



Fynbos flower harvesting. Credit: Juan Pablo Moreiras/FFI

HALCYON LAND & SEA

ANNUAL REPORT
2016

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Chuilexi, Niassa Reserve, Mozambique. Credit: Matt Rice/FFI

EXECUTIVE SUMMARY

Halcyon Land & Sea is a fund established in 1998 by Dr Lisbet Rausing, and joined by Hugh Sloane in 2008, to find innovative and entrepreneurial ways to secure threatened habitats.

The aims of Halcyon Land & Sea are to:

- I. Secure areas of exceptional biodiversity that are unprotected or under-protected and are at risk of destruction or degradation using the most locally appropriate approaches;
- II. Build the local and national capacity to manage these sites into the long term, engaging the local community in this process wherever possible;
- III. Develop mechanisms to underpin the long-term financial sustainability of these sites; and
- IV. Develop an improved enabling environment for site conservation, through strategic interventions at both policy and practice levels.

This report provides an update on all Halcyon Land & Sea projects supported since 1998, with a focus on activity in 2016.

Fauna & Flora International (FFI) is extremely grateful to Arcadia – a charitable fund of Peter Baldwin and Lisbet Rausing, and to Hugh Sloane, for the opportunity to undertake such strategic and long-term conservation. We look forward to continuing this work over the next two years of the current grant period.

A review of Halcyon Land & Sea commissioned by Arcadia took place during 2016, and this provided us with an extremely valuable opportunity to reflect on the progress, achievements and approaches used in Halcyon Land & Sea and across FFI more widely. We are extremely grateful to Arcadia for providing us with this opportunity for self-examination and reflection.

The Halcyon Land & Sea portfolio now includes some 46 projects¹, as well as an additional 33 sites that have been supported through the Rapid Response Facility.

The investment from Arcadia, and co-finance into the fund from Hugh Sloane, has leveraged almost **US \$125 million** of further conservation finance.

¹ Marine projects previously supported through Halcyon Land & Sea are reported as part of the Arcadia Marine Programme and are not reported here,



Forest, Indonesia. Credit: Juan Pablo Moreiras/FFI

PROTECTING LAND

Through Halcyon Land & Sea, FFI secures areas of critical biodiversity through a number of diverse approaches, developed to fit the needs of individual sites and projects. These include site purchase or lease, developing local land stewardship or site management agreements, and putting in place conservation management where this has been absent or weak. We always work in partnership with local conservation agencies and local communities.

Halcyon Land & Sea is extremely selective in its acquisition of sites; it acts strategically by securing key habitats, creating wildlife corridors and bridging essential gaps in site ownership.

To date, Halcyon Land & Sea has actively secured

over **9.5 million hectares** of critical habitat, and has directly contributed to the conservation of over **55.8 million hectares²**, an area almost as large as Kenya.

Halcyon Land & Sea sites are not only important in terms of the wildlife they protect – they also protect important stores of carbon that, if released, could contribute to global warming. Initial calculations made in 2007 indicated that the habitats and soils within the sites at that time had secured around **260 million tonnes of carbon**. If key sites had been destroyed or degraded, up to **204 million tonnes** of carbon dioxide could have been released – equivalent to 37% of the UK's annual CO₂ emissions.

We also award strategic small grants in areas where traditional funding is unavailable, but the threat to priority conservation lands is immediate.

EMPOWERING COMMUNITIES

These projects ensure local sustainable management by empowering local groups to address conservation needs themselves. Halcyon Land & Sea projects always work towards handing over site management or ownership to an appropriate in-country group, with a commitment to provide support until the project is sustainable.

Halcyon Land & Sea projects also work to ensure equitable benefits to local communities through an improvement in the standard of living and through their inclusion in land planning decisions. Where appropriate, the sustainable use of biodiversity and the development of innovative community-based enterprise schemes are encouraged. This is an important component of project sustainability.

SUSTAINABILITY

We consider project sustainability from the start of our work. This involves investments into the capacity of local institutions to be able to manage sites and projects long term. Equally important is the promotion of long-term conservation finance. To this end projects develop innovative approaches to ensure the running costs of Halcyon Land & Sea sites can be underpinned in the long-term, realising the inherent values of natural resources where possible, with the aim that biodiversity can in effect fund its own conservation.

Halcyon Land & Sea did not support any new projects during 2016 due to a hiatus in project development and investment during the Arcadia review process. This reflected the redeployment of staff time to the review, and also a wish to see the outcomes of the review before making any further investment decisions. We request that funds be carried forward for 2017, for which an exciting pipeline of consolidation and new investments is planned.

² This does not include the Chagos marine reserve; Halcyon Land & Sea funding provided to BLUE Foundation helped to secure this area, covering some 54.5million hectares.

MAJOR SITE ACQUISITION AND PROTECTION UPDATES 1998+

Major site acquisition and protection updates 1998-2016	Country
<i>Eurasia</i>	
2014-15 Zarand corridor, Transylvania	Romania
2009-15 Târnava Mare grasslands	Romania
2008-14 Pamir Mountains Initiative	Tajikistan
2002-11 Iberian Lynx Programme	Portugal
2004 Montado do Areeiro	Madeira
<i>Africa</i>	
2011 –15 Chuilexi Conservancy	Mozambique
2010-14 Re-establishment of Southern National Park	South Sudan
2011-2014 Securing vital areas of Renosterveld	South Africa
2008-13 Greater Niassa Reserve	Mozambique
2010-13 Expanding community conservancies	Kenya
2009-12 Sera Wildlife Conservancy	Kenya
2008 Lekurruki Wildlife Conservancy	Kenya
2010 Kwakuchinja	Tanzania
2002-08 Flower Valley	South Africa
2004-07 Ol Pejeta Conservancy	Kenya
2003 Nkuringo, Bwindi Impenetrable National Park	Uganda
<i>Americas & Caribbean</i>	
1998-14 Awacachi Ecological Corridor (including Endesa concession)	Ecuador
1998-2012 Golden Stream Corridor Preserve	Belize
2010-11 Yasquel cloud forest	Ecuador
2001-10 Chacocente Wildlife Refuge	Nicaragua
2003-09 Cristalino State Park	Brazil
2008-09 Estancia La Querencia, Patagonia	Argentina
Total	



View over Zarand corridor. Credit: Lizzie Duthie/FFI

PROTECTING KEY FOREST LANDSCAPES AT ZARAND, ROMANIA

Romania still has one of the largest areas of undisturbed forest in Europe and within this the Transylvania region supports some of Europe's most threatened landscapes. The remaining tracts of forest in the Carpathian Mountains support a wide range of native biodiversity including carnivore populations of European significance (Romania is thought to support 40% of European brown bear and 35% of European wolf populations). The forests are also important in their own right, as large-scale and representative blocks of native European broadleaved and coniferous woodlands. These forests also represent part of a beautiful and culturally rich landscape, where traditional Romanian life is still maintained. The region's valleys have been used for centuries for small-scale agriculture, nestled between heavily forested hills and mountains.

However, over recent years the growth of unsustainable forest management coupled with inappropriate development and agricultural intensification (following the large-scale purchase of smallholdings) are affecting the integrity of these forests and of the landscape itself. The fragmentation of key forest corridors is also affecting the integrity of carnivore populations, and is resulting in increased incidences of human-wildlife conflict, as carnivores provided to help develop this project and to underpin are forced to cross agricultural areas. In 2012 a

Halcyon Land & Sea strategic small grant was the development of a EU LIFE proposal; in 2014 Halcyon Land & Sea funding co-financed the significant EU grant that resulted from this proposal). This landscape-scale project will secure and maintain key areas of forest, ensure site designation under the Natura 2000³ network, and promote sympathetic land management while also addressing livelihood issues for small-scale traditional farmers in the area.

The project focuses on a key forest corridor (the Zarand landscape corridor) in south-western Transylvania, which links the Western Carpathians (including Apuseni Mountains Natural Park) and the Southern Carpathians (including Retezat National Park). The Zarand landscape corridor is 150 kilometres long and averages 20 kilometres wide, covering some 434,935 hectares. This corridor connects two significant forest landscapes of the Carpathians, and is the only zone through which large mammals and other forest-dependent fauna can move between these forest tracts. This connection also ensures the linkage of the Romanian western Carpathians into a chain of forest landscapes north into Ukraine and south-east into the former Yugoslavia.

³The EU-level network of protected areas established under the Habitats Directive and Birds Directive. As a recent member of the EU, Romania is committed to establishing protected areas under the EU Natura 2000 framework.

Around 80% of the Zarand landscape corridor is forested, with old growth stands of broadleaved species such as beech, oak, hornbeam and ash zoning into coniferous stands (including spruce, silver fir and larch) at higher elevations. In the base of the valley people have for generations cultivated the fertile lands around the river courses. Within the forests an abundance of wildlife thrives, demonstrating the diversity that once occurred throughout Europe's forests. As well as wolf and bear, these forests support a wide array of representative forest species including European lynx, wild boar, stone martens, eagle owls, lesser spotted eagles, black woodpeckers and capercaillie.

The project focuses on maintaining forest connectivity within this landscape by restoring habitats at key bottlenecks within the forest, through strategic land purchase of approximately 280 hectares of land, and managed restoration of these and other sites. In addition, the project took on direct management of a key Natura 2000 site within the corridor (Zarandul de Est, which covers 20,315 hectares) in 2014 for a 10-year period, and this now serves as a demonstration model for effective habitat and wildlife protection to inform other land managers and agencies in the region. This work is being delivered primarily through a local NGO partner - Zarand Association. The project brings together 19 different state institutions to work collaboratively across the landscape in a consultation group (a first for Romania, where agencies rarely collaborate).

