recreational fishers, and 129 fishers have now been trained in shark monitoring and safe release techniques (with 48 fishers pledging to stop catching sharks and rays in 2015).

Protection of nesting turtles is a priority for FMB, and 2016 saw the largest loggerhead turtle nesting season in decades: over 3,000 loggerheads nested on Miao (compared to the usual 900-1,500). Over the past five

years, the rate of turtle poaching has fallen from approximately 5% (which would be unsustainable) to approximately 1%, and this figure was maintained in 2016, despite the increased numbers nesting.

FFI's institutional and financial support to FMB has been critical to the continued existence of the organisation during a period of instability and significant staff turnover. We have provided extensive institutional development support and capacity building, covering financial management, strategic planning and fundraising; in 2016 we supported the recruitment of key staff to the organisation, including a new Director. FMB is now poised to receive substantial five-year funding from an independent donor, who has stated that FFI's ongoing strategic guidance to the organisation is a key factor in their decision to make the award.

We foresee an ongoing relationship with FMB in the coming years, but also recognise the opportunity to replicate the successful Maio MPA model on other Cape Verdean islands. The Cape Verdean central Government has been using the development of Maio's MPA network as a national pilot, and there are clearly lessons that have been learnt from this experience that will be relevant to other islands.

Estimated area of impact: 28,500 hectares

COLLABORATIVE MARINE CONSERVATION IN THE MYEIK ARCHIPELAGO, MYANMAR



Myanmar's 2,278 kilometre coastline hosts a considerable diversity of coastal wetland habitats, including regionally significant mangrove forests. The coral reefs of the Myeik Archipelago in Tanintharyi region have been highlighted as a priority for coral conservation in the Bay of Bengal.

However, when we started our engagement, the technical and institutional capacity of the Myanmar Government and local civil society to deliver marine

conservation was critically low. In addition, information on Myanmar's marine ecosystems was very scarce, constituting a significant regional knowledge gap. Thus, alongside development of a framework for MPAs around the Myeik Archipelago and the introduction of the Locally Managed Marine Areas (LMMAs) concept to Myanmar, FFI has needed to invest in both baseline data collection and basic training to underpin any further conservation management gains.

Development funding from Lisbet Rausing and Peter Baldwin in 2010 enabled FFI's regional team to undertake valuable scoping activities, developing our understanding of the local context for marine conservation and the country's technical needs and priorities. As a result, we are now leading a ground-breaking marine project in the country to (i) build in-country knowledge and technical skills, (ii) design appropriate governance and management models in the Myeik Archipelago and the Meinmahla Kyun Wildlife Sanctuary and (iii) support replication of these models to meet wider marine conservation targets.

To provide vital information needed to underpin marine management, we have undertaken comprehensive biodiversity assessments of the Myeik Archipelago, training government and civil society representatives in key survey and data analysis skills as we go. A series of research cruises has brought leading experts to Myanmar and this year, for the first time in the country, acoustic sounders were used to record cetaceans, boat traffic and the sound of dynamite fishing. The data generated has further highlighted the conservation value of the Tanintharyi coast and the imperative for effective management of the area. Work has also commenced, in collaboration with the Smithsonian Institute, to identify the major inshore fishing grounds and catch type within them, to inform national marine management and fisheries planning.

Establishment of the first three LMMAs was approved by the Department of Fisheries in July 2016, and has been submitted for final parliamentary approval. The designation of these community managed areas, the first in the country, will be a significant milestone, paving the way for local groups to become active stewards of their environment, and providing a model that allows the relevant authorities - who at this stage remain chronically under-resourced - to use devolved management structures to help them support a wider range of sites more efficiently.

There is ample evidence for the enthusiasm within the pilot communities for these management arrangements. Over the year, communities have organised their own meetings, initiated patrols (now facilitated by the

provision of a boat to each community through the project), and directly contacted the Department of Fisheries about issues of concern, all without recourse to FFI support. The project has also provided support to small-scale livelihood initiatives, and has helped finance the transition to less damaging fishing gear. We are also helping the Department of Fisheries to develop the skills needed to oversee these new community co-management arrangements. These skills will be vital to support the future expansion of community-led marine management areas throughout the archipelago (ten further communities have already expressed interest in this model of management for their marine areas). Government officials at the highest level have also welcomed the co-management approach, and the Department of Fisheries has confirmed that the model created by the pilot LMMAs is helping to shape the new fisheries law, ensuring greater civil society involvement in sustainable resource use.

In parallel to the initiatives in the Myeik Archipelago, the project is working to support community approaches to management at the Meinmahla Kyun Wildlife Sanctuary, a significant mangrove area that hosts important fauna and flora including the estuarine crocodile, *Crocodylus porosus*. This year a new management plan for the Sanctuary has been submitted for Governmental approval, while information from the FFI-led biodiversity surveys has underpinned a proposal for Ramsar status for the site. The project has established the first systematic and regular patrol system for the Sanctuary, creating opportunities for community members to engage in Sanctuary management through joint patrols with forest rangers. Since 2012 rangers report an estimated 25% increase in the crocodile population, which they attribute to the increased management presence resulting in reduced persecution.

Mangrove destruction is a key threat to coastal biodiversity at Meinmahla Kyun; while patrols have helped to deter the illegal collection of mangrove wood from within the Sanctuary, there is an unresolved local demand for fuelwood. To address this, fuel efficient stoves have been introduced to over 1,200 households and woodlots have been created to provide household firewood. In addition, mangrove seedlings are being replanted in the Sanctuary to boost recovery.

Coral reef. Credit: Michelangelo Pignani / FFI



These models of marine management, together with the improved information on marine resources in the Myeik Archipelago, are now providing the impetus for development of a wider MPA network in the archipelago (within which the LMMAs would be nested). During 2016, the wealth of environmental, geographical and social data on the Archipelago amassed by FFI was submitted to the Government. Following an FFI-facilitated MPA workshop in August involving representatives from Government, the fishing industry and local communities, a consultation process for the development of MPAs in priority sites in the archipelago has been authorised. FFI will be working with stakeholder groups to support this process in 2017.

FFI is now recognised as a key player in marine conservation in Myanmar, having been one of the first international NGOs to begin working in this space. The Arcadia review consultants conducted a field trip to the project this year and provided some invaluable advice and perspectives on the project, not least in helping us recognise the potential to scale it up and increase our ambition for the scope of impact that is feasible within Myanmar. As a result, the project team has started a process to rearticulate their wider strategy for Myanmar.

Area of conservation impact: 24,165 (pending approval)

EXPANDING MARINE CONSERVATION ON THE PACIFIC COAST OF NICARAGUA



The foundations laid by the Arcadia-funded project in Central America (see pg.38) enabled FFI and local partners to secure funding for a complementary project over a larger geographic area in Nicaragua, focusing on excluding harmful fishing practices (notably blast fishing with explosives and bottom trawling for shrimp) through the development of collaborative marine management approaches and regulatory reforms.

Through this ambitious project, FFI is working with local partners, the Government, the tourism industry and coastal communities, in an 80 kilometre long marine management area known as the 'Coral Corridor'. The project will help to improve the effectiveness of two existing Marine Protected Areas (MPAs), will establish a third MPA, and will introduce new fishery management

tools, notably No Take Zones and fisheries restrictions. Linking with, and building upon, our existing work to conserve sea turtles in Nicaragua (see pg.24), this project is seeking, in particular, to address the threats posed to turtles from fishing practices in nearshore waters, through gear exchange programmes, improved gear design, and the prohibition of harmful fishing methods in areas frequented by turtles.

Work to eliminate harmful fishing practices is progressing well, following a presentation to the authorities of information gathered in 2015 on the scale, extent and impacts of destructive fishing methods within and outside the Coral Corridor, two municipalities have expressed formal support for eliminating blast fishing.

Olive ridley turtle hatchlings. Credit: FFI



The project is now combining awareness campaigns, increased enforcement, livelihood support and legal measures to move towards this goal. Anecdotal evidence indicates that blast fishing has substantially reduced in the Corridor as a result of these interventions.

Improved compliance with fisheries regulations is being promoted through support and training to municipal authorities, the fisheries authority (INPESCA) and fishers. Fishers are being registered, which helps to manage the fishery and provides information to determine future access rights for local fishers and for those from other areas. To address the significant issue of turtle by-catch, a hook exchange programme is underway and its impact will be assessed by on-board observers on fishing boats.

As well as tackling blast fishing and turtle by-catch, the project is also working to ban bottom trawling along the Pacific coast of Nicaragua. Significantly, the most important industry body in Nicaragua, Cámara de la Pesca de Nicaragua (CAPENIC) is convinced of the case for phasing out this damaging practice, and there is strong (but not universal) support within coastal communities. In parallel with advocacy work, the project is engaging with the trawler-boat owners to better understand the opportunities for, and barriers to, change. Throughout this process, the team will be learning from FFI's experience and ongoing work on the application of trawling bans elsewhere in the world, including in Costa Rica (see pg.29).

A key objective of the project is the designation of a new MPA. During 2016 a proposal for a community-based conservation area at Gigante was submitted to the authorities and is now under consideration. This proposal, produced in collaboration with fishers and with regulations and zoning set by the fishers themselves, is a completely novel initiative for Nicaragua. The project is helping to generate social and political support for this initiative, and a neighbouring community has already expressed interest in developing a similar proposal for their area.

In order to generate critical knowledge on the status and threats to marine life in the Coral Corridor, biannual dive surveys are being conducted; this also provides on-the-job training for local staff, improving their skills in data collection, analysis and interpretation.

Whilst the project is already gaining traction to tackle key issues within the Coral Corridor, the possible development of the Nicaragua Canal remains a future threat to the project and the whole coastline. At present this mega infrastructural development is on hold due to uncertainties around the financing of the project, but we will continue to track any change in the status of this major threat.

Estimated area of conservation impact: 80,000 hectares

CONNECTING COASTAL COMMUNITIES FOR INTEGRATED SEASCAPE MANAGEMENT IN ATLÁNTIDA, HONDURAS



The Cuero-y-Salado Wildlife Refuge in Honduras, which was designated as the country's first Ramsar Site in 1993, encompasses highly biodiverse coastal wetlands and one of the best preserved mangrove forests in the northern region of Honduras – home to the Endangered Antillean manatee (*Trichechus manatus*) and Vulnerable American crocodile (*Crocodylus acutus*). The site is close to the Mesoamerican Barrier Reef and also hosts thriving coral reefs and populations of commercially important fish species.

Through the Central Americas regional marine project (see pg. 40), we have worked with partners at this site to

improve the legislative measures in place for marine and coastal habitats at the Refuge. Specifically we have secured commitments to extend the boundaries of the Refuge to include important marine habitats, and have built the institutional capacity of the local fishing association, APROCUS, to play a role in the effective management of the area. Through our support, the local co-management agency, FUSCA, has become more active and effective in enforcing the regulations of the Refuge, and local fishers have registered as traditional users and are adopting more responsible fishing practices, while proactively reporting illegal fishing activities to the authorities.