The project also includes a strong emphasis on strengthening cultural heritage and diversifying local livelihoods, including agri-environment support to communities, and agro-tourism development. In addition, the project focuses on finding solutions to reduce conflict between human communities and wildlife (such as strategies to prevent crop raiding and livestock killing).

During 2016, the **baseline surveys** conducted in 2015 were used to update the standard inventories of the Zarandul de Est site, and further surveys of invertebrates and forest habitat types were completed. A management plan for the site was also developed this year, and will shortly be submitted for formal approval, alongside being incorporated into existing forestry plans within the area.

Five **rangers** operate across the Natura 2000 site, checking for poaching, illegal logging or any other inappropriate activities. The team undertook due diligence on all applications for activities within the site, and 68 permits were issued during 2016; a formal government assessment confirmed that the site's operations met the obligations of custodianship.

The project also worked with four other Natura 2000 sites and a national park within the wider Zarand corridor to ensure habitat connectivity is effectively built into their management plans. Data from Natura 2000 and information on infrastructure development projects in the corridor were collated to help inform **integrated management actions**. A Geographic Information System (GIS) covering the corridor will help to manage these and other emerging datasets.

The project is also working to form **micro-corridors** at critical points within the wider Zarand corridor. In 2016, a further 14.3 hectares of land was purchased for micro-corridors in the Mures Valley, taking the total purchased to date to 18.3 hectares (with a further 116 hectares under negotiation). Non-native, invasive scrub (*Amorpha fruticosa*), which is impenetrable to larger animals, has been cleared and the purchased plots have been mapped. Land purchase has proved challenging, due to problems in identifying ownership, increasing land prices, uncertain legal frameworks and bureaucratic delays.

In December 2015, 414.5 hectares of **Vorta Forest was purchased** – representing a key area of forest within the Zarand corridor that could otherwise have been logged. The forest has subsequently been demarcated and mapped and discussions with neighbouring landowners have been held to establish exact boundaries of forest parcels. Forest management plans are being developed for the site that will take into account the needs of the local communities and current users. With the project's support the General Inspectorate of the Romanian Gendarmerie has set up two anti-poaching units within Zarand, with nine staff operating across two bases, supported by vehicles including a snowmobile.

Beehives. Credit: Lizzie Duthie/FFI





Mitigation measures for motorway development. Credit: Lizzie Duthie/FFI

An area of one million hectares was patrolled during 2016, and 11 cases of illegal hunting or logging were reported; more than 150 snares were removed and charges were brought against two poachers. The gendarmeries are now exploring opportunities to roll out the model at a national level.

The project's **human-wildlife conflict team** helped release two bears caught in snares and responded to six livestock attacks by wolves and averted another incident of a bear attacking livestock. In addition, wildlife conflict has been reduced by the deployment of 44 electric fences, use of chemical repellents and provision of sheepdogs. After two years of work led by the project, a unified protocol has been agreed for the handling of dangerous wild animals, bringing together all relevant statutory agencies, to ensure coordinated responses to such incidents. The project continued to actively engage with a wide range of statutory agencies across three counties to ensure their awareness and support for the project. **Ecological monitoring** continued in the corridor during 2016, including howling surveys for wolves (which confirmed the locations of between three and five wolf packs), and bear scat collection from across the corridor as a source of genetic information on the population. Data on the distribution and abundance of bear, wolf and prey species are being used to develop a biodiversity monitoring strategy for the Apuseni-Southern Carpathian Corridor. The project team has also helped support the Ministry of Environment in rolling out a new methodology to assess and monitor large carnivore populations.

Work continued to assess how easily large carnivores could cross roads that bisect the corridor, to identify where this may inhibit migration pathways through the area.

During 2016 further **recommendations were provided to the Ministry of Roads** in terms of mitigation plans for the new motorway that will bisect the corridor, and meetings were held to discuss plans to upgrade the railway through a parallel route. The team provided recommendations to the Ministry of Environment on aligning forestry practices with conservation and these measures are being incorporated into four forestry management plans and three hunting administration plans in the corridor.

During 2016 a **combined livelihoods and cultural values assessment** was conducted in order to gain a greater understanding of the connections and relationships between local people and nature; as well as information on natural resource use, data was collected on cultural values of nature and underlying tensions relating to human-wildlife conflict and with local administrations responsible for wildlife. The project continued to support the maintenance of **traditional livelihoods** in the corridor (on which the biodiversity and landscape mosaic depends). A milk collection facility helped 40 farmers to sell their milk during 2016, and daily volumes of milk collected have risen from 100 litres (when it opened in 2015) to 300 litres a day; this increased farmers' income by on average 19%, providing market access for milk that previously could not be sold.

The success of this venture has, however, been threatened by the collapse of the local milk purchasing company, and the project is now exploring whether added value could be created by establishing a butter and cheese processing unit to overcome this problem.

The milk collection facility building now also houses a **honey bottling unit**, allowing locally produced honey to be certified for commercial sale. The 3,000 local bee-keepers are recognising that the quality of their honey is underpinned by the variety of different species of plants within the surrounding meadows and forest. Over 110 kilograms of honey was collected in 2016, and is being sold under the 'Zarand' brand. This brand has its own registered logo to help marketing and to establish a premium value for these local products, which are specific and unique to the area (including speciality jams, liqueurs, oils and smoked dried fruits, along with traditional handicrafts and clothes).

The community has also benefited from support from the project to reinstate a watermill, a traditional oil press and a traditional barn, and to bring together information on traditional customs, crafts and costumes; the community is showing increasing pride in **showcasing its traditions and crafts** under the "Zarand" brand. Work is under way

to collect and conserve local varieties of fruit trees with the support of a local botanic garden.

The **capacity of our in-country partner** (Zarand Association) has also grown over the duration of the project, and in 2016 FFI led a process of organisational assessment and strategic planning for Zarand Association. Technical and staff capacity has increased and over the year our local partner has engaged with four additional projects, which also represent a source of co-finance for its activities (totalling over €75,000 in 2016). It has also identified potential sources of statutory funding available once the Zarandul de Est's management plan has been approved. This is in-line with FFI's plan to step back from leading the project after the initial five-year investment, enabling Zarand Association – with its enhanced capacity – to gradually take on the long-term leadership of this work.

Area secured	20,748 hectares
Area of conservation impact	434,935 hectares

TÂRNAVA MARE GRASSLANDS, ROMANIA

The Târnava Mare (Saxon Villages) area of south-east Transylvania covers a landscape of some 125,000 hectares. It is a biodiversity hotspot of European importance, and also provides livelihoods for thousands of farming families. This historic landscape incorporates wildflower-rich lowland pastures and meadows, old-growth woodland and farmed lands. The combination of small land parcels, traditional extensive livestock management systems and low fertilizer inputs, creates a complex and unique habitat mosaic, which is dependent on continued traditional management by small-scale farming communities. This landscape supports an exceptional diversity of species (including many that are threatened at a European level) and is an outstanding example of the type of traditional mixed farming landscape that has disappeared in most of Europe.

Although Halcyon Land & Sea previously provided a grant (in 2009) to the project partner – the ADEPT Foundation – in 2013 we embarked on a new and much more extensive intervention at this site, focused on land purchase. This is being co-financed with a significant investment from the Grass Valley Trust.

Within the Târnava Mare landscape specific areas of exceptional botanical diversity are associated with landscape features called *moviles* (tumps); these have unique microclimates that support remarkable hotspots of botanical diversity. The project aims to purchase 650 hectares covering specific *moviles*, thus protecting a botanical diversity of European (and potentially global) biodiversity significance. They are currently threatened by: (i) lack of management as smallholdings are abandoned; (ii) purchase of land by outside developers who then degrade or destroy the habitat (by practices such as ploughing or agricultural intensification); and (iii) extraction of the aggregates from beneath *moviles* for road-building materials.

The current land restitution process in Romania has created a situation open to land purchase, as land is handed back to families or communities who owned it during the Soviet era. The *moviles* are currently partly owned by local town halls and by private individuals. Ownership is currently divided into small plots, which are not economically viable. The rapid purchase of these sites, in advance of land developers, is necessary to protect them from extraction or agricultural development.

⁴ Includes \$48,880 reallocated from the Târnava Mare project at the end of 2015 towards the purchase of Vorta Forest.

In addition, as such sites will be eligible for EU subsidies, purchase of this land will generate additional income for managing the area in future years. Once purchased, the *moviles* will be handed over to ADEPT who will own and manage the sites. Following the first land purchases in 2014 and 2015, **three further separate purchases** were agreed in 2016, together totalling an additional 22 hectares, bringing the total area purchased to 184 hectares including a core area of 130 hectares, at a farm in an area called Angofa. These land purchases have directly protected exceptionally biodiverse grassland from intensification. Purchasing the land has protected it from being ploughed up, intensively grazed, burned or exposed to substrate extraction. Introducing appropriate grazing regimes will serve to maintain the biodiversity value of these sites in the long term. ADEPT is now responsible for the management of these sites, including mowing or clearing, hay-making, management of farm staff, subsidy claims and compliance. Subsidy received in 2016 totalled €35,000; it is estimated that the subsidy payments associated with the lands purchased will in future cover some 53% of ADEPT's core operational costs.