Local fishing boat, Honduras. Credit: Mary Rider/FFI

Carefully chosen community projects including a fisheries storage centre (to improve the shelf life and market value of catches), and a mangrove seedling nursery (to help regenerate key areas of mangrove forest degraded through exploitation for building material) have reinforced linkages between community livelihoods and the conservation of the marine ecosystem.

Building on this base, in 2016 the project was extended to cover two additional Marine Protected Areas (MPAs) - the Cayos Cochinos Marine National Monument, part of the Bay Islands Marine National Park and the waters between them and Cuero y Salado. With co-funding from the Darwin Initiative, FFI and five Honduran partners are working with stakeholders to establish an integrated, collaborative management system that conserves critical habitat and species, and enables fishing communities to improve livelihoods, while taking increasing responsibilities in management. By increasing the dialogue and partnerships between stakeholders in the three areas, the aim is to see cooperative management for this ecologically connected marine system.

Although the marine expansion of Cuero y Salado Wildlife Refuge is still pending approval, the imminent changes in access and regulations are already being communicated to

fishers coming from other areas. Throughout 2016, the local fishing association, APROCUS, was increasingly involved in management of the Refuge, proactively requesting that the authorities increase their presence in the marine area, and actively engaging with other technical and scientific organisations. Assisted by our project partner, APROCUS was successful in securing a donation of four fishing boats, fishing gear and a freezer to support local livelihood efforts.

Surveys and mapping of key habitat features are also being undertaken, to help provide a seascape-wide evidence base to inform management of the inter-connected habitats, key species and fisheries.

Area of conservation impact: 168,000 hectares

Comprised of:

- Cuero y Salado Wildlife Refuge: 28,000 hectares (pending approval of extension)
- Cayos Cochinos Marine National Monument: 110,000 hectares
- Bay Islands Marine National Park (part of): 30,000 hectares

CO-MANAGEMENT OF MARINE RESOURCES IN TANZANIA



The Pemba Channel Conservation Area (PECCA) in Zanzibar was declared in 2005 to protect the unique biodiversity and critical habitats of the area, including deep water coral communities, seagrass beds and concentrations of sailfish, black marlin and tuna. Through our partnership with a local NGO, FFI identified an opportunity to strengthen the management of this important site. The project seeks to establish and equip village level associations (known as Shehia Fishers Committees) to play an active role in the management of their marine resources, with a particular focus on improving the sustainability of artisanal fishing

practices within PECCA, and reducing illegal and destructive fishing practices such as the use of ring net and dynamite fishing.

Following initial scoping and in-country consultations in early 2015, we worked with local partners Mwambao Coastal Community Network and the community of Kisiwa Panza to support the establishment and monitoring of the first temporary No-Take Zone within PECCA, restricting fishing for octopus – an important resource for local consumption and trade - in response to declining catches.

The pilot closure, conducted over a small area for a period of three and a half months, appears to have been successful, with local fishers reporting perceived increases in the size, weight and value of octopus catches following the re-opening of the area to fishing.

In 2016, the project has expanded to work with a second community – Kukuu. Temporary octopus closures were put in place for both sites and once again the communities reported significantly higher octopus catches (up to four times higher) after the closure. Whilst these closures were designed to maximise benefits to the octopus fishery, the effect of the closure - which prohibits any human entry - benefits all species in these areas, with observations suggesting greater abundance and size of other locally valuable fish species (including emperors, snappers and parrotfish). The success of these pilot closures has hugely increased local support for marine management. Both communities put a portion of the income from fishing in the closed areas into a community fund, which is being used for community projects such as school improvements, thus benefiting the wider community.

Training has been provided to both communities on issues such as governance, conflict resolution, data recording and financial management. With support, the Shehia Fishers Committees at each site have established by-laws relating to marine management measures and have raised awareness of these in their own, and neighbouring, communities. Although both communities have been active in enforcing their restrictions, the need for greater support from the authorities has been recognised, and the project is facilitating the engagement of the Department of Fisheries. They have agreed to assist

with enforcement and awareness amongst fishers and relevant authorities, such as the police.

Developing sustainable sources of finance for the Committees to allow them to implement management measures is key to long-term success. Fines from infringements are already being used to support enforcement patrols, but more substantial and reliable revenue streams are needed. Surveys with hotels in Zanzibar found significant willingness to pay more for sustainably managed octopus, and the development of an appropriate participatory market system to benefit from this will be explored. Other options for sustainable income, such as the Committees taking on management of fish landing sites, and direct contributions from tourist revenues where tourism businesses benefit from improved marine management, are also being explored.

The successes realised within these two communities has generated wider interest; four more communities have expressed interest in implementing octopus closures, and our partner, Mwambao, has been asked to share their methodology with the Zanzibar Department of Fisheries as they embark on a World Bank-funded fisheries management project. There are significant opportunities to scale up our work in this area, to empower more communities and develop government capacity to support co-management, which we will be exploring over the coming months. This will ultimately lead to improved marine management and more secure, sustainable livelihoods.

Area of conservation impact: 5,993 hectares

Sharif Makame Sharif, Kisiwa Panza Shehia Fishers Committee. Credit: Hannah Becker/FFI



ACEH SMALL ISLANDS INITIATIVE, INDONESIA



The coral reefs and waters off mainland Aceh, northern Sumatra, support rich and abundant marine life, and provide important breeding grounds for fish species. Even before the devastating tsunami in 2004, parts of this rich reef system were being destroyed by unregulated and destructive fishing practices (including the use of dynamite and cyanide).

In 2006, FFI started work with communities on the most north-westerly island of Indonesia, Pulau Weh, to re-establish traditional village-based fisheries management systems, build the capacity of communities to reduce destructive fishing threats, and to diversify their livelihoods away from damaging fishing practices through a micro-credit scheme.

Development funding from Lisbet Rausing and Peter Baldwin in 2010 enabled FFI to step up this initiative in order to begin replicating the local management success from Pulau Weh on two more islands, Pulau Simeulue and Pulau Banyak, and to support the establishment of a series of new community-managed areas, known as Locally Managed Marine Areas (LMMAs).

Over the five years since it started, the project has strengthened and empowered customary institutions and has given communities greater confidence to participate in managing their resources. In Pulau Weh, the LMMA established under this project now operates independently. Fishers actively patrol their own waters to encourage compliance with local regulations, and through collaborative partnerships with the Navy and fisheries authorities, have significantly reduced illegal fishing threats and improved the timeliness and effectiveness of responses to illegal fishing violations.

In Pulau Simeulue and Pulau Banyak, traditional community leaders from target communities have improved their understanding of local and national regulations, and organised themselves to undertake patrols and to intercept,

document and report illegal fishing incidences within their customary areas. Pulau Simeulue falls within a larger-scale Marine Protected Area (MPA), and our support has helped ensure that traditional leaders and communities are represented on the MPA management council, with local stakeholder interests adequately represented in the newly-developed MPA management plan. Preliminary assessments of fishers at Pulau Simeulue show they perceive positive benefits and improvements in the marine environment since the start of FFI interventions at this site in 2011.

The project has played an important role in building awareness and appreciation for the LMMA approach at both a regional and national level in Indonesia. At the provincial level, FFI's technical support to the Aceh Marine and Fisheries Agency has led to an increase in the total marine area under protection through the adoption of a revised provincial level spatial plan - which includes measures for additional protected sites and has catalysed LMMA activity in eight districts.

Arcadia funding for this initiative was suspended in early 2015 due to a number of internal changes related to staffing and fundraising, and a resulting lack of clarity over the scale and outcomes of the project. During 2015-16 an internal review of the project was undertaken, which in turn fed into the wider Arcadia review process. The potential of the project to deliver further socio-economic and environmental benefits, both in current communities, and (through replication of the model) in adjacent areas, was recognised by the Arcadia review, which recommended reinvestment in this project. Subsequently, a revised strategy has been developed to enable wider project investment and co-financing in 2017, and to ensure the 2012 surveys are repeated as a basis for robust long-term monitoring (a specific recommendation from the Arcadia review for this project).

Area of conservation impact: 486,459 hectares

Credit: Juan Pablo Moreiras/FFI





Local fisherman and his catch. Credit: NAZCA Institute, Ecuador

GALERA SAN FRANCISCO MARINE RESERVE, ECUADOR



Galera San Francisco is an area of international biodiversity importance off the coast of Ecuador. This site boasts a species inventory larger than the Galapagos Marine Reserve and is understandably listed as a priority national site for conservation. Species present include snapper, dorado, goliath grouper, manta ray, whale shark and seahorse, and the area is a feeding ground for turtles and cetaceans. However, with limited capacity for management, the Reserve and its biodiversity are threatened by illegal, destructive fishing, clearance of mangroves and other coastal habitats, and pollution.

Development funding from Lisbet Rausing and Peter Baldwin in 2010 enabled FFI to build strong partnerships with local NGOs and communities around the Reserve, to use these as a platform to develop an improved management plan for the site, and to build public and political support for the plan's implementation. Following significant delays, the management plan for the Reserve was approved in 2014, including pioneering provisions (the first of their kind in mainland Ecuador), for the establishment of strictly protected areas (No-Take Zones), and preferential access rights for artisanal fishers (which paved the way for fishing resources to be locally managed for the first time). Efforts have since focused on demonstrating how the long-term implementation of the Reserve can be improved through the effective engagement of invested local communities, including

enhanced participation in the agreed management and governance structures.

Work continued in 2016 to support community engagement with, and understanding of, the new management plan, and to support a new participatory management committee (which includes representatives from ten local organisations and six government bodies). Although fishing control measures within the Reserve remain inadequate, there are indications of greater acceptance of the need to regulate fishing among local communities, with the issues of responsible fishing practices, control, access and resource management being discussed by the management committee. In addition, this year saw improved responses to illegal activity (including incidences of piracy) within the Reserve, as a result of better information exchange between the maritime authorities, environment agencies, and communities.

Baseline ecological information on the Reserve is being compiled through a programme of biodiversity and fisheries monitoring, involving community participation in data collection. Species not previously observed in the Reserve, and in some cases the country (such as the reticulated round ray *Urobatis concentricus*), have been recorded, along with evidence of high levels of fishing pressure.

The findings have been publicised and have helped to profile the importance of the Reserve, resulting in increased support for fisheries management at both community and government level. In addition, surveys have commenced to help inform sustainable management of key fisheries within the Reserve (notably octopus and sea cucumber fisheries).

While there is significant progress towards effective management of the Reserve, the delays in approval of the management plan, poor communication and coordination among government bodies, and reluctance within the provincial authorities to devolve adequate responsibility to local partners have all reduced the intended influence of this project. Furthermore, significant institutional instability in the relevant Department of Environment (the Provincial Director of Environment changed four times in five months) further undermined Reserve implementation, while in April, a devastating earthquake immediately down the coast from the Reserve

resulted in further diversion of resources and staff.

With the implementation of the management plan just starting and the local fishery management areas currently being established within the Reserve, there is a significant opportunity to help establish this site as a model for marine conservation in Ecuador. A new Global Environment Facility (GEF) project focusing on coastal and marine management is just starting in the area, and we are currently investigating how to integrate our project objectives and our ongoing role at the site with this new initiative.