Further **land purchase** is taking much longer than anticipated due to delays or problems with the current owners' paperwork, but the project still aims to secure at least 300 hectares of biodiversity-rich *movile* habitat overall. An abandoned school on the site at Angofa will be developed as an **education and tourist centre** using co-finance sourced by the project in 2016.

With the support of funding from this project and FFI capacity support, ADEPT has responded to changes in **agri-environment schemes** within Romania, which could otherwise have had negative impacts in the project area. ADEPT continued to pilot a new agri-environment measure during 2016, exploring the viability of using result-based remuneration schemes to promote biodiversity enhancement; this helped 75 small farmers to collectively benefit from an additional €37,224 this year.

The scheme also helped the government recognise problems in the existing calculation of payments for High Nature Value farmland, and these were increased by €50 per hectare; it is estimated that a total of €230 million more in subsidy will be available over the next five years as a result. These higher payments for High Nature Value farmland will represent a significant financial incentive for hundreds of thousands of farmers to manage their grasslands sustainably.

ADEPT continues its **policy advocacy work**, which helps promote traditional small-scale farming, on which the botanical diversity of Romanian grasslands depends. For example, as a result of ADEPT representations, the criteria for support for small-scale farmers have been reduced from a minimum of €8,000 to €4,000 annual turnover, making an additional 230,000 small farms (4-10 hectares in size) eligible for subsidy. In addition ADEPT developed a set of training packages to improve the economic viability of traditional, small-scale, biodiversity-friendly farming. These have been tested in six farming areas in Transylvania, and are now freely available for wider use.

The registering of land at Angofa for **agri-environment payments**, which provided vital core funding for ADEPT in 2015 and 2016, remains a challenge owing to inaccurate mapping not only of Angofa parcels, but also of neighbouring parcels. ADEPT is working to resolve this issue. However some initial subsidy payments were received in 2016 to contribute to the conservation management of these sites.

Area secured	184 hectares
Area of conservation impact	1,500,000 hectares

⁵ This has reduced relative to reported spend in 2015 due to reallocation of funding at the end of 2015 to the purchase of Vorta Forest at Zarand.

The Saxon village of Viscri, viewed from the flowery pastures south-east of the village; Transylvania Tarnava Mare landscape. Credit: ADEPT





View of the Great Pamir. Credit: FFI

PAMIR MOUNTAINS INITIATIVE, TAJIKISTAN

In 2008 Halcyon Land & Sea provided a first small grant towards the conservation of 457,700 hectares of threatened high mountain landscape in the Pamir Mountains, on the border between Tajikistan and Afghanistan. Zorkul Lake Reserve represents an area of 87,700 hectares of high montane habitat (4,000 - 6,000 metres). The reserve is home to both Marco Polo sheep (a subspecies of the threatened argali or mountain sheep) and snow leopards. It is an important migration stopover, and is known to support some 116 bird species. Zorkul Lake Reserve is the newest of Tajikistan's protected areas. It was re-designated in its current form in 2000 with the aim of protecting a representative example of the Eastern Pamir ecosystem. Prior to FFI engagement the reserve was highly under-resourced, and lacked any real on-the-ground protection. Uncontrolled poaching appeared to be a significant threat to its wildlife, along with livestock grazing, which occurred over nearly half the reserve, including in sensitive nesting areas. In addition, the risk of climate change at mountain reserves such as this one is significant.

In 2009 the **first formal needs assessment** was conducted for Zorkul Lake Reserve. This demonstrated that it was badly under-resourced, and highlighted the paucity of management systems and processes, including the absence of any management plan. In 2011, Halcyon Land & Sea provided a follow-up grant to the reserve, to enable

full-scale support and capacity building efforts to be undertaken. A **full biodiversity survey**, and mapping and GIS analyses of the area have now been completed. In addition, camera trapping revealed the presence of a healthy population of snow leopards in Zorkul.

The project provided fuel and maintenance for the patrol vehicles, and ensured that reserve staff could access the reserve regularly (in contrast, in 2010 and previously they were unable to visit the reserve at all). The ranger station at the reserve's western entrance was renovated and refurnished, and boundary signs were erected. The presence of a **functioning ranger station** provides a key deterrent for potential poachers who might previously have hunted in the reserve.

FFI is no longer active at the site, but maintains contact with the reserve director and his team. During 2016 the reserve administration continued to manage and patrol the site using the equipment and renovated ranger station provided by the project. FFI also previously introduced the reserve to the charity Panthera, who continue to monitor snow leopards and their prey in Zorkul as well as contributing to running costs (including the purchase of new ranger uniforms in 2016).

Area secured	87,700 hectares
Area of conservation impact	457,700 hectares

IBERIAN LYNX PROGRAMME, SOUTHERN PORTUGAL

When this programme started in 2002, fewer than 150 Iberian lynx were believed to survive in the wild, making it the most endangered cat species in the world. This was due mainly to the loss and fragmentation of lynx habitats. The population of lynx prey (the wild rabbit) has decreased, and lynx habitats have been destroyed by infrastructure projects in both Spain and Portugal. The animals are also killed in road accidents and illegally hunted. The lynx is associated with some of the Iberian Peninsula's most threatened habitats – cork oak forest and maquis scrubland.

In 2002, Halcyon Land & Sea started the process of securing a landscape corridor with the aim of reconnecting current and former lynx habitats and safeguarding the vital habitat required for future reintroductions of this species. This project works in parallel with other conservation efforts in Portugal and Spain. The planned corridor will stretch from the Monchique region of south-western Portugal, to the Sierra Morena in central Spain.

Working with the Liga Para a Protecção Da Natureza (LPN), a leading Portuguese conservation NGO, we have now successfully negotiated land management agreements for strategically positioned areas of lynx habitat, with the aim of establishing a corridor of suitable habitat for lynx linking back to their existing refuges in Spain. These lands are managed for the recovery of rabbit populations (given

the importance of this locally declining species as prey for the lynx). In January 2010 a lynx was formally recorded in one of the target areas for our project (the Moura/Barrancos region) – the first verified evidence of lynx in Portugal since 2001. Indeed, the project was selected as one of the six 'best of the best' EU LIFE supported projects in 2010 and LPN now sits on the governmental committee overseeing implementation of the National Lynx Conservation Strategy.

In 2013, 15 new **management agreements** were signed (covering an additional 775 hectares) and since then ongoing management interventions have included promotion of rabbit populations (through fertilisation and electric fencing of rabbit pasture lands and the construction of rabbit shelters and refuges).

Iberian lynx **populations are now showing an increase** as a result of concerted captive breeding and protection measures by governments, with just over 404 lynx in the wild and 140 in the captive breeding population. However, the species is still listed as Critically Endangered.

Nineteen captive-bred lynx have now been released within Portugal, and more releases are planned. This re-emphasises the importance of the 'lynx habitat corridor' that this project is working to create.

Iberian Lynx. Credit: FFI





Setting a camera trap. Credit: FFI

During 2015 a revised strategy was developed for the lynx programme. Work also continued to develop plans for a significant land purchase within the core lynx habitat area, based around an estate that could be managed by LPN as a model for habitat recovery and for education and training activities.

The lynx programme enabled LPN to access two successive EU LIFE+ grants, one of which also supported effective conservation measures for black vultures, resulting in the first chick of this species successfully fledging in Alentejo for more than 40

years. However, with the end of the EU grant, the lack of ongoing funding has led to the decision to reduce LPN's lynx team, with just one staff member continuing to maintain the profile of the work in-country, and to seek opportunities to operationalise the new strategy. FFI provided ongoing support in 2016 to retain a project vet for three months and for ongoing maintenance at project sites; 29 land management agreements remain in place securing 18,154 hectares of habitat, but staffing constraints limit the monitoring of these.

Area secured
Area of conservation impact

18,154 hectares
20,050 hectares

MONTADO DO AREEIRO, MADEIRA

In 2004, Halcyon Land & Sea secured 310 hectares of land on Madeira's Montado do Areeiro. This is the only known breeding site of Zino's petrel, Europe's rarest seabird. The birds were threatened by livestock overgrazing, uncontrolled tourism, rats and feral cats, and only approximately 30 pairs were known to survive.

Halcyon Land & Sea contributed US \$184,000 to purchase the land and incorporate it into the neighbouring park, Parque Natural da Madeira. The park raised a further US \$1,280,000 from sources including the EU to co-finance the purchase and implement activities such as removal of livestock, rehabilitation of habitats and control of tourism to protect Zino's petrel.

The land is now irrevocably the property of the Parque Natural da Madeira, which has been managing the area successfully for some time. The initial effect of the removal of livestock and reduction in rabbit numbers was dramatic. Endemic flora started appearing across the site. Close monitoring of the breeding colony showed that numbers of Zino's petrel were steadily increasing up to the summer of 2010.

However, in August 2010 the site was badly affected by widespread fires on the island. Four adults and 38 juveniles were lost during this fire and efforts concentrated on protecting the remaining fledglings, repairing damaged burrows, preventing erosion, promoting habitat recovery and preventing rat invasions after the fire. Regeneration of the flora has been a slow and painful process. The park management responded immediately with as many anti-erosion measures as possible and the Portuguese Air Force helped by dropping seeds of endemic and indigenous plants over as much of the affected area as possible. In 2011 the petrels returned at the normal time and the number of calls heard suggests there was no significant reduction in the adult population as a result of the fire, despite the loss of many of that year's fledglings.

The site is subject to ongoing management as part of the Parque Natural da Madeira; wardens regularly collect data regarding Zino's petrel during the breeding season, rats and cats continue to be managed (through the use of targeted poison and traps), and the area remains clear of livestock.