Area of conservation impact: 54,600 hectares

TURNEFFE ATOLL, BELIZE



Turneffe Atoll is the largest and most biologically diverse coral atoll in the Western Hemisphere, encompassing deep-ocean, fringing reefs, sea grasses, mangroves, littoral forest and lagoon ecosystems. Until 2012, Turneffe Atoll was the largest unprotected section of the Mesoamerican Barrier Reef, facing threats from unregulated development, mangrove conversion, and over-exploitation of fishery resources.

FFI worked alongside the Blue Marine Foundation, the Belizean Government and the NGO and donor community to catalyse the establishment of a new Multiple Use Marine Reserve on Turneffe Atoll, and to leverage support for its long-term management and enforcement. The area was formally designated in November 2012 by the Government of Belize, and a local NGO was appointed as co-manager of the Reserve. FFI provided further technical and capacity building support

to local partners during 2013-14, and supported the Ministry of Fisheries, Forestry and Sustainable Development with capacity building and advice on media relations to help the communication of protected area policies, including those related to Turneffe.

Following a review of the project with partners at the end of 2014, in light of the capacity built within the local management NGO, and direct funding availability, it was agreed that there was no longer a need for FFI to directly support work in the Reserve and as such we have scaled back our engagement at this site.

Area of conservation impact: 131,690 hectares

Coral reef. Credit: Juan Pablo Moreiras/FFI





Lake Piso, Liberia. Credit: Jeremy Holden/FFI

COMMUNITY MANAGEMENT OF MANGROVE ECOSYSTEMS IN LAKE PISO, LIBERIA



Liberia's mangroves have been extensively degraded, which in turn has affected the productivity of coastal fisheries and undermined coastal water quality and shoreline stability. The Lake Piso Multiple Use Reserve in Liberia hosts important mangrove ecosystems that directly adjoin Liberia's coastal waters. FFI and local partners worked together at this site to improve understanding of the role that mangroves play for local ecosystems and economies, identified threats that drive their degradation, and worked to improve the capacity of Liberian civil society to engage in conservation and management activities for mangroves.

The project included participatory mapping of mangroves within the Reserve as well as an assessment of the threats driving mangrove degradation. Consultations and engagement across 34 communities improved the project's understanding of the importance of mangroves for local livelihoods, and increased communities' participation in management activities, particularly among youth groups. A management plan to guide the use and conservation of mangroves within the Reserve was put in place (a first in Liberia), and the implementation of the plan

and the management of infractions is now led by local communities, offering scope for long-term sustainable use.

There is anecdotal evidence to suggest a decline in the harvesting of mangrove wood, and a shift away from wood as the preferred building material for houses. Increases are also reported in the height of the mangrove canopy and area coverage, as well as the presence of associated animals such as crabs, mudskippers and migratory birds³. A self-imposed moratorium on the destruction of mangroves is now in effect across 14 communities within the Lake Piso Multiple Use Reserve (ordained by local community authorities). This is attributed to a greater awareness of the role of mangroves in underpinning coastal fisheries, and perceived increases in fish production in recent years as a result of reduced mangrove degradation.

Area of conservation impact: 6,361 hectares

Area of conservation influence: 97,000 hectares

³ As reported by the partner – we are not able to verify these observations.

MOBILISING PARTNERSHIPS FOR EFFECTIVE MARINE PROTECTED AREA GOVERNANCE IN THE CARIBBEAN



The Caribbean islands support intricate networks of coral reefs, seagrass beds and mangrove forests, and contain regionally significant biodiversity. Despite a strong political interest to create Marine Protected Areas (MPAs), the financial support needed to set up effective institutional frameworks (e.g. management and regulatory bodies) for MPA management and to ensure they have adequate budgets is often weak. Development funding in 2010 helped to identify the added value that FFI might bring to existing efforts in the region in issues such as MPA governance, capacity building and sustainable financing. It also enabled the development of an options paper for advancing MPAs in Antigua and Barbuda.

Drawing on our network of contacts, FFI explored opportunities to mobilise the necessary large-scale finance to support local partners in the Lesser Antilles to increase the area of marine habitat under active and effective protection. It has become increasingly clear that the scale of the current conservation response is insufficient to meet the array of threats facing Caribbean

marine ecosystems, at least in regards to effective MPAs. There are many organisations working on this challenge in this region. However, few national organisations are enthusiastic about pursuing the radical reforms in governance and management that are required. For example, our engagement in Anguilla, Montserrat and Saint Lucia has generated interest, but has not resulted in a clear path to the level of Government commitment needed to bring about real change.

We are continuing to engage with partners in the region to identify emerging opportunities – particularly those that have the potential to engage the tourism sector in marine governance and financing. We are also developing links with new partners to understand the challenges and opportunities in the less well-represented areas of the region, such as Cuba, and towards the end of 2016 began exploring the possibility of supporting work to designate a large MPA around the island of Redonda, Antigua.

CONSERVING SEA TURTLES ON THE PACIFIC COAST OF NICARAGUA



Nicaragua's coastal and marine ecosystems are recognised as some of the most important sea turtle habitats in the Americas. The Pacific coast is home to globally important nesting beaches for hawksbills (*Eretmochelys imbricata*) and leatherback (*Dermochelys coriacea*) turtles (which are both listed as Critically Endangered on the IUCN Red List), as well as two of only nine mass nesting beaches known globally for olive ridley (*Lepidochelys olivacea*) turtles. These sea turtles face multiple threats including direct capture (for their meat and shells), poaching of their eggs from nesting beaches, accidental snaring in fishing nets, ingestion of marine debris and other pollutants, and damage to their coastal nesting habitats and foraging grounds.

FFI has been working alongside partners to safeguard sea turtles in Nicaragua since 2002, through capacity building, strategic planning, public awareness campaigns, monitoring and scientific data collection. Local capacity to monitor, protect and patrol nesting sites has been

developed at five key locations. This has significantly reduced the threats posed to nesting turtles from poaching, and resulted in the protection of over 90% of all leatherbacks nesting in Nicaragua and 50% of the known nesting population of Eastern Pacific hawksbills. Close to 70,000 olive ridley turtle nests were protected on one mass nesting beach during the 2014/2015 nesting season alone.

Protection efforts continued during the 2015/16 nesting seasons and into the 2016/17 season, with beach patrols involving park rangers and Government staff preventing poaching of adults or eggs. This year, workshops were held at two locations to provide refresher training for personnel involved in the patrols and hatchery management. Additional turtle protection was also carried out at sea off the coast of Chacocente to minimise turtle by-catch, through a surveillance committee involving fishers, the navy and the Government's Wildlife Department.

In parallel, we have continued to work with communities to develop economic alternatives to the harvesting of turtle eggs. As part of efforts to strengthen the long-term sustainability of the programme, a volunteer tourism initiative has been initiated at one of the project sites, which generates revenue to underpin the ongoing costs of community patrols. Tourism options at Chacocente, as well as the well-being of park staff, were supported in 2016 through the provision of a reliable fresh water supply at park headquarters.

More broadly the project has continued its national awareness campaign to reduce demand for turtle eggs, as well as communicating scientific findings and engaging with policy makers and relevant regional initiatives to advocate for the improved management and protection of these species.

While it is still too early to be able to determine the impact of this work for turtle population recovery, we are seeing positive trends for olive ridley turtles. Unfortunately, however, the regional population of leatherbacks continues to decline. Our engagement in the Eastern Pacific Leatherback Conservation Network allows us to understand our leatherback turtle data from Nicaragua in the wider regional context, and to collaborate with other groups to strengthen protection for the species throughout the Eastern Pacific. Our work within Nicaragua's Coral Corridor (see pg.16) reinforces our turtle conservation strategy and will help tackle the wider threats faced by turtles from fishing activity in their nearshore feeding and breeding grounds.

SUPPORTING MARINE CONSERVATION EFFORTS IN CUBA



Cuba's rich terrestrial and marine biodiversity is unmatched within the Caribbean region. FFI has worked in Cuba through granting schemes and has a number of in-country relationships with partner institutions, but has not to-date had a significant regional programme of work in the Greater Antilles. The recent trends towards liberalisation in Cuba and the thaw of Cuban-U.S. relationships could spell significant changes in the tourism and fisheries sectors on the most biodiverse island in the Caribbean, with the potential for dramatic impacts on many pristine marine and coastal habitats and the species that inhabit them.

In 2015, Arcadia funding supported initial in-country scoping activities within Cuba to assess the opportunities and needs for marine and coastal conservation, and to identify how FFI might work with, and support, potential partners and projects. These early investigations indicated the potential for FFI to add value to existing efforts around a range of themes including Marine Protected Area (MPA) governance and financing, spatial planning to manage the threats to biodiversity in seascapes primed for tourism development, and the conservation of flagship species.

Cuban coast. Credit: Mary Rider



Given the uncertain political, social and economic situation that persists in Cuba, we are proceeding cautiously. We are continuing to explore the needs and opportunities for marine conservation, particularly in the east of the country, which is receiving less attention from the Government and

non-governmental conservation community than the south and west.

MARINE CONSERVATION ON GEORGIA'S BLACK SEA COAST



The Black Sea is threatened by over-fishing, pollution and hydro-power dam development, and its marine fauna (which includes six Endangered and Critically Endangered sturgeon species and three cetacean species) is under grave pressure. FFI has been working in Georgia since 2004, primarily focusing on terrestrial issues. However, a recent initial scoping visit was undertaken to assess the need for marine conservation in the country, and opportunities requiring FFI support. This assessment identified an appetite to improve marine management on the Georgian

Black Sea coast and potentially to establish new Marine Protected Areas (MPAs) as well as improve the management of the one existing MPA. We are currently developing a project focusing on common sturgeon (a Critically Endangered species that moves between freshwater and marine habitats) and will use this as a platform to develop other marine projects in Georgia.

RIDGE-TO-REEF CONSERVATION ON HALMAHERA, INDONESIA



Weda Bay in Halmahera has been identified by the Indonesian Government as a priority area for Marine Protected Area (MPA) development, in light of the wealth of biodiversity and the reliance of the local people on healthy marine ecosystems. However, Government funding to expand protection measures in this important area has been lacking. Drawing on our experience of securing marine tenure for communities in Indonesia, facilitation of public-private partnerships, and development of sustainable conservation solutions, we investigated

opportunities for a new project in Weda Bay. Scoping activities were initiated in 2015; however, due to limited local partnership opportunities and a changing context for engagement (linked to emerging mining interests), which has created substantial uncertainty over what can feasibly be achieved in this area, it was decided not to advance this project further at this time.

CROATIA



Funding from Lisbet Rausing and Peter Baldwin enabled the exploration of opportunities for new marine projects and partnerships in Croatia in 2013. Despite the positive engagements and interest from environmental agencies to engage with FFI on marine activities, significant political restructuring and legislative changes were underway in

Croatia as part of their ascension to the European Union. This uncertain political backdrop did not provide a favourable basis for new project development at the time, and development of marine work in that country has not been taken any further.