The spread of invasive plants (such as broom) after the fire initially hampered the spread of native flora, but endemics are increasingly seen along the paths (something that would never have happened prior to the purchase of the site, when intensive grazing prevented regeneration).

In 2015 a **review of the project was completed**. This pulled together information across the lifetime of the project, to effectively document a project history, to evaluate its long-term impact and to document lessons learnt. In 2016 we followed up with the government partner about some specific concerns regarding the way that funds were managed and transferred to various landowners for the purchase of the site. Responses from the government resolved all our concerns, and no further action was deemed necessary.

Records of Zino's petrel (including data from tagged individuals) continued to be collected during 2016; however, this year's data has not yet been analysed and results are not currently available. Initial

analysis of data from tagged birds in previous years does, however, show long-term consistency in use of relatively dispersed foraging areas. In 2016, petrel population counts were supported by the Royal Naval Bird Watching Society, who set nets every night for a week.

In 1984 when data collection relating to Zino's petrel began, no chicks were known to fledge and only 30 breeding pairs were thought to survive. With the main nesting sites under protection there are now some 65-80 breeding pairs, and 29-30 known fledglings (based on 2015 figures). Although the population is not yet at the levels recorded prior to the 2010 fire, it is still significantly higher than the original project baseline. This would not have been achieved without the Halcyon Land & Sea grant, which secured the land for protection and leveraged significant co-finance from the EU to ensure effective management of the area.

Area secured	310 hectares
Area of conservation impact	310 hectares

CHUILEXI CONSERVANCY, MOZAMBIQUE

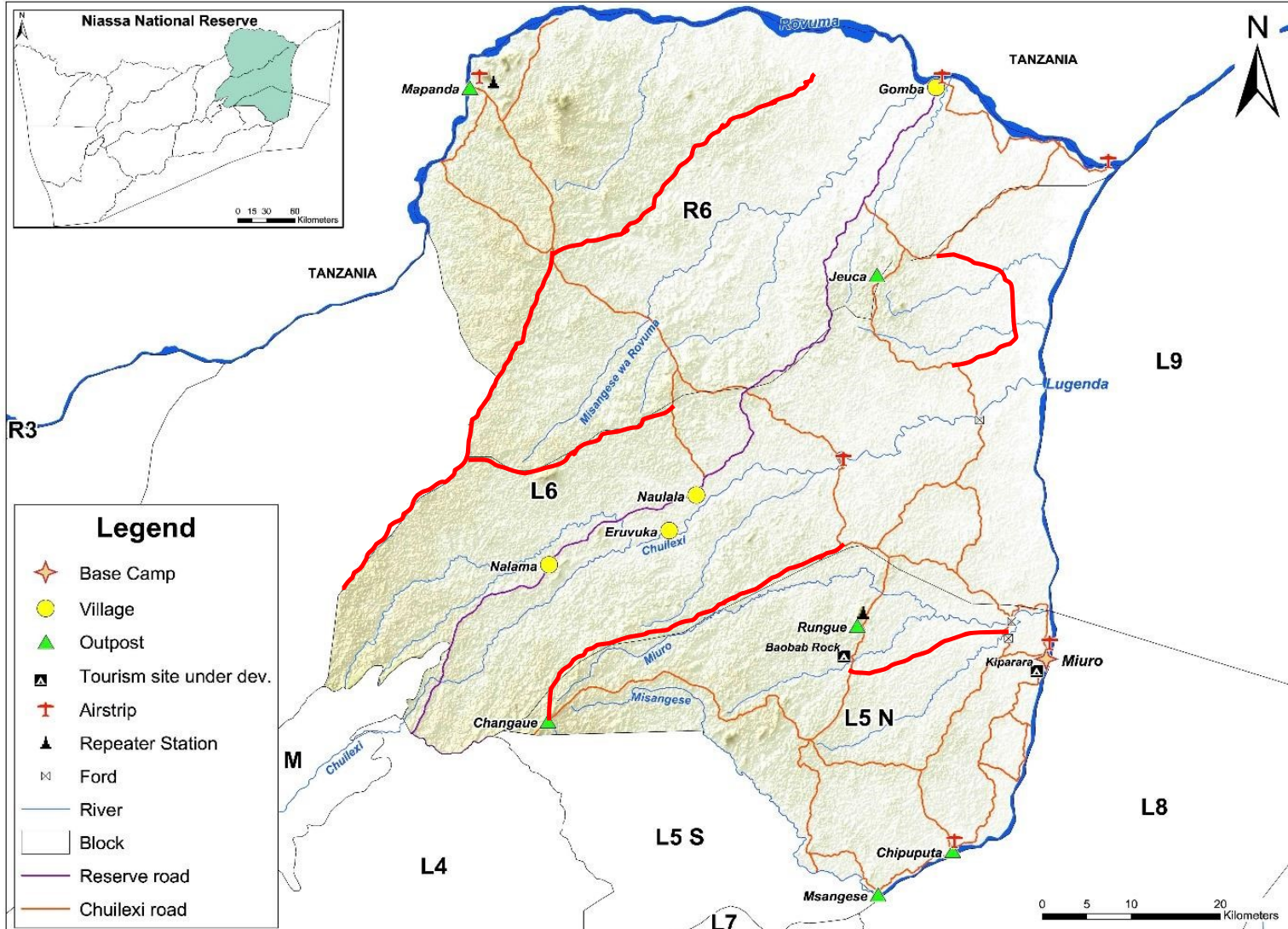
Given the growth in targeted poaching in East Africa, and the difficulties in protecting wildlife across the vast areas of the Greater Niassa Reserve, Halcyon Land & Sea funding has been deployed towards a new strategy of developing a highly protected 'core zone' for wildlife within the reserve. By targeting a core area with the highest wildlife densities – and taking over direct management of the concessions in these areas – we are able to put in place much stronger controls than are feasible across the whole reserve. This approach acts as a backstop for, and complements, the wider reserve management policies, as well as providing a refuge for key species during the current upsurge in poaching.

Three adjoining concessions within Niassa have now been secured under 15-year contracts, renewable for 10-

year periods thereafter, although options for a renewal on a 25-year contract are under discussion. These concessions together constitute the newly established Chuilexi Conservancy, covering 586,800 hectares (14% of Niassa Reserve). Chuilexi Conservancy has effectively been built from scratch since 2013. In 2016 the conservancy continued to operate effective **security operations** across the three concessions that it covers, including patrols by a force of 48 rangers, who all received refresher training during 2016 and have recently been trained in a more structured approach to data collection and monitoring through the adoption of SMART (Spatial Monitoring And Reporting Tool) software. Data from this improved monitoring system will feed directly into the conservancy's management.

View over Chuilexi conservancy. Credit: Matt Rice/FFI





Map of Chuilexi Conservancy.

The work of the ranger force is underpinned by a variety of infrastructure and support staff. This includes outposts, a well-established HQ, staff quarters, 57 support and construction staff, a specific communications system, a fleet of anti-poaching vehicles and an improved road access network within the conservancy. Chuilexi also has an experienced management team including a Conservancy Manager, Community Coordinator, Monitoring Officer, Human Resources/Admin Officer and a dedicated Security Manager.

The Conservancy is now significantly more accessible as a result of the building or rehabilitation of **eight airstrips**, one of which has been registered with the Civil Aircraft Authority⁶, and a light aircraft will soon be operational at Chuilexi to support anti-poaching operations.

The conservancy actively **engages with surrounding communities**, under the leadership of a dedicated community coordinator and two community assistants. In addition, nine community rangers were appointed in 2016 to work within the three villages inside Chuilexi, in order to directly resolve human-wildlife conflict issues. At one site an electric fence was erected to help keep wildlife away from villagers' crops.

Community committees have been established and help communities represent their concerns and needs to the conservancy, and to develop zonation plans for village lands. Micro-credit loan schemes have been developed for womens' groups in the three villages, with 45 women now using this facility to start small businesses, such as local shops and chicken production. The conservancy has also invested in improving the infrastructure of local schools, and offers a bursary for selected students to complete primary school and enter secondary education. Work is under way to implement a 'flying doctor' initiative to improve healthcare for the resident communities. Chuilexi also provides significant permanent and seasonal employment for local communities (it is estimated to employ a third of all adult males); local communities have received over US \$50,000 from employment, and a further US \$45,000 invested through community capital projects for the year to date. In further support of conservancy-community relations, a football match is held annually between the three communities and the Chuilexi staff football team.

A **tourist camp (Kiparara)** has been established near the conservancy headquarters and hosted its first visitors during 2015.

⁶ This ensures insurance for aircraft when flying in tourists and also enables the pilot to file a flight plan directly.

Chuilexi also linked strongly into the management of the wider Niassa Reserve, and during 2016 Chuilexi representatives provided significant input to the development of a new **General Management Plan for Niassa Reserve**, including participation in a series of relevant working groups. Chuilexi also takes a leading role in the Niassa Conservation Alliance (which links together adjoining concessions to allow more joined-up management).

Before Chuilexi Conservancy was established, its three concessions were experiencing widespread biodiversity decline – elephant poaching, snaring, illegal logging etc. In under four years Chuilexi has achieved a significant reversal of this trend. Investment in infrastructure, effective logistics, good equipment and men on the ground, maintaining a permanent security presence and putting in place experienced and high-quality senior staff have all been central to this success. The heightened anti-poaching operations at Chuilexi have resulted in **measurable reduction in poaching and other illegal activities** (such as snaring and illegal logging).