Sea slug, Myanmar. Credit: Michelangelo Pignani /FFI

IMPROVING POLICY AND PRACTICE

OUR APPROACH

Whilst Marine Protected Areas (MPAs) are vital as refuges for biodiversity, they will not, on their own, achieve sustainable ocean management. Currently only around 4% of our seas and oceans are protected by MPAs, yet the threats are global and damage occurring outside these protected areas affects the marine biome as a whole. There is therefore a need for approaches that address the connected nature of ecosystems and the cumulative impacts of human uses. The trend on land is towards broader partnerships between governments, businesses and interest groups, and towards significant policy shifts that can drive real change in the enabling environment for conservation and incentivise protection and sustainable use.

We have already begun to influence national fisheries policies and management in some of our countries of operation, based on existing governmental relationships and the experiences we bring from site-level operations. Building on our success in incentivising and influencing local reforms that reduce damaging fishing practices or overfishing, we have expanded these engagements, with a particular focus on reducing damaging fishing practices (such as bottom trawling for shrimp) and strengthening

regulatory mechanisms to tackle illegal fishing in domestic waters. In particular, we see the provision of well targeted and highly credible information as a key role for FFI in the policy arena. We have also supported local NGOs to lobby for improved policies, and have collaborated with local and international partners with expertise in policy issues, lending our voice to issues of strategic relevance to our overall marine aspirations.

Many business sectors have serious impacts on the coastal and marine areas where FFI is working to conserve biodiversity. In view of the growing evidence that sustainability makes good sense for both businesses and the environment, we have identified leverage points to influence corporate marine responsibility in three sectors: fishing, oil and gas, and plastics. In particular, over the past six years, we have become a leading player in the campaign to reduce microplastic pollution in the UK, with a reputation for providing well-researched and credible data and non-confrontational, constructive engagement with industry. We are already gaining significant traction on our two focal microplastic issues - microbeads and plastic pellets (see pg.32).

PROJECT OUTLINES

REDUCING THE EXTENT AND IMPACT OF DESTRUCTIVE SHRIMP TRAWLING PRACTICES



Bottom trawling for shrimp and prawn is a critical issue within the wider problem of unsustainable industrial fishing, due to high levels of by-catch, physical impact on habitats, and conflicts between the industry and artisanal fishers. These impacts are widespread, and are recognised and reported by all regional teams within FFI.

In light of the impacts, a number of countries have implemented or are considering a partial or total ban on bottom trawling. These measures have been applied with varying levels of success, depending on the national context. Development funding from Lisbet Rausing and Peter Baldwin in 2011 allowed FFI to compile lessons learnt and recommendations from these global experiences as part of efforts to inform countries and help them avoid, and plan for, common pitfalls. Building on this work, FFI is now working to support local governments, NGOs and community partners in Costa Rica and Ecuador to implement restrictions or bans on shrimp trawling activities, while also ensuring there are effective monitoring protocols established to document the benefits of these measures for local biodiversity and ecosystem recovery.

A trial no-trawling zone was established by this project in Costa Rica in 2011, and extended indefinitely by the Government in 2013, as a direct result of efforts by our local partner to measure and communicate the remarkable recovery of biodiversity in this area following the cessation of trawling activity. Work with artisanal fishers to trial limited shrimp catching using sustainable methods (nets) has helped to establish the initiative as a visible flagship for the argument that prohibitions on bottom trawling can both foster sustainable development as well as restoring marine ecosystems. This work put FFI and partners in a position to strongly advocate for a wider ban on bottom trawling and to support policy and regulatory reforms at a national level. This is now being taken forward through a separate initiative (see pg.29).

In Ecuador, national policy changes have paved the way for the elimination of bottom trawling for shrimp, with the exception of one localised fishery. This project is providing critical support to government partners to understand and document the socio-economic and biodiversity impacts associated with the implementation of the ban. It has resulted in closer collaboration between fisheries and MPA authorities, the participation of government representatives in monitoring, and the sharing of experiences between Costa Rica and Ecuador.

Data gathered from two MPA sites in Ecuador where the ban is in place indicates higher abundances of two commercially important species that have been studied (starry grouper (*Epinephelus labriformis*) and yellow snapper (*Lutjanus argentiventris*)), following the cessation of bottom trawling in 2012, pointing to initial ecosystem recovery. Anecdotal evidence from artisanal shrimp fishers indicates improved shrimp catches, and initial results from a socio-economic survey produced this year have shown few perceived negative impacts of the ban; however, there is a risk of artisanal fishers capitalising on the prohibition of large-scale trawlers and starting to use trawling methods from small boats, an issue which would require further regulation.

Relationships with government institutions in Ecuador have remained challenging this year, due to multiple changes in key staff and a lack of consistent commitment and participation in project activities (linked in part to budget reallocations). A briefing document for government partners on the ecological and socio-economic impacts of shrimp trawling is in preparation and is expected to generate further debate on management improvements for this fishery.

Artisanal fisherman. Credit: Paul Colley



TOWARDS NEW NATIONAL POLICY ON BOTTOM TRAWLING FOR SHRIMP IN COSTA RICA



Bottom trawling for shrimp is the most damaging fishing technique used in Costa Rica, posing a critical threat to biodiversity through physical damage to seabed habitats, and to species (particularly turtles, rays, sharks, lobsters) caught as incidental/discarded by-catch. In a landmark decision in 2014, the Constitutional Court in Costa Rica ruled that bottom trawling was considered to be 'unconstitutional', and prohibited the issuing of any new fishing licenses unless and until trawlers could change their methods to avoid impacts to habitats and species. This prompted national dialogue to identify how the fishing industry might be better organised and managed to avoid impacts, with a view to generating a new national policy.

The foundations laid by the Arcadia project in Costa Rica (see pg.28) put FFI and local partners in a strong position to influence and inform the reform process, and led the Government to request our support to ensure that future decisions about the regulation of destructive shrimp trawling practices are informed by strong ecological, social and economic considerations, and are based on effective consultation.

In 2015 our project partner CoopeSoliDar RL facilitated a government-led process of dialogue, aimed at producing a new regulatory framework for sustainable shrimp fisheries. Hundreds of stakeholders representing fishing, tourism, conservation and academic sectors met regularly to discuss and propose elements of the policy and its guiding principles. Draft legislation was developed and submitted by the President's Office to the Legislative Assembly, where it is currently under consideration. If approved, the draft law would pave the way for significant scientific, economic and social reforms across the entire shrimp fishing sector (not just trawling), which would include controls on sizes, quotas and seasons for different shrimp species, the restriction of trawling activity to certain zones, limits on by-catch, requirements for

monitoring, and improved working conditions for people employed in shrimp fisheries and processing. The details of these measures are to be defined in regulations and will form the framework against which applications for new shrimp fishing licenses will be evaluated. The project has also changed how the Government involves different sectors, and the public, in marine decision making. The forum that was developed to address shrimp fishing has continued to operate during 2016, and will now be used to discuss the controversial topic of shark conservation and sustainable use.

In parallel, the project has helped partners undertake studies to address knowledge gaps, generating critical information on the socio-economic impacts of the bottom trawling industry, which has been provided as an input to the policy process, and used in strategic communications with legislators and the media. This has led to greater awareness of the issues among the Government, legislators and the general public. Four communities are being supported to assess the impacts of the fisheries management measures and, during 2016, an innovative fish traceability system was introduced at one pilot site, Tarcoles, to provide data to demonstrate the positive effects of the cessation of bottom trawling.

Through this project FFI has provided advice, raised questions and commented on draft documents, thereby helping to shape the reform of national policy while respecting the national leadership. We have developed a good relationship with the fisheries authority, who are keen to receive our ongoing inputs to other aspects of national fisheries policy and management, and we are currently exploring ways that we can contribute further.

SUPPORTING SCOTLAND'S FIRST DEMONSTRATION AND RESEARCH MARINE PROTECTED AREA, FAIR ISLE



Scotland has the longest coastline in the UK, and this harbours some remarkable cold-water biodiversity, as well as being home to globally significant populations of seabirds. Scotland's waters have been significantly

affected by the use of bottom trawling and dredging in vulnerable inshore habitats, damaging the very habitats that are vital as nurseries for juvenile fish, and which also harbour species of European importance.

"FFI has opened doors, refined the Fair Isle proposal and brought to it technical expertise we lacked and brought on board stakeholders who were previously unwilling to engage. These elements were barriers the isle community had not previously been able to overcome."

Nick Riddiford, FIMETI



View of Fair Isle. Credit: Tommy H Hyndman

The mobile fishing sector has traditionally been very politically strong in Scotland, with few other voices providing the Government with an alternative message. Our support to Sustainable Inshore Fisheries Trust (SIFT), Community of Arran Seabed Trust (COAST) (see pg.36) and emerging community groups (see pg.37) is part of a wider programme of work attempting to rebalance the messages that the Government receives about the values placed on inshore waters, and thus the range of management options that should be considered.

However, political change over the last five years has led to a policy opportunity with the Scottish Government, with community empowerment being prioritised as part of its platform for reform. This is coupled with a growing recognition of the shortfalls in current fisheries management practice, after years of lobbying by a range of different environmental organisations. Over the last five years, Scotland has been through a process to define and plan a network of Marine Protected Areas (MPAs) in Scottish waters in line with EU obligations, including sites proposed by third parties such as NGOs and community groups.

Scottish legislation includes a provision – which has not been tested until now – for third parties to propose sites that do not necessarily meet the strict requirements of the national network as Demonstration and Research MPAs, where progressive marine management approaches can be tested. Through our ongoing programme of work in Scotland (see pg.37), FFI has worked with the Fair Isle Marine Environment and Tourism Initiative (FIMETI), a

community group who have been campaigning for an MPA for their waters for over 20 years. FFI helped FIMETI develop and advance their proposal to meet the criteria of a Demonstration and Research MPA, and led the process to develop consensus support for the proposal from other stakeholders (including Government and fishers). The proposal aims to improve marine management practices within a 145,000 hectare area around the island to safeguard the seabird populations that are critical to the island's tourism-based economy. The Fair Isle MPA finally came into force in November 2016, following an announcement in October in which the Scottish Environment Minister formally recognised FFI's role in the MPA's development. This Demonstration and Research MPA is the first of its kind in Scotland, and the first site to devolve MPA management responsibilities to a non-fishing community group, through a formal co-management agreement.

FFI will continue to support partners in 2017 to develop appropriate research and effective management for the site – and to provide a ground-breaking model for community-led and managed MPAs in Scotland as the basis for replication at other sites. This work is a logical next step for our growing programme of work in Scotland, and is expected to strengthen the recognised role and contribution of FFI in supporting wider processes for marine conservation planning and fisheries reform.

Area of conservation impact: 145,000 hectares

DOCUMENTING THE IMPACTS OF NO-TAKE ZONES ON FISHERIES, FIRTH OF CLYDE, UK



Extractive fisheries have caused significant declines in native marine biodiversity and habitats in Scotland, resulting in the collapse of key white fish fisheries (which are no longer commercially viable), and a reliance on species much lower in the food chain, which are gathered using destructive fishing practices. One area where this impact has been felt most keenly is the Firth of Clyde, where the Community of Arran Seabed Trust (COAST) worked for over a decade to campaign for the establishment of a No- Take Zone (NTZ) at Lamlash Bay.