Elephants remain the key performance indicator for Chuilexi Conservancy. In 2016, up to the end of October, **only seven elephants were poached within Chuilexi** (45% fewer than the 13 lost in the same period last year).

Chuilexi's performance continues to be favourable compared to other concessions within the reserve, as illustrated by the fact that one neighbouring concession recently lost 10 elephants to poaching in one week alone. Aerial surveys conducted by the Wildlife Conservation Society (Niassa Reserve's co-management agency) also confirmed the presence of a herd of 90 elephants in the Mapanda area of Chuilexi, demonstrating the species' re-establishment in an area that had previously seen low wildlife numbers as a result of cross-border poaching from Tanzania. There is reason to believe that this area is now becoming a safe haven for elephants, and research is under way to establish whether this herd is resident to Chuilexi. However, during 2016 there has also been evidence of a resurgence in snaring for wildlife (for both bushmeat and commercial use) along Chuilexi's eastern border, which adjoins a concession with no active management.

During 2016, initial discussions started to investigate the option of expanding Chuilexi.

Area secured	586,800 hectares
Area of conservation impact	586,800 hectares

RE-ESTABLISHMENT OF SOUTHERN NATIONAL PARK, SOUTH SUDAN

South Sudan once boasted spectacular wildlife, including major migrations of antelopes said to be on a par with the wildebeest migration of the Serengeti. However, the civil wars of recent decades have decimated wildlife populations. During the war years (1962-1972 and 1983-2005) no conservation agency was present in Southern Sudan and its protected areas have had no active management for the past 30-40 years. During this time heavy wildlife poaching was conducted by the Sudanese Peoples Liberation Army, heavily armed local and Arab militias and the large volumes of displaced people in the region. South Sudan finally became an independent state in July 2011.

South Sudan's oldest and largest national park is Southern National Park in Western Equatoria. This 1.6 million-hectare park was historically known for its large numbers of elephant, buffalo, giant eland and roan antelope as well as its northern white rhino population. This park, like all other protected areas, was subject to severe poaching during the civil wars, but reports today indicate that key wildlife populations – including elephant – do still survive in the western sector. These remaining populations are

still under threat from poaching, including steady trade for nearby bushmeat markets and annual foreign hunting raids. Without timely intervention the remaining wildlife may disappear, signalling the loss of the park as a haven for wildlife.

Grants from Halcyon Land & Sea in 2010, 2011 and 2014 enabled FFI to begin the process of re-establishing conservation management at Southern National Park. We are working to support the new government to re-establish capacity for wildlife protection – and have a specific partnership with the Ministry of Wildlife Conservation and Tourism, which runs the Wildlife Service. The government asked FFI to input to the Wildlife and Protected Area Policy for South Sudan, which has now been approved, and FFI also assisted in the drafting of new wildlife conservation legislation.

The outbreak of conflict in December 2013 and the subsequent civil war in parts of South Sudan has had a profound effect on the project and further destroyed the nascent infrastructure and governance of this new country.

By maintaining our programme in Western Equatoria (albeit at reduced levels) over the conflict period, FFI demonstrated its commitment to the area, at a time when other programmes and government activities have reduced or are no longer functioning. This has maintained and strengthened FFI's credibility with our partners in country. By the end of 2014 the project had – from scratch – supported the establishment of basic infrastructure (roads and outposts) resulting in the first sustained management and anti-poaching presence within Southern National Park for decades. Furthermore, FFI trained a quarter of Western Equatoria's operational Wildlife Service personnel as rangers, and others in leadership and management. In addition, deployment of camera traps in Bangangai and Bire Kpatuos game reserves confirmed the presence of forest elephants, chimpanzee, forest buffalo and a healthy population of bongo in these reserves, along with the presence of 34 other species – some of which had not previously been reported in South Sudan.

During 2016 the security situation in South Sudan deteriorated further. The prolonged and increasingly violent civil war, with subsidiary conflicts that have spread into the programme's area of operations, limited our options for effective engagement on the ground. During the year the economy was in freefall, the ceasefire was violated and there were difficulties in establishing a proposed Transitional Government of National Unity. In addition, risks of violent crime in Juba remained high and banditry on main roads continued, significantly affecting the logistics of operating in-country (affecting access to fuel and food supplies and increasing travel risks). At the beginning of 2016 it proved impossible to access the project sites due to intensive fighting between government forces and rebels in the area. Despite this situation, FFI maintained its operations in the Western

Equatoria region of South Sudan as far as it was able during 2016, thus demonstrating our ongoing commitment to this new and fragile nation. Work during 2016 was restricted to the Bangangai and Bire Kpatuos game reserves. Bire Kpatuos Game Reserve became accessible from spring 2016, although the area around Bangangai Game Reserve remained insecure.

At Bire Kpatuos the two adjoining communities remained strongly engaged in the work and **Community Wildlife Ambassadors** drawn from the communities nearest the game reserves continue to be selected, trained and equipped for protection activities, with the support of the government. This has been an important way to demonstrate the potential value of community co-management to the government, while strengthening relationships between the game reserves and the surrounding communities.

A structured framework of **anti-poaching patrols** (joint patrols involving the Wildlife Service and selected community members known as 'Community Wildlife Ambassadors') was maintained in the two game reserves and surrounding forest areas (although primarily focused at Bire Kpatuos). As well as deterring poachers, the patrols also provide the opportunity to download data from 42 camera traps across the reserves, providing further valuable insights into the wildlife of these areas (including images of yellow-backed duiker, baboon and red-tailed monkey). In addition, a follow-up ranger training course was run by FFI staff in April for 17 Wildlife Service Rangers and Community Wildlife Ambassadors from the game reserves. Importantly, the government formally agreed to commit its trained rangers to continue to work at the game reserves (rather than being drafted to military duties).

Elephants caught on camera. Credit: FFI



Equipment and infrastructure developed by the project in support of the game reserves remained in use (and a Wildlife Service ranger post near Bire Kpatuos was re-established by the project, after it had been closed due to fighting in the vicinity). FFI continues to actively seek secure co-financing to underpin the project's ongoing operations in South Sudan.

We are developing plans to re-establish a larger project working across four different protected areas, with associated community forestry and livelihood activities.

Area to be secured

770,000 hectares

Potential area of conservation impact

2,300,000 hectares

SECURING VITAL AREAS OF RENOSTERVELD, SOUTH AFRICA

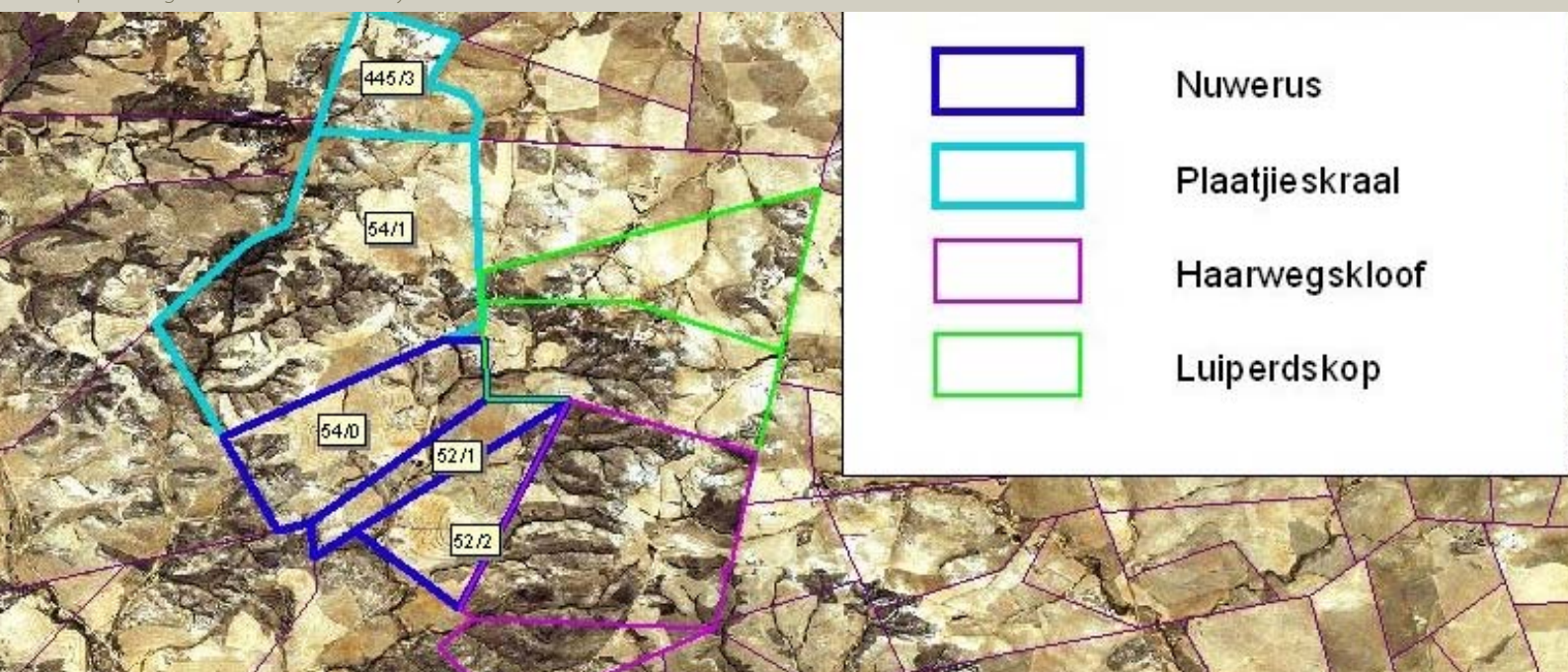
Renosterveld represents a specific type of species-rich heathland only found in the South African Cape. This unique, but fragmented, habitat is at immediate risk of destruction. Less than 4% of the original coverage of *renosterveld* now remains – putting many of the endemic plant species it supports at risk of extinction. Most of the remaining tracts of *renosterveld* occur on private land, and are at risk of being ploughed up for agriculture or being degraded through overgrazing. Botanical surveys conducted as part of the project are already revealing additional rare and new plant species in these botanically rich fragments.

In 2011 Halcyon Land & Sea provided funds to a new initiative that will work to purchase three key areas of *renosterveld* (the farms of Harwegskloof, Luiperdskop and Plaijieskraal). Once legal title has been secured, these areas will be managed by Cape Nature - the nature conservation agency for Cape Province. Halcyon Land & Sea support is facilitating the legal process to secure these sites, and

covers their short-term management needs. FFI is also collaborating with WWF-South Africa, which has secured substantial funding towards land purchase for these sites.

In 2012 the Overberg Lowlands Conservation Trust was established as a local organisation devoted to conservation and sustainable management of *renosterveld* habitats. Negotiations started with owners of two out of the three priority farms and botanical monitoring was conducted on all of the *renosterveld* habitats on all properties – as a result, a new species of lily was discovered on one of the target farms. Early in 2014 the project succeeded in buying Harwegskloof Farm – the property with the largest areas of intact *renosterveld*, with land purchase costs met by WWF, and Halcyon Land & Sea funds supporting all legal, rezoning and conveyancing costs on the transaction. The property has been declared as a formal nature reserve (under WWF ownership, Cape Nature stewardship and management by the Overberg Lowlands Conservation Trust).

Map showing the farms located in key areas of *renosterveld*.





Renosterveld Visitor & Research Centre. Credit: Dr Odette Curtis/ORCT

A 30-year management agreement was signed between WWF and Overberg Lowlands Conservation Trust in 2014 for the latter to take on management responsibility for this 'renosterveld reserve'. Formal declaration of the reserve is awaiting final signature from WWF and Cape Nature, to be completed in early 2017. A **management plan** was developed and adopted for the site, along with a business plan outlining how the site might generate sustainable conservation finance through tourism. The farmhouse at Harwegskloof was refurbished to become the **Renosterveld Research and Visitor Centre**, and includes a fully equipped guest house for visitors and researchers.

A **conservation easement** (where a legal deed on the property restricts its future use to conservation, in perpetuity) has also been placed on a portion (60 hectares) of a further important property for *renosterveld* – Kykoedie. In addition, stewardship arrangements (easements or servitudes) are being developed with multiple local farmers for *renosterveld* protection, allowing for sustainable management of productive lands while ensuring legal protection of the critical areas of *renosterveld* habitat for long-term conservation.

During 2016, negotiations were still under way to **secure the neighbouring property** Plaatjieskraal (682 hectares of *renosterveld*), where the plan is to subdivide agricultural lands within the property – allowing for a land swap for neighbouring arable lands. This rezoning and subdivision has now been approved by the regional Agriculture Department and

the necessary legal process is expected to proceed in 2017. In addition, initial negotiations have started for purchase of the final renosterveld property in the target cluster (Luiperdskop) with the aim to secure this in 2017. **On-the-ground management** of the Harwegskloof Renosterveld Reserve is under way, co-funded by Halcyon Land & Sea. The first controlled burn of 30 hectares within the reserve for 20 years was undertaken in March 2016 and this had spectacular results in terms of flowering of many characteristic *renosterveld* plant species; *fynbos* habitats are dependent on fire to maintain ecosystem functioning and floral diversity. This was in line with a new fire management plan and burning guidelines for the reserve and other *renosterveld* properties. In addition, all woody alien plants have been removed and the species inventory for the reserve was updated (more than 550 plant species and 125 species of bird have now been recorded). Signage is now in place.

In 2016 the Overberg Lowlands Conservation Trust was renamed as the Overberg Renosterveld Conservation Trust (ORCT). The organisation has continued to develop rapidly under its dynamic director (Odette Curtis) and active local board; it has been successful in bringing in funds from a wide range of donors - both for the Renosterveld Centre and to support wider programmes of work. In addition, the newly completed self-catering accommodation at the Renosterveld Centre is providing ORCT with a separate income base, generating revenues from researchers and tourists visiting the reserve.

Expected area of conservation impact

2,883 hectares

GREATER NIASSA RESERVE, MOZAMBIQUE

The Niassa Reserve, a pristine wilderness of 4.2 million hectares (the size of Denmark), is home to one of the largest miombo forest ecosystems in the world. It harbours rich and diverse wildlife, including elephants, sable antelopes, large numbers of Cape buffalo, Lichtenstein's hartebeest, eland and zebra. An estimated 350 Endangered African wild dogs live in the reserve, making Niassa one of their last strongholds. There are also 30,000 people living within the reserve. They are among the poorest in the country, with little access to markets or social services, and they are entirely dependent on the reserve's natural resources for their livelihoods. In 1954, the government of Mozambique created a reserve to protect Niassa in a joint venture with a private company. Thus, the Sociedade para Gesta e Desenvolvimento da Reserva do Niassa (SGDRN) was formed.

In 2002, SGDRN invited Halcyon Land & Sea and FFI to help protect Niassa, and for 10 years we assisted them in managing the reserve. Biannual aerial surveys showed that over the decade populations of most wildlife species stabilised and grew. The elephant population doubled to around 20,000 individuals (over 70% of Mozambique's total elephant population). Research and monitoring confirmed the importance of the reserve to two of Africa's most charismatic carnivores – lion and African wild dog. Niassa's lion population represents one of only six that number over 1,000 individuals. The population of 350 wild dogs represents the third largest population in the whole of Africa for this Critically Endangered species. In addition, tourism concessions were established to contribute significant revenues towards the annual operational budget of the reserve.

The mandate of SGDRN to manage the reserve ended in September 2012. It was proposed (by the government) that a Mozambican Foundation be established to manage the reserve in the future, and FFI has continued to assist the government in its development. In the interim, the Wildlife Conservation Society has been working with the government in the co-management of the reserve. This new management structure builds on and will consolidate FFI's longstanding support. However,

this is happening against a background of increasing poaching pressures in and around the reserve, resulting in worrying declines in some key species. The significant resurgence in ivory hunting across East Africa has been felt particularly strongly within Niassa.

FFI continues to work actively with governmental, NGO and private sector partners to find long-term solutions to the management of Niassa. During 2016 FFI staff were involved in a number of meetings to help revise the General Management Plan for the reserve; this retains the original zonation plan developed with Halcyon funding in 2007.

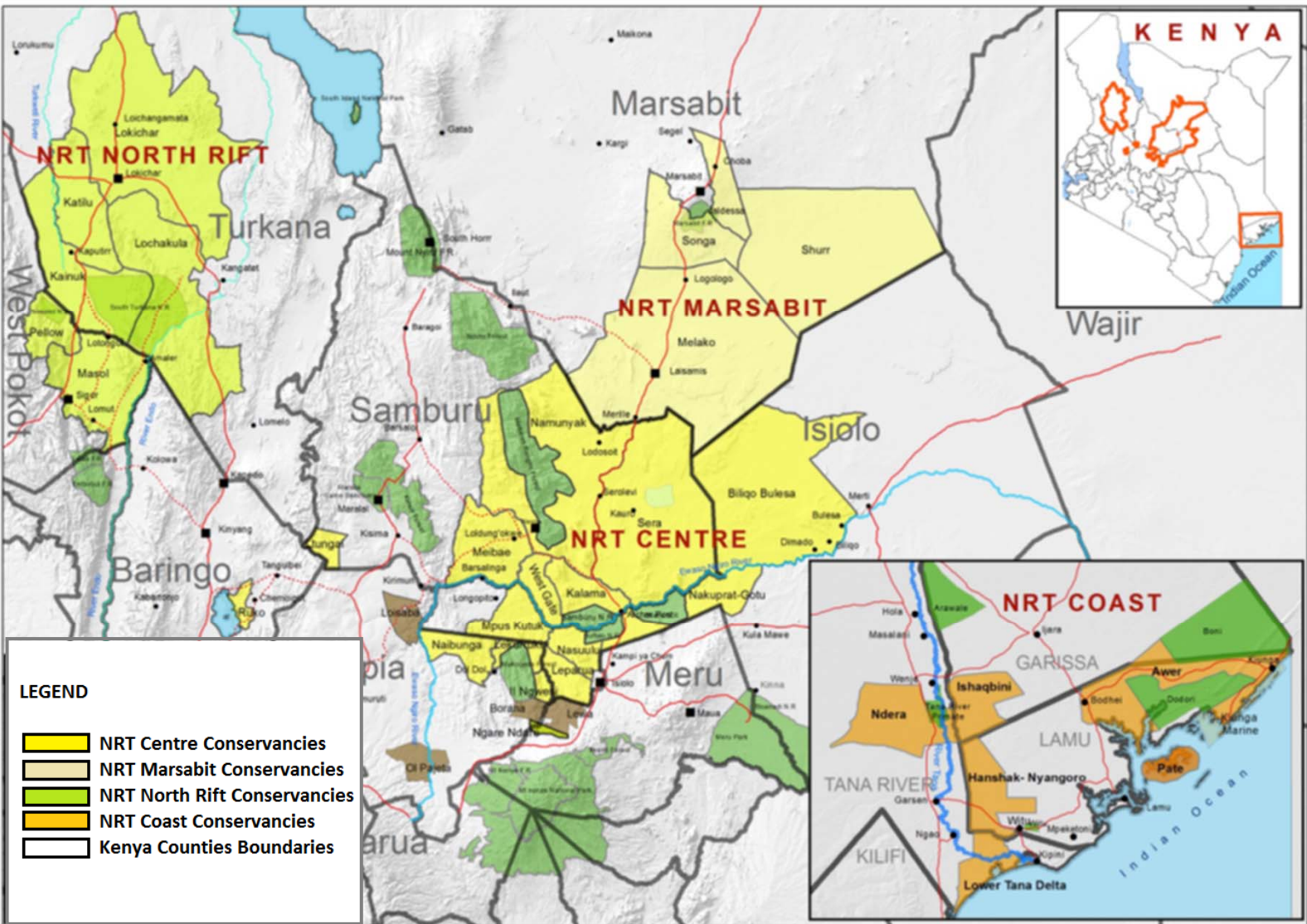
In 2014 FFI entered the Global Development Alliance aiming to develop a secure funding base for the reserve, and continued to collaborate on this initiative in 2016. FFI is also advising the government of Mozambique on the potential establishment of a Mozambican Foundation to take on the management of the reserve. Via Chuilexi Conservancy, FFI also works closely with other Niassa concessionaires in order to improve collaborative management between adjoining concession areas and to liaise collectively with Niassa reserve management as a way to **strengthen the overall management** of the reserve.