Between 2011 and 2014 FFI supported the University of York to undertake a multi-year monitoring programme in the Lamlash Bay NTZ – the first and only fully protected marine reserve in Scotland, and the only marine reserve in the UK that was originally proposed by a local community and which bans all extractive uses. The research sought to establish the rate, trajectory and recovery of commercially important marine species following the cessation of all forms of fishing.

Dive survey data and underwater video footage collected over a four-year period has generated critical evidence of ecosystem recovery, with the number of species, number of individuals and overall biodiversity observed inside the NTZ greater than the surrounding area. This includes commercially important species such as cod and haddock, which are considered largely absent from the Firth of Clyde due to overfishing.

Habitats inside the NTZ are noticeably more complex than the surrounding fishing grounds, hosting abundant populations of maerl, sponges, feather stars and seaweeds.

The evidence gathered through this work shows the applicability of closing areas to fishing as a crucial management tool to provide both biodiversity conservation and fisheries benefits. The study directly informed the successful campaign by COAST to establish a new South Arran Marine Protected Area (MPA) (one of 30 sites designated in July 2014), informed their arguments for more effective management of this site (approved February 2016), and has provided the basis for ongoing ecological monitoring within the NTZ. Strategic communication of the study results through five peer reviewed publications and via mainstream media channels is encouraging consideration of the costs and benefits of protection in future management decision making. This work has also catalysed our wider programme of ongoing work to support coastal communities in Scotland to engage with marine protection (see pg.37).

Area of conservation impact: 240 hectares

Beach on Arran. Credit: Kerri Whiteside/FFI



IMPROVING POLICY AND PRACTICE TO REDUCE PLASTIC POLLUTION



Development funding from Lisbet Rausing and Peter Baldwin in 2011 enabled FFI to evaluate the threats posed to marine ecosystems from plastic pollution and to develop a strategy to address the issue of microplastic particles directly entering the oceans.

With this initial investment, FFI successfully leveraged further funding in 2012 from a private trust to enable us to advance a targeted programme of work on marine plastic pollution. Following the recruitment of a dedicated staff member, a clear action plan was developed setting out how FFI could bring about change on this issue and specifically reduce the volume of microplastics from avoidable (industry-linked) sources finding its way into the sea.

From these beginnings, FFI has established a leading role as the first biodiversity-focused organisation to identify the risk to marine life and the food chain from microplastic pollution. Research has since proved that microplastics concentrate persistent organic pollutants on their surfaces, and can be directly ingested by marine life at the base of the food chain (including plankton and other filter feeders).

Early outputs from this work included the development and launch of a Good Scrub Guide⁴ and collaboration on the Beat the Microbead campaign⁵ to focus attention on the issue of unnecessary use of plastic microbeads in cosmetics and personal care products. These plastic beads are designed to be washed down the drain but pass directly through sewage treatment works into the marine environment. In addition, FFI worked to engage with the plastic production industry to improve uptake of good practice guidelines for handling raw plastic pellets, a frequently reported pollutant that reaches the sea through poor industry practice.

FFI's strategy on microbeads initially focused on eliciting voluntary commitments from cosmetic brands to eliminate microbeads from their products. Over a three year period, the issue grew in prominence, culminating in a high-profile advocacy campaign led by a coalition of four NGOs (FFI, Greenpeace, Marine Conservation Society and EIA) for a UK-wide microbead ban, based on FFI's credible and well-researched evidence. Following an enquiry by Parliament's Environmental Audit Committee (at which FFI presented oral evidence) and intense media pressure, the UK Government announced a ban on microbeads in cosmetics

and personal care products in September 2016. In addition, the Government clearly took on board calls from the coalition to consider other sources of microplastic (e.g. from other consumer and industrial products) and this has been built into a consultation around the ban.

This is a major victory which, over time, will have a significant impact on plastic pollution in UK waters, and could provide a legislative framework that may help other governments take similar measures. FFI undoubtedly played a crucial part in this, with the report from the Audit Committee specifically recommending that any ban on microbeads "*should follow the principles set out by Fauna & Flora International around universality and consistency*"⁶. There is still work to do to ensure that the legislation is rigorous and practical, and the project team also continues to work with international brands on their voluntary commitments on microbead use outside the UK, to start to reduce this damaging pollution in other areas of the world.

Our work to prevent the loss of raw plastic pellets to the ocean has also developed significantly over the last year. FFI convened a new coalition of NGOs working on this issue across Europe to increase collaboration and achieve greater traction and impact. Work with industry leaders and trade associations (including the British Plastics Federation and Plastics Europe) has led to 54 UK-based plastic producers and users and 22 multi-national companies signing up to best management practices to reduce plastic pellet pollution.

FFI has also worked with Fidra, Plastic Soup Foundation and a group of ten other NGOs from across Europe to collate information on pellet loss from multiple locations across six countries (England, Scotland, France, Italy, Norway and the Netherlands). The findings from this research were presented to a broad representation of the European plastics industry this year at an industry-NGO meeting in June, and were also shared with policy-makers in the European Commission and OSPAR (the Convention for the north-east Atlantic marine environment). The issue is gathering momentum both within the corporate sphere (including promising dialogue on auditing pellet loss in the supply chains of three major UK supermarkets) and at the regulatory level, with interest expressed in the development of European-wide legislation, and new opportunities for traction on this issue emerging.

⁴ <http://www.fauna-flora.org/initiatives/the-good-scrub-guide/>

⁵ <https://www.beatthemicrobead.org/en/>

⁶ House of Commons Environmental Audit Committee (2016). Conclusions and Recommendations. Environmental impact of microplastics – Full Report. <http://www.publications.parliament.uk/pa/cm201617/cmselect/cmenvaud/179/17908.html>

SUSTAINABILITY RATING FOR THE FISHERIES SECTOR



Despite the significant threat posed to marine ecosystems by over-fishing, efforts to achieve change within the fisheries industry have had limited success to date. In 2012, FFI and partners - the North Sea Foundation, Synnervate, and Gaia Values – launched an innovative pilot project to harness the power of the financial sector as a means to improve the sustainability of operations of the fishing industry at scale. Through this project, the team developed and launched the Sustainable Seafood Finance (SSF) tool, providing financiers with the information they need to evaluate sustainability performance and catalyse improvements in the fishing companies in which they invest.

Using market research into the 50 largest seafood companies and their financiers, FFI has continued to engage with financial institutions in 2015 and 2016, (particularly in Asia and, notably in 2016, with UBS Hong Kong and with Aviva investors) to improve their understanding of how the seafood sector operates as well as the risks they are exposed

to by financing unsustainable seafood production. FFI is also discussing the Sustainable Seafood Finance (SSF) tool with the UN Principles for Responsible Investment unit.

Uptake of this work has been hampered by the very limited transparency and disclosure within the seafood sector, the relatively small seafood portfolios held by financial institutions (and the lack of awareness of risk inherent in such investments), and the changes within the sustainability landscape towards divestment rather than performance improvements. Signs of a tougher stance on illegal fishing by some governments may mean the issue gains more traction with the investment community, and we will continue to feed into relevant fora, promoting the tool as a way to reduce investor risk and use private sector finance to leverage change.

MARINE STEWARDSHIP INITIATIVE



To meet the world's increasing demand for energy and resources, offshore and deep-sea fossil fuel extraction is growing, posing serious threat to marine wildlife and ecosystem health. FFI's Business and Biodiversity team has developed new approaches and methodologies to assess risk and apply global best practice principles of avoidance, minimisation, mitigation and offsetting of potential impacts within marine environments. Through engagements with corporate design, engineering and construction teams, there has been the opportunity to integrate marine biodiversity considerations into their operations, ensuring a more sustainable approach to working in sensitive marine habitats. These approaches have been applied to operations in offshore coral reef and deep water habitats in northern Mozambique; Bentuni Bay, Indonesia; Gabon; and Congo Brazzaville.

In response to a recognised gap by the industry, finance sector and conservation organisations alike, FFI has developed specific guidance and recommendations for oil and gas companies on how to identify and mitigate the impacts of their operations on marine biodiversity and ecosystem services. The document has been developed in close collaboration with partners and was reviewed by a number of leading oil and gas companies to ensure its relevance, and to build appetite for use.

The *Good Practice Guidance for Oil and Gas Operations in Marine Environments*⁷ was launched in September 2016 at a workshop at the World Conservation Congress and generated considerable interest from the industry, conservation and finance sectors.

⁷ www.fauna-flora.org/wp.../FFI_GoodPracticeGuidance_FINAL.pdf

Crab caught in a net. Credit: Paul Colley





Starfish on seabed, Cambodia. Credit: Paul Colley

The guidelines have the potential to influence both corporate policy and operational practice relating to marine biodiversity and ecosystem services, in time reducing the threats posed to marine habitats and species from this sector.

Engagement with international financial institutions (which fund a large proportion of oil and gas operations globally) has started, with the aim of encouraging them to

use the guidelines to guide capital investments into more responsible marine oil and gas projects. In parallel, the FFI team has continued to explore how the oil and gas sector could engage with Marine Protected Areas (MPAs) in the seascapes in which they operate, for example helping to support MPA management.

IMPACT INVESTING FOR MARINE CONSERVATION IN ACEH, INDONESIA



Global marine conservation and management efforts are critically limited by uncertain or inconsistent funding prospects, and there is a need to improve the diversity and longevity of funding sources underpinning conservation initiatives. FFI is exploring opportunities to catalyse increased investment in conservation by the private sector by developing and testing innovative financing mechanisms, in particular through impact investment - a form of socially responsible investment made into a company or organisation with the intention of generating measurable social or environmental benefits alongside a financial return.

In 2014, FFI started a new pilot project to test the potential of an impact investment approach to incentivise more sustainable practices in fishery-based businesses in Simeulue Island, Aceh, by driving capital into businesses that take steps to minimise their impacts on biodiversity. This work builds on and seeks to reinforce FFI's work with partners on Marine Protected Areas (MPAs) and Locally Managed Marine Areas (LMMAs) in the area (see pg.20).

The experimental project developed a good understanding of the fisheries sector and markets in Simeulue, and how impact investment could reduce the impacts of LMMAs on local businesses. However, a detailed assessment of 74 local business operations revealed that none had the accounting or governance capacity (termed

'readiness') that would allow them to manage an impact investment loan to the required standard, and significant further investment would be needed to develop this capacity before impact investment could become a viable tool in this location.

The project provided initial capacity to improve the fisheries sector in Simeulue, including targeted awareness-raising on sustainable fishing practices and training in business skills such as financial reporting and cash flow management, and has stimulated greater coordination at the local level (e.g. engagement between businesses, local government and fisheries cooperatives). However, the decision was made not to proceed further given the real constraints to mobilising impact investment funding where baseline capacity is so low.

We are using the lessons learned from this project to inform our wider programme of work in Aceh (see pg.20) and our work around environmental markets. In 2016, findings from this project were fed into a new Coalition for Private Investment in Conservation, an IUCN-led initiative seeking to create opportunities for return-seeking private investment in conservation, which was launched at the World Conservation Congress in September.



Dive team in Myanmar investigate recent findings. Credit: Paul Colley

STRENGTHENING PARTNER CAPACITY

OUR APPROACH

Many of the highest biodiversity marine areas lie within developing countries that have limited technical, human and financial resources to contribute to their effective management. Despite this, the most effective and long-term solutions for safeguarding species and habitats lie in local hands; strong and effective local, national and international institutions are the key to successful conservation.

FFI is committed to identifying organisations within our regions of operation that can have the greatest impact for marine conservation and assisting them to reach their full potential. We support a diverse range of partners (government agencies, NGOs, academic institutions and community-based organisations) to access the technical and financial resources they need to deliver conservation.

Targeted training and mentoring has been provided to 26 in-country partners over the last year, including government institutions (e.g. in Cambodia and Myanmar), civil society organisations (e.g. in Turkey, Scotland and Cape

Verde) and community groups (e.g. in Tanzania and Honduras). We have also started to test how we might support emerging local champions for marine conservation - individuals who can spearhead future initiatives in their own countries.

We have also continued to build our own internal capacity for marine conservation, through training, learning from partners, and exchange and mentoring across the global learning network. The Arcadia review has been a particularly important source of learning and reflection during this year.

PROJECT OUTLINES

STRENGTHENING COMMUNITY INSTITUTIONS IN THE FIRTH OF CLYDE, UK



As part of FFI's work in the Firth of Clyde, we support two local institutions to deliver and advance effective marine conservation in the locality: COAST and SIFT.

COMMUNITY OF ARRAN SEABED TRUST (COAST)

The local community group Community of Arran Seabed Trust (COAST) campaigned for the establishment of the No-Take Zone at Lamlash Bay on the Isle of Arran in Scotland (see pg.31) and are involved in the enforcement of this site. FFI has supported COAST in developing their institutional strategy and governance systems in order to advance their ambitions to establish a wider Marine Protected Area (MPA) around the south of Arran, and to help other local communities replicate similar approaches to the management of their seas.

In July 2014, COAST's proposal for the South Arran MPA was approved by the Scottish Parliament and the site was formally designated. Further consultations and efforts by COAST in 2015 to promote the effective management of the new MPA, led to the approval of comprehensive Marine Conservation Orders⁸ that prohibit dredging and limit trawling activities within the MPA. These progressive and ground-breaking measures, which represent a significant revision from those originally proposed by the authorities for this site, were upheld by the Scottish Government's Committee for Rural Affairs despite strong lobbying efforts by the fishing industry. This is a significant achievement, indicating that the concerns of a wider group of stakeholders are being acknowledged within marine management debates in Scotland. In addition, COAST received valuable public recognition when its Chairman Howard Wood was awarded the prestigious Goldman Environmental Prize in 2015, following FFI's

⁸ Marine Conservation Orders are provisions under the Marine (Scotland) Act 2010 that enable Scottish Ministers to ensure the conservation of nationally important marine natural and cultural heritage.

nomination. FFI's partnership with COAST continues to evolve as the organisation strengthens. During 2016, FFI provided technical and fundraising advice as needed, and worked closely with COAST to deliver joint actions through the Scottish MPA project (see pg.37). The work of COAST demonstrates how pragmatic community or NGO approaches can achieve gains that complement wider governmental processes. This is resulting in a growing awareness of community rights in marine conservation, and an increased engagement from this sector in marine management. COAST was a key player in the community workshop we organised in May this year (see pg.37), sharing their experiences and providing inspiration for other groups seeking to embark on a similar journey.

SCOTTISH INSHORE FISHERIES TRUST (SIFT)

Also in the Firth of Clyde, FFI supported the Scottish Inshore Fisheries Trust (SIFT) to strengthen their institutional capacity, and provided technical input to the SIFT steering committee. Our support has helped SIFT establish the required structures and funding to advance their planning and lobbying for alternative, sustainable models for fisheries within the Firth of Clyde.

In 2015, SIFT submitted an ambitious draft Regulating Order to Marine Scotland, as a means to introduce sustainable fisheries management in the Firth of Clyde. This innovative but controversial approach to zonation of the Clyde and restriction of dredging and bottom trawling did not gain the expected political traction and was rejected by the Government, in part due to a change in minister after the May 2016 Scottish elections.

Arran. Credit: Kerri Whiteside/FFI



However, SIFT is now in a strong position from which to campaign for wider-ranging changes in Scottish fisheries legislation, and FFI has since been working with them to think through their strategic priorities and approach going forward.

Both SIFT and COAST have undergone significant

organisational developments since the start of the project. The Arcadia review this year provided the opportunity for reflection on the value of the partnership with FFI, and both organisations have expressed their strong appreciation for the relationship and the ongoing mentoring support provided.

IMPROVING CAPACITY FOR EFFECTIVE MPA (MARINE PROTECTED AREA) DESIGNATION AND MANAGEMENT IN SCOTLAND, UK



Building on existing partnerships in Scotland, FFI and the Community of Arran Seabed Trust (COAST) (see pg.31) embarked on a new joint initiative that aims to ensure coastal communities are effectively represented in inshore marine conservation, and that community impacts (beyond fisheries) are considered in governmental decision making. The aim is to create a network that will enable peer-to-peer support between communities to advocate for sustainable management and appropriate protection of the inshore resources upon which they rely. This project seeks to build on lessons from COAST's success in bringing about community-led protection of a marine site in Scotland and to offer bespoke support to other communities with similar ambitions, to help them realise their goals.

Following the recruitment of a Marine Community Support Officer in 2014, the project actively engaged with a series of local groups around Fair Isle, the Loch Sunart to the Sound of Jura MPA, and the Wester Ross and Summer Isles MPA – all of which have aspirations to improve the management of marine habitats and species in their localities (with either agreed or proposed MPAs). A range of other local groups now routinely approach the Community Support Officer for advice and guidance, and new relationships have been established in 2016 with groups from the Isle of Skye, St Abbs and Eyemouth, and the Small Isles.

By enabling these local groups to become more organised and strategic in their advocacy efforts, and providing direct assistance to help communities access political processes, the project has helped to successfully influence government decision-making around the management measures to be applied within specific

MPAs. As a result, these are more progressive and will reduce threats to sensitive habitats and species from damaging fisheries activities. For example, there are now bans on scallop dredging in the Wester Ross MPA and the South Arran MPA, along with increased closures to trawl fishing in these two sites and the Loch Sunart to the Sound of Jura MPA.

During 2016 the project also supported local groups at Wester Ross and Skye to undertake biodiversity surveys to better understand the biodiversity and baseline health of sites, as a basis for future monitoring. The project also provided crucial support to the Fair Isle community to allow them to move forward with their ambition to secure Scotland's first Demonstration and Research MPA, which was designated by the Scottish Government in late October 2016 (see pg.31).

Whilst inputs from a range of different organisations and campaigns underpin the Government's decision to strengthen proposed management measures in these MPAs, effective organisation from within these communities has been recognised by the Scottish Government as an important influence. Over the past two years, the Government has shown both increased awareness and support for appropriate marine conservation and management models that better reflect broader community needs and aspirations. There has also been an increasing realisation of the potential for local partnerships to help the Government deliver effective marine management against a backdrop of decreasing state resources. FFI's role in facilitating this community engagement has been recognised, and this year two key agencies have invited us to participate in major government initiatives on communities and MPAs.

With the aim of creating a self-supporting network of communities, the project has increased its focus on actively supporting linkages between groups, so that they can not only work together to share experiences and solve mutual problems, but also develop a collective voice to raise issues with government. In May the project held a Marine Communities Workshop, bringing together 30 representatives from eight local community

organisations, along with participants from relevant government agencies and NGOs, for a weekend of experience-sharing and relationship-building. The workshop highlighted the communities' aspirations for a more formal network, underpinned by a website and active engagement, and exchange visits.

COORDINATED COMMUNITY CONSERVATION, TANA LAMU, KENYA



The north coast of Kenya, stretching from the Tana Delta to the Somali border, is an area of global biodiversity significance, characterised by a mosaic of largely intact coastal and marine habitats. This region holds 60% of Kenya's mangrove forests and hosts the country's largest and most important wetland. Collectively, these habitats support a wide array of marine species, including sharks, dolphins, dugongs, and sea turtles. The inshore and pelagic fisheries are particularly important to the livelihoods of the local Bajuni and Swahili peoples, as are the mangrove forests, which have been harvested by certain coastal communities for centuries.

This area has come under increasing threat from unsustainable levels of harvesting of natural resources, increased pollution, deforestation and habitat conversion. In addition to the ecological consequences, these

changes have negatively affected the traditional inhabitants of the area, who have been unable to safeguard their lands from large commercial interests and land speculators (e.g. marine port development).

Development funding from Lisbet Rausing and Peter Baldwin in 2010 helped us to better understand the importance of this area and catalysed the development of competent community institutions capable of effective natural resource management. In addition, the project helped to bring these institutions together into a forceful conservation constituency able to address some of the wider-scale challenges to the north coast environment. This conservancy model draws on lessons from more than 15 years of conservation effort in Kenya by FFI, and is increasingly recognised as an important instrument for community development.

Mangroves on the Kenyan coast. Credit: J A Bruson/FFI



The local institutions are now operating together as Northern Rangelands Trust-Coast (NRT-Coast), linked to the central Northern Rangelands Trust model that has proved successful in terrestrial conservation in northern Kenya. NRT-Coast's efforts have been particularly channelled to the marine management efforts of the Pate Island Marine Community Conservancy.

At Pate, six beach management units have been established, and community co-management plans developed for these in 2015 were implemented during 2016. During 2016, surveillance was undertaken in zoned areas, along with fish stock assessments, restoration and conservation of marine habitats and monitoring. Regular patrols - some in collaboration with Kenya Police, Kenya Forest Service and the State Department of Fisheries - were conducted across the beach management units, and a number of illegal mangrove loggers were apprehended. Patrol information was entered into a monitoring database.

Four rangers from Pate graduated from the Kenya Wildlife Service Law Enforcement Academy this year, and in-situ refresher training for all rangers was also conducted. This ongoing capacity building ensures the rangers are effective in providing security for wildlife, people and property within the Conservancy.

Income to fishers operating under the sustainable management system is being boosted through a 'Fish to Market' programme, which was successfully piloted this year. This introduced better fish storage to preserve catch, and created a price premium for the fishers by adding value through filleting, packaging, and freezing the fish, and subsequent marketing of products to established buyers.

Area of conservation impact: 55,000 hectares

COMMUNITY CONSERVED AREAS, SOUTH KENYA COAST



The south Kenya coast, from Msambweni to Vanga on the Tanzania border, is an area of outstanding natural beauty and biodiversity. FFI has been supporting communities living along the coast to take a greater role in the effective management and care of their marine resources through participatory management and through the diversification and development of sustainable livelihoods (to both reduce fishing pressure and build resilience within marine ecosystems).