Niassa continues to face an upsurge in poaching pressure, particularly targeting elephant populations across this vast area. This is one of the main reasons that FFI has focused its strategy onto the concentrated protection of core conservancy areas (see Chuilexi Conservancy, above).

Outside of Chuilexi the impact of poaching on the elephant population within the reserve continues to be a significant issue; **the decision to establish concessions** (as supported by Halcyon funding in 2007) has been one important means to ensure core areas of the reserve are well protected (namely Chuilexi Conservancy (concessions L5N, L6, R6), Mariri (concession L5S) and Luiiri (concession L7)).

Area secured	3,613,200 hectares ⁷
Area of conservation impact	3,613,200 hectares

⁷ Does not include area of Chuilexi Conservancy, as this is reported elsewhere.



Map of the NRT regions.

EXPANDING COMMUNITY CONSERVANCIES, KENYA

The Northern Rangelands Trust (NRT), with FFI backing, is now supporting 33 community conservancies, which have effectively re-established a wildlife landscape of approximately 4.4 million hectares from Mount Kenya to the Mathews Range, and beyond. This region harbours around a quarter of Kenya's remaining wildlife. Within these conservancies, communities have autonomy of management and apply their own norms and rules – retaining their ownership of conservation. The conservancies are also providing a way for the communities to address wider issues (such as rangeland and livestock management and conflict resolution) and to develop new income streams (from tourism and other nature-based enterprises). In addition, with a range of support from Halcyon Land & Sea and FFI, NRT itself has developed into a functional and fully independent organisation.

Grants from Halcyon Land & Sea in 2010 and 2011 enabled NRT to support four new communities to

develop conservancies, and then to review the NRT business model and develop an alternative structure, with replication of the NRT model through separate regional entities. The support from Halcyon Land & Sea also facilitated the development of a new NRT five-year strategic plan and underpinned the NRT Growth Strategy – with the successful establishment, registration and initial operations of North Coast Conservation Ltd – the first satellite NRT operation.

A Conservancy Management Monitoring System collects data within community conservancies, which clearly shows improved conservation and protection of species and habitats – with individual conservancies showing increased populations of wild dog, giraffe, elephant and lions, and the return of species such as eland to areas from which they had previously disappeared.

Security in NRT areas has been maintained by conservancy rangers who play a vital role in protecting wildlife, people and property. The rangers are recruited from the communities within the conservancies, which allows them to more effectively raise awareness on wildlife conservation in their areas, as well as gather intelligence. The rangers continued to work closely with Kenya Wildlife Service, county governments and Kenya Police in maintaining peace and security. As a result, illegal killing of elephants in NRT conservancies has continued to drop since 2012.

NRT and community conservancies continued to implement an **innovative rangeland management programme** across two million hectares, combining traditional approaches to rangeland management with new techniques including land use planning, rotational grazing, bunched grazing, land rehabilitation and the development of effective community institutions. In addition a number of sanctuaries to support recovery of threatened species have been established within community conservancies, including Sera Black Rhino Sanctuary, Ishaqbini Hirola Sanctuary and Reteti Elephant Sanctuary in Namunyak Conservancy.

As a community conservation initiative NRT now also helps to **support over 550,000 people** that live within its conservancies. NRT Trading works to seed and grow sustainable businesses within the NRT Conservancies and has developed local enterprises such as Livestock to Market (Beef WORKS), BeadWORKS, Fish to Market, tourism

enterprises, and a mango business, thereby improving financial sustainability within conservancies. For example, BeadWORKS operates across nine conservancies and involves over 900 women in beadcrafting; in the first half of 2016 it produced over 64,000 items earning Ksh 3.8million (over US \$36,000) – twice the income received in the whole of 2015.

Over the years of FFI’s support, NRT’s capacity in biodiversity management delivery has continued to strengthen, as is evident from the improving rangelands in areas under management, increasing wildlife population trends and successful species recovery projects. Competent and experienced staff members have been recruited to deliver effective programmes and FFI’s support is now limited to more targeted technical input and board membership. NRT has continued to develop its organisational and technical capacity and is largely able to work independently, forging partnerships with donors, government, international organisations and NGOs on its own. NRT has since raised significant sums of funding independently.

In 2016, NRT **initiated two new conservancies** (Nkoteiya and Oldonyiro) and plans are in place to develop two more (Kirimon and Ndoto). County governments are increasingly accepting and supporting the community conservancy model; there has been a 12% increase in county government funding of conservancies from 2014/15 to 2015/2016.

Area secured	4,400,000 hectares
Area of conservation impact	4,400,000 hectares





Sera radio operator. Credit: FFI

SERA WILDLIFE CONSERVANCY, KENYA

Lying approximately 250 kilometres north-east of Mount Kenya, Sera is a vast and remote semi-arid wilderness. With a remarkable system of permanent springs, it supports a diverse range of wildlife, including elephant, wild dog, gerenuk, beisa oryx, buffalo and Grevy's zebra, and it is an important dispersal area for migrant species during the rains. However, the location of Sera in the northern Kenya borderlands means that it has been affected by the impacts of civil disturbance in neighbouring Somalia. Incursions of Somali bandits, cattle rustlers and organised gangs of poachers into the area remain a key threat to wildlife, particularly to the remaining elephant population. Communities requested the assistance of local conservation organisations (the Northern Rangelands Trust and Lewa Wildlife Conservancy) to promote both conservation and development in the area and, through a partnership with FFI, these NGOs have developed a project to secure 51,000 hectares of the Sera wildlands (33,000 hectares of core area plus a buffer zone of 18,000 hectares).

The Sera Wildlife Conservancy has been successfully demarcated and is patrolled daily, and a controlled grazing regime has been implemented. In addition, a formal management structure has been established (and has been resourced with key equipment) and a strategic plan has been developed – both of which have the support of local

communities. In an area that was once prone to banditry and poaching, Sera has become a stable focal area where security has been restored, with poaching and cattle rustling much reduced. Evidence over the last few years has shown that **elephant poaching has been reduced** in contrast to the trends in other areas. Elephants have now taken up residence throughout the year and Sera Conservancy has been transformed from a former poaching hotspot to a safe haven for this species.

During 2014 **Kenya's first ever community-managed rhino sanctuary was established** at Sera. This is surrounded by a 45-kilometre perimeter fence, with active protection and monitoring of the first 10 translocated rhinos by the ranger force. The sanctuary now contains 11 black rhinos, after the birth of a calf in March 2016. The sanctuary is also being used to secure populations of other key species including beisa oryx; approximately 45 oryx are now protected within the sanctuary.

In 2016 Sera Wildlife Conservancy remained a strong and recognised community institution with the management framework and capacity to protect and conserve the key wildlife of the area.

No poaching or banditry cases were recorded during 2016, and the conservancy's rangers continued to work closely with the Kenya Wildlife Service, Kenya Police Service and NRT's anti-poaching team. 13 of Sera's rangers graduated from the Kenya Wildlife Service Law Enforcement Academy this year.

An agreement was signed with a tourism company for the management of **tourism facilities** within the Sera rhino sanctuary, guaranteeing at least US \$10,000 a year as income to the conservancy and community (on a 60:40 split) for five years. Tourists will have a chance to track black rhinos on foot accompanied by a Sera community ranger and an expert guide, starting from February 2017.

The conservancy continued to be a **source of employment and income** for the local community. An additional 31 rangers were recruited from local

communities to support the rhino sanctuary, and their living conditions were improved in 2016 through completion of new accommodation blocks. Over 120 women from Sera actively engaged in the BeadWORKS programme, generating income of over US \$8,000.

As with other conservancies in the region, Sera was affected by the lower than average rainfall in both 2015 and 2016. Rangeland management plans were undermined by the pressure from grazers to access grass within conservancies. The Sera Conservancy collaborated with neighbouring conservancies to manage dry and wet season grazing plans collectively and to share pastures without conflicts.