Funding from Lisbet Rausing and Peter Baldwin and from Arcadia underpinned FFI's support to a network of nine Community Conserved Areas (CCAs), where we have been facilitating community consultations and helping to develop locally appropriate by-laws to improve fishing practices, delineate strictly protected No-Take Zones, and empower community surveillance patrols. Management plans detailing how the Government and communities

would collaboratively deliver the CCAs were formally approved for two sites and were implemented throughout 2016. These are the first management plans for Community Conserved Areas in the country; one of the CCAs is recognised as a demonstration site for other communities interested in this form of marine resource management.

The project supported the development of robust and accountable governance structures to underpin the long-term management of the CCAs. As a result, communities have a clearer understanding of their roles and responsibilities in promoting sustainable management and have been supported to conduct fair election processes to appoint representatives. Training and learning exchanges have enhanced the operation of management committees and improved knowledge of sustainable fishery practices in order to reduce over-exploitation.

Squid catch. Credit: J A Bruson/FFI



Four communities have continued to actively manage their areas through 2016 and have worked with the authorities to apprehend illegal fishers. They now report a reduction in the use of illegal fishing gears in their areas. Two sites have established agreements with local tour operators to bring tourist visitors to their CCAs, and the revenue generated helps to underpin ongoing patrols and community welfare activities.

Biodiversity surveys, conducted annually since 2010, are generating information on the status of habitats and species in four of the CCAs. A participatory impact assessment showed that some fishers perceive an increase in fish populations, particularly those fishing around the boundaries of one of the No-Take Zones, at Kibuyini. This improvement is attributed to a reduction in illegal fishing due to CCA patrols and the habitat enhancing effects of seaweed farming, which is leading to spill-over of fish into surrounding fishing grounds. Wider ecological monitoring in the project area has reinforced the importance of Kibuyini, which has particularly high coral cover and among the highest fish biomass measurements of all No-Take Zones on Kenya's south coast.

The project has also collected significant baseline socio-economic data from the communities. A third party evaluation conducted within the project sites indicates that communities have an improved appreciation for co-management and a sense of enhanced rights and influence over resources since the inception of the CCAs. The project has also supported a Kenyan Government initiative to link representatives from CCA sites, offering an

important platform for communities to share information and discuss common challenges with CCA management.

This project has provided an important model for the establishment of CCAs on the Kenyan coast, helping to clarify the legal and regulatory framework for these areas. In order to ensure the lessons and experiences are shared, the project has developed a film, a briefing paper for the Government and a summary of lessons learnt, which will be shared with all relevant stakeholders.

"The setting up of the Community Conserved Area has been extremely beneficial as it has improved fish catch, as we now get more and bigger fish. Furthermore, this CCA has enabled us to undertake other income generating activities such as tourism and in particular scuba diving whose proceeds have gone directly to the beach management unit, and by extension our community."

Omari Jabiru Supi, Coordinator – Kibuyuni CCA

"The [CCA] has brought the entire village together, and has been of great assistance to fishers (such as myself) as it has provided us with markets for fish, with modern fishing gear as well as with rescue services whenever a fisherman is in distress. Furthermore, the [CCA] has taught us how to protect fish breeding sites and now we have improved fish catch. I personally have taken my children to school through the assistance of this [CCA]."

Jugwe Hatibu Jugwe, Member – Vanga (Fisherman)

Estimated area of conservation impact: 13,000 hectares

BUILDING CAPACITY FOR MARINE CONSERVATION IN CENTRAL AMERICA



Marine ecosystems in the Central American region are rich in biodiversity, as well as being of great importance to the welfare and livelihoods of coastal communities. However, ecosystem degradation, resource depletion and inequitable distribution of benefits from conservation are causing biodiversity loss, degraded fisheries, conflict over access to marine resources, and livelihood impacts on local communities. These problems are prevalent in Honduras, Costa Rica and Nicaragua.

For each government, it is a priority to restore over-exploited marine ecosystems and strengthen the

capacities of coastal communities both to participate in conservation and to emerge from poverty, through improved fisheries and new activities such as ecotourism. Marine Protected Area (MPA) initiatives in which all parties understand the role they play and are empowered to deliver this (building good governance) should be central to the strategy for achieving both conservation and poverty goals, but current models are ineffective in conserving biodiversity and sustaining livelihoods.



Small islands along the coast of Corcovada National Park, Costa Rica. Credit: Juan Pablo Moreiras/FFI

Through a regional alliance, FFI and partner organisations in Honduras, Costa Rica and Nicaragua worked to demonstrate and promote innovative MPA and resource governance that emphasises biodiversity conservation together with fisheries management, support for local livelihoods, and engagement of coastal communities in decision making and responsible use of resources.

In Honduras, the project helped to leverage government commitment to increase the size of the Cuero y Salado Wildlife Refuge to protect important marine habitats, and catalysed the participation of fishers in management and decision-making. This work has now evolved into a discrete project in this area of the Honduran coast (see pg.17).

In Costa Rica a community-led proposal to create a new marine area with improved management, adjacent to the Cabo Blanco Strict Nature Reserve, was developed and is under consideration by the Government. There is evidence of improving political will to implement participatory approaches, as well as increased support for fishing associations at Cabuya and Cabo Blanco.

In Nicaragua, FFI and its partners worked to highlight marine conservation priorities to the Government, and to support the development of a community-led proposal for a special Marine Zone for Life and Development around La Anciana, which has now been presented to the authorities. This would help to protect important turtle populations in

an area that forms part of the so-called 'Coral Corridor'. This work has evolved into a separate project to support co-management and address destructive fishing practices, particularly blast fishing, within the Coral Corridor (see pg.16).

While governments in the three countries have in principle been supportive of greater community engagement, our experience has been that the adoption of formal collaboration between communities and government is a slow process, and the time taken to grant formal recognition and empowerment (particularly where these are breaking new ground) has constrained the pace of change. The work has reaped rewards, however, by laying the critical foundations for our important new elements of work in Honduras and Nicaragua (see pg.17 and pg.16).

Area of conservation impact:

Cabo Blanco (Costa Rica): 4,800 hectares (awaiting final approval)

La Anciana Marine Zone for Life and Development (Nicaragua): 62,000 hectares (awaiting final approval)

Other areas are now included in reports on *Connecting coastal communities for integrated seascape management in Atlántida, Honduras* (see pg.17) and *Expanding marine conservation on the Pacific Coast of Nicaragua* (see pg.16).



Coral reef. Credit: Paul Colley

DEVELOPING MODELS OF LOCAL INDIGENOUS MARINE MANAGEMENT IN THE PHILIPPINES



The Philippines lies within the Coral Triangle, the epicentre of marine biodiversity. The country contains 9% of the world's coral reefs and has been identified as a marine biodiversity hotspot and a priority for coral reef conservation efforts. In the Philippines, the customary laws, beliefs and practices of indigenous peoples relating to the use of natural resources in their ancestral domains are enshrined in law. Global experiences suggest that this kind of 'tenure' is an important pre-requisite for reducing unsustainable practices in marine ecosystems and providing a mechanism to reduce conflicts between different stakeholders over marine resource use.

This project, which started in April 2012, supported indigenous communities in two sites (General Nakar and Aramaywan) to manage their marine and coastal resources through traditional tenure. As a result, two Indigenous Community Marine Protected Areas were established within the ancestral waters of the Agta-Dumagat and Tagbanua tribes, with management plans including No-Take Zones and enforcement strategies. Financing from visitor fees and fines from infringements was agreed and co-management agreements were signed between the two tribes and the local government. Baseline information on threats and

illegal activities was collected, to enable future monitoring of the impact of these closures in terms of both adherence and fisheries recovery.

This project was the first of its kind in the Philippines, allowing representation of a wider range of stakeholders in the MPA process and creating mechanisms by which Indigenous people's groups could collaborate with NGOs and government departments to support the implementation of more effective marine resource management. The frameworks developed through this project are applicable in other highly biodiverse areas of Palawan and Quezon Provinces, where municipal waters and ancestral waters overlap. This work is now being taken forward by the Center for Conservation Innovation, the independent NGO that has evolved from FFI Philippines, and the models offer scope for replication to influence marine management efforts across a wider spatial scale in the Philippines.

Area of conservation impact: 27,724 hectares

CATALYSING PARTNERSHIPS FOR MARINE CONSERVATION IN BALI, INDONESIA



Bali Province has one of the highest levels of coral species richness in the world, and an associated abundance of marine fish as well as other important marine ecosystems such as mangroves and seagrasses. Marine ecosystems in Bali face significant pressures from tourism and coastal development as well as threats from high levels of trade in marine ornamental species, and destructive fishing practices.

Development funding in 2012 from Lisbet Rausing and Peter Baldwin enabled FFI to identify key conservation needs at a site in northern Bali, and to develop partnerships with two local Indonesian NGOs with specific institutional capacity building needs that FFI was well placed to support and which, if addressed, would enable them to engage in a more meaningful way in marine conservation in Bali.

In 2013 FFI worked closely with these partners and was able to provide them with the relevant support and training to meet their requirements, specifically developing their strategic planning and long-term financial strategy. A review of future opportunities did not

identify significant added value from further engagement at this site, and as such we have not made any further investments to this project.

SUPPORTING MARINE CHAMPIONS THROUGH THE CONSERVATION LEADERSHIP PROGRAMME (CLP)



The marine conservation sector is significantly under-represented in terms of civil society efforts, training and professional development opportunities, and donor funding. Mobilising an effective cadre of new and dynamic marine conservationists and local marine conservation champions is an effective way to grow the enthusiasm and skills needed to drive forward marine protection in some of the countries where it is most needed.

FFI is a founding member of the Conservation Leadership Programme, which champions and provides training, mentoring and career development opportunities to young conservation leaders. Under this framework Arcadia funding has been used to support young marine conservationists through the 'Future Conservationist Award' scheme. As part of this, two teams of young leaders are being mentored and funded to undertake and manage their own projects to overcome threats to important marine species and habitats, and to develop these into larger programmes of work.

Experience from 30 years of the CLP shows that individuals who have received this investment into their early career development very often go on to become successful conservationists, catalysing wider action and becoming significant players in the conservation community within their home countries.

Of the two projects chosen for support in 2016, one aims to characterise a previously unknown coral ecosystem in Cozumel, Mexico, while the other is researching and developing conservation strategies for dugongs in northern Mozambique. One person from each team attended the CLP conservation management and leadership training course and received training in a broad range of conservation-related skills, equipping them to lead further marine conservation efforts in their countries, supported by the very active CLP alumni network (which, because of the length of CLP's operation, now includes very experienced conservationists).

Coral reef dive in Cozumel, Mexico. Credit: Dominic Andradi-Brown



SUPPORT TO THE BLUE MARINE FOUNDATION



We have provided support to the Blue Marine Foundation, an emerging foundation that aims to channel significant private donor and corporate funding into marine conservation. This organisation– which was formed by the team behind the film *The End of the Line* – is using the funds it generates to invest in securing large-scale or high profile Marine Protected Areas (MPAs) that, in addition to promoting biodiversity benefits, simultaneously raise public awareness of marine conservation issues.

In 2010 and 2011, through Halcyon Land & Sea, we provided small core grants to help establish the Foundation. This initial investment helped to leverage a significant grant from a private donor towards the management of the Chagos Marine Reserve. Without this investment it would not have been possible for the Government to have finalised the declaration of this 54.5 million hectare area as a No-Take Zone. In addition, Halcyon's investment in a Development Consultant has helped the Blue Marine Foundation to access further funding. Further details on this collaboration are reported through the Halcyon Land & Sea report.

In 2013 and 2014 we continued to assist the Blue Marine Foundation (BLUE), under the framework of the Arcadia marine programme. Significant in-kind support was provided in terms of staff time, including mentoring on organisational development, governance, and recruitment. A marine specialist was recruited and seconded to the Foundation, to build in house technical skills and capacity and to underpin the strategic

development of its programme of work. We continued to provide technical marine advice and assistance, including ongoing involvement in project development in Belize, and direct support with fundraising. As an outcome of this partnership, the Blue Marine Foundation supported FFI's work in Scotland (see pg.37), and directly collaborated with FFI on an initiative in Belize (see pg.22).

FFI and BLUE continued to maintain a close relationship in 2016 through FFI's participation on the Blue Marine Foundation board. FFI also provided considerable support toward the development of BLUE's work in the Solent, alongside continued fundraising advice and support. BLUE is now a well-established marine NGO with a strong team in place able to continue and further develop its marine conservation work. Over the last year BLUE has actively participated in campaigns to persuade the UK Government to designate MPAs around the oceanic UK Overseas Territories, has continued its projects on the south coast of England (in Lyme Bay and the Solent), and has developed new initiatives in Azerbaijan and Italy.

BLUE recognises the importance of funding provided from Halcyon at a pivotal time in its organisational development as laying the foundations for the growth of the organisation. Details of this partnership are also reported in the Halcyon Land & Sea report.

Area of conservation impact: 54,470,666 hectares

Nicaraguan coastline. Credit: Juan Pablo Moreiras/FFI





Dive team conduct reef study in Myanmar. Credit: Michelangelo Pignani/FFI

BUILDING FFI'S CAPACITY

With support from Arcadia, FFI scaled up its marine programme and is now engaging with and supporting a network of over 88 partner organisations on marine conservation issues, with support from staff across our four regional programmes (Asia-Pacific, Americas, Africa and Eurasia) and from the core marine programme team. Development funding from Lisbet Rausing and Peter Baldwin and the two Arcadia marine grants have enabled critical investments in our internal capacity to design and deliver our marine portfolio of work. It has allowed us to mobilise existing marine experience and expertise, as well as investing in additional technical staff to deliver key roles. Our marine programme is supported and guided by a respected marine scientist who provides central oversight and coordination, ensuring that activities across all four regions are linked into an effective and complementary programme of work.

As part of efforts to enhance sharing of lessons and exchange of experiences across the widely dispersed marine team, we have established an internal marine working group. This group convenes on a monthly basis to provide updates from the field and to share knowledge and good practice. A key output of this group was the development of a strategic document to effectively communicate our work in the marine sector. The group maintains an active knowledge exchange 'hub' through

FFI's intranet, to provide an open and supportive space for staff from across the regions to seek guidance and share experiences and news.

We have continued to improve collaboration between our regional teams on marine issues, through targeted exchange of lessons to improve the design and delivery of projects. For example, our marine manager in Cambodia has this year participated in the Marine Protected Area planning workshop in Myanmar, to share her knowledge and ideas from the similar work in Cambodia.

Our Conservation Livelihoods & Governance team provide support on a diverse range of socio-economic, cultural and gender issues, with projects in Cambodia, Honduras, Tanzania and Nicaragua particularly benefiting from in-country and remote support this year.

Targeted support has also been provided by FFI's Monitoring and Evaluation team to strengthen the logical frameworks of projects and to ensure the development of robust monitoring processes. A new marine team member recruited in 2016 will have a specific focus on strengthening this element of our work (see pg.4).



Clown fish. Credit: Michelangelo Pignani/FFI

2016 has been dominated by work to support the external review supported by Arcadia. This has provided an invaluable opportunity to take stock, self-evaluate and reflect on our work and achievements to date, and also provided significant useful feedback from the consultants themselves, for whom we organised a series of field trips

and internal meetings and/or conversations. Although time consuming – which has caused a hiatus in some other marine programme activities – this has been an extremely valuable, instructive and constructive process for the whole team.

STRENGTHENING THE EVIDENCE BASE FOR MARINE CONSERVATION

Marine management is still a relatively new discipline, and as such it is hard to convince communities, governments and the wider public to commit to changes that may be perceived to involve restrictions, and where the evidence base for longer-term benefits is not yet available. Demonstrating the impact of improved management for people and ecosystems is central to securing commitment to make these improvements. FFI's work to date has collected information on reduced threats and some indications of biological recovery; however there is a need for consistent and robust evaluations of project impacts and wider consequences across the portfolio. This will help build a stronger political and social case for marine conservation within our countries of operation.

Under this grant, we plan to work directly with our partners to help them develop appropriate indicators and monitoring methods to track the outcomes from their work

and the change that can be attributed to their interventions. This evidence and learning would also be used centrally to inform practice both within our project portfolio, and externally to inform the wider processes associated with marine management and policy.

A dedicated staff member within the marine team was recruited during 2016 to take forward this work to improve the evidence base for marine conservation across the portfolio, building strong theories of change, monitoring frameworks and impact assessment processes across our projects and partners. However, as the preferred individual was currently under contract to provide a key maternity cover role within the team, there has been a delay in him taking up the marine monitoring post until the last quarter of 2016. We are looking forward to this programme of work being driven forward in 2017.

COMMUNICATING AND DISSEMINATING OUR WORK TO OTHERS

Communicating news and successes from our marine projects is important for building the profile of marine conservation, and the marine team works with FFI's communications staff to ensure opportunities to share information are capitalised. As described above, evaluating the positive impacts from improved marine management is vital to building support amongst communities, governments and other stakeholders. In addition, we aim to communicate about marine issues and successes more

widely to make the case for marine conservation as both an urgent, and tractable, issue on the wider conservation agenda. FFI's website and social media channels are excellent vehicles for external communications and, alongside use of more traditional print publications, our communications team works to maximise the use of electronic media to share key messages in appealing, widely accessible and easily understood formats.



A fish emerges from a sea anemone. Credit: Paul Colley

Communications staff also regularly help colleagues in our project countries with their national media work, providing valuable capacity building in communication and media skills as well as supporting their efforts to communicate messages on the impacts of marine management.

To date in 2016 we have published 21 marine related news stories or blog posts on our website, supported by associated social media posts. These reached at least 270,900 people. In particular, the increasing interest in the microbeads issue resulted in greater traffic to our marine pages, particularly the [Good Scrub Guide](#) (19,533 visitors to this page alone).

Indeed, our media work played a very significant role in putting pressure on the UK Government to commit to a ban on microbeads in cosmetics (see pg.32). FFI worked with coalition partners to promote the issue to journalists, but FFI's specific role within the coalition was to provide accurate information to back up their stories. The final announcement by the Government of its intent to ban microbeads was significantly strengthened following extended coverage of the issue in the Daily Mail, which was informed by dialogue between the Daily Mail and FFI staff.

The use of video was more prominent in our messaging this year. For example, we shared a short video about the

Koh Rong Archipelago in Cambodia⁹ on our social media channels, with over 30% of views from within Cambodia.

Information or experiences from our marine projects are fed into regional and global dialogue on issues such as marine governance, collaborative management, and enforcement of Marine Protected Areas. This year we participated in several marine and fisheries conferences around the world and hosted a workshop at the World Parks Congress on our *Good Practice Guidance for Oil and Gas Operations in Marine Environments* (see pg.33).

In addition, FFI is one of six UK-based organisations actively participating in a Marine CoLABoration, convened by the Calouste Gulbenkian Foundation, which seeks to enable sharing of experiences between marine focused NGOs, and find collaborative mechanisms to communicate the role of the ocean in human well-being, culture and prosperity in order to engender support for improved marine management. Participation in this group is providing opportunity for collaboration and exchange as well as the co-creation of innovative (and joined up) ideas with other forward thinking UK-based groups working on marine issues both in the UK and globally.

⁹ https://www.youtube.com/watch?v=meq_KYTTuw0.

IN SUMMARY...

This report summarises the results from FFI's marine programme of work since the initial catalytic investment by Lisbet Rausing and Peter Baldwin in 2010, with a particular focus on progress and achievements in 2016. Our programme builds on the three core areas of our marine strategy, which is rooted in FFI's core strengths and experiences. While actual biological impact takes some time to become evident, the report identifies outcomes that should, over time, deliver significant benefits for marine ecosystems and the people who depend on them.

Achieving these outcomes takes time, and this year we have been gratified to see our sustained investment in several of our projects bearing fruit. Significant achievements this year include:

- o official designation of a new 40,500 hectares Marine Fisheries Management Area (MFMA) in Koh Rong Archipelago, Cambodia, the result of over five years support to community and government institutions;
- o designation of a 145,000 hectare Demonstration and Research Marine Protected Area around Fair Isle, Scotland, the first of its kind in the country;
- o approval of a 700 hectare extension to the existing No-Take Zones in Turkey's Gökova Bay, to include important coralline and rocky reef habitats and extensive seagrass meadows, along with a complete ban on purse seining within the inner zone of Gökova Bay MPA (thereby removing an important threat to fish stocks in the protected area);
- o endorsement by Myanmar's Fisheries Authority of three pilot Locally Managed Marine Areas (LMMAs) in

Tanintharyi, Myanmar, which FFI has been developing for the past four years. The proposal is now awaiting final approval by Parliament;

- o community-led temporary closures of octopus fishing grounds in three areas, totalling 436 hectares, in Pemba, Tanzania, following the success of a pilot closure last year;
- o maintenance of minimal poaching of nesting loggerhead turtles on Miao Island, Cape Verde, during a bumper season with over 3000 loggerheads nesting (compared to the usual 900-1,500);
- o negotiation of a significant grant to our partner in Cape Verde, for which FFI's institutional support was cited by the donor as essential;
- o decision by the UK Government to introduce legislation banning the use of plastic microbeads in personal care products, with the potential that this legislation will be extended to include all down-the-drain products.

We are very grateful that this year we have been able to benefit from the review commissioned by the Arcadia Fund, not only providing us with the framework within which to reflect on and evaluate our work so far, but also enabling us to gain constructive input and guidance from independent external experts. Although this resulted in some delays in implementation of our new Arcadia marine grant for 2016-2018, this was an invaluable opportunity to further strengthen our work, and we are now incorporating the recommendations from the review as we take our programme forward into 2017.

Sea slug. Credit: Paul Colley





Credit: Michelangelo Pignani/FFI

IF YOU HAVE ANY QUESTIONS OR
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