Area secured	339,336 hectares
Area of conservation impact	339,336 hectares

LEKURRUKI WILDLIFE CONSERVANCY, KENYA

Part of the Laikipia landscape, Lekurruki constitutes a critical dispersal area and migration corridor for wildlife, including elephant, Grevy's zebra and African wild dog. This corridor provides safe passage between Samburu, Buffalo Springs and Shaba National Reserves and is essential to maintaining the ecological integrity and long-term conservation of species in the wider ecosystem.

Within the Lekurruki Conservancy, land was previously held by 26 private landowners, and parcels were likely to be sold and/or developed for agricultural purposes. An initial investment from Halcyon Land & Sea enabled FFI to secure the northern block of the conservancy, incorporating 12 private titles. This land is now fully under the management of Lekurruki Conservation Trust which is fully equipped with scout and management staff, a vehicle, radio communications and field equipment to provide anti-poaching coverage and security for the area – and a new headquarters was completed in 2012.

Monitoring by Conservancy scouts indicates that wildlife populations are stable and/or increasing.

The Lekurruki Conservation Trust also undertakes a number of related livelihood activities for the community, including improved grazing and rangeland management, conflict resolution and security, tourism operations, support to schools and student bursaries, and healthcare. A local tourist lodge has been developed (Lekurruki-owned, but under third-party management) which is providing increasing revenue streams to support conservancy operations and community returns, with a 20-year agreement to market the lodge in place.

In 2016 Lekurruki Conservancy continued to operate effectively. The trained ranger force worked closely with Kenya Wildlife Service and Kenya Police to maintain security for wildlife and people at the site; four incidences of livestock raids were resolved.

Black rhino. Credit: FFI



In order to take a landscape approach to conservation and habitat management, **Lekurruki expanded its area of operation** to cover neighbouring Kuri Kuri ranch and a large portion of the adjoining Mukogodo forest, which required effort to resolve existing governance challenges within Kuri Kuri.

Grazing management was implemented during 2016, despite the challenges associated with the poor rains this spring. However, the distribution and diversity of wildlife species was affected by lack of pasture and by livestock incursions, particularly between April and June when the dry season intensified. Wildlife sightings decreased towards June and wildlife species moved towards the Mukogodo forest and Iingwesi Conservancy, perhaps as a result of increasing grazing incursions.

Livelihoods support in the conservancy in 2016 included training in climate-smart farming for 12 farmers, to help improve **sustainable agricultural**

techniques and diversify crops towards non rain-husbandry, intercropping, agroforestry and dependent varieties. Skills developed included compost manure preparation (soil fertility), livestock rainwater harvesting techniques. In addition, the community continues to receive a 40% share of revenue from the Tassia Eco-lodge and local women participated in NRT BeadWORKs and micro-credit programmes.

The conservancy (through NRT) helped to fund the construction of two new permanent classrooms for the local primary school in 2016 and recruited six additional teachers. A comprehensive water resource management programme is also under way to improve reliable access to fresh water – a significant issue in this drought-prone region. Four sand dams were constructed during 2016 and a 225,000-litre water tank was installed to help ensure a regular water supply for community members, livestock and wildlife.

Area secured	1,584 hectares
Area of conservation impact	11,950 hectares

KWAKUCHINJA, TANZANIA

Since 2003, FFI and Halcyon Land & Sea have worked with local partners to establish a wildlife corridor in Kwakuchinja, northern Tanzania. This 2,500-hectare corridor links Tarangire National Park and Manyara Ranch, and is a critical lifeline for migrating wildlife in the region.

Of the nine wildlife routes historically emanating from Tarangire, four have already been blocked by villages and farms. Radio tracking shows that elephant, wildebeest, hartebeest, oryx and zebra still travel along the Kwakuchinja corridor, going northwards to Manyara Ranch and beyond.

FFI worked with the Netherlands Committee of the World Conservation Union, to assist the Tanzania Land Conservation Trust and the African Wildlife Foundation financially and technically with this project. The first phase of the project focused on **mapping and research** into wildlife movement, land tenure and location of settlements. Subsequently the project has focused on community engagement and development of sustainable livelihood activities within the area of the corridor.

The proposed corridor area was successfully mapped by satellite imagery and an aerial survey. However, following elections in 2011, a new local council decided to overturn

all previous agreements concerning the wildlife corridor and the project came to a halt.

In 2012 a **new corridor was proposed** between Manyara Ranch and Tarangire National Park, on the north-eastern side of the original corridor. It is suggested that this could form part of the Randulen Community Wildlife Area (which was established in 2013) and would pass through rehabilitated agricultural land.

As of 2014 the Randulen Community Wildlife Area now has two safari camps using the area and providing revenue to the community. In the corridor itself, the village council of Msakwini Juu (the main village in the area) has now taken forward the main proposal for the Kwakuchinja corridor to the local district council. This was done on its own initiative, without further external NGO support. This indicates that the project left a key legacy in terms of mobilising the community to take this initiative forward, even after the conclusion of support.

Potential area of conservation impact	15,800 hectares
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Flower Valley. Credit: Juan Pablo Moreiras/FFI

FLOWER VALLEY, SOUTH AFRICA

The Cape Floristic Region is one of the world's six botanical kingdoms and is the most botanically rich habitat on Earth. Nearly 70% of its 8,600 plant species are endemic. In 1999, Halcyon Land & Sea purchased Flower Valley, 550 hectares of near-pristine *fynbos* flower meadows on the Agulhas Plain of the Cape Floristic Region in South Africa. This site was otherwise threatened with conversion into a vineyard.

FFI and its local partner, the Flower Valley Conservation Trust (FVCT), created a project linking biodiversity conservation with community development. For the first time wild *fynbos* flowers have been harvested sustainably under a new code of practice which ensures effective habitat regeneration. Local people now have year-round work under ethical conditions and its success has made this project a model for other farms in the Cape. Additionally, the Flower Valley Early Learning Centre has provided education for 800 children and training for teachers, as well as support and mentorship to the wider community.

Between 2000 and 2002, Halcyon Land & Sea also helped to purchase Witkrans and Witvoetskloof (two areas of lowland *fynbos* next to Flower Valley), saving them from agricultural conversion. These lands were used to test new South African legislation enabling conservation easements (where a legal deed on the property restricts its future use to conservation, in perpetuity) – this is the first ever transaction in the country to use a conservation easement as part of a property sale.

The Witvoetskloof property has now been incorporated into the neighbouring Grootbos Nature Reserve (under a deed ensuring conservation use), and is being used as a joint tourism venture between FVCT and Grootbos.

In parallel to the work at Flower Valley, Halcyon Land & Sea has worked directly with South African National Parks (SANParks) since 2003 to implement a conservation management system for the Agulhas Plain and to secure a series of additional sites of high biodiversity management under the auspices of the Agulhas National Park. In previous years, SANParks has used the support of Halcyon Land & Sea to leverage the conservation of sites such as Hangnes, Ratel River North, and the Nuwejaars wetlands.

A 'Fynbos Trail' was established in 2012 as a three-day walking experience through Witvoetskloof, Grootbos and the Flower Valley Farm, providing overnight stops in each site, with the proceeds shared between the organisations. Along with continued strong sales of *fynbos* products to local and international supermarket outlets, the revenues from this tourism development will make an important contribution to the ongoing sustainability of FVCT and its operations. In 2013 the 'Fynbos Trail' and 'Fynbos Retreat' were entirely operational and were both fully booked in summer 2013 and 2014; tourism revenues from this joint venture have already started to generate a small income for FVCT.

In 2011 FFI undertook a review of the project, pulling together a detailed project history, an evaluation of its impact and a series of lessons learnt relevant to future initiatives. Information from this document was published in a book chapter on the *fynbos* system⁸.

FVCT continued to thrive in 2016. Visitor numbers and profits from the Grootbos Trail increased further in 2016, providing valuable income to the operation of Flower Valley. Plans for an **ecotourism and sustainability centre** within the old farm buildings have been developed, and ways to finance this and potential partnerships have been discussed, including proposals for a new business manager position. FVCT staff will visit the UK at the end of the year to present their work at an event at the Royal Geographical Society, including a keynote address by Mark Rose, FFI's CEO.

FVCT continues to act as the coordinator and secretariat for the ongoing **Agulhas Biodiversity Initiative** (ABI, phase II), which maintains the conservation partnerships between landholders and agencies across the Overberg landscape, focusing on integrated land-use planning (including

controlling invasive alien plants), viable nature-based, responsible tourism, environmental education and environmental awareness programmes, and transitioning to a green economy.

FVCT coordinates the ABI Alien Clearing Programme with funds from the Department of Environmental Affairs, which is due to start a new three-year phase. Properties purchased or leveraged with funds from Halcyon Land & Sea (Flower Valley, Witvoetskloof, Witkrans, Ratel Rivier, etc.) remain under long-term conservation management and/or easements, and managed by local agencies (FVCT, Grootbos, SANParks). All properties are subject to both the ongoing alien plant clearing programmes, managed and coordinated by FVCT under ABI phase II, in order to improve and maintain conditions of the *fynbos* and derive local income and employment opportunities from sustainable harvesting of *fynbos* products. FFI continues to provide technical and institutional support to FVCT, primarily through representation at board level, maintaining oversight on the implementation of its current business plan, the financial sustainability of the trust, and the development of new project funding opportunities.

Area secured	3,607 hectares
Area of conservation impact	270,000 hectares

OL PEJETA CONSERVANCY, KENYA

In 2004, the Arcus Foundation most generously gave funds (routed through Halcyon Land & Sea) to secure and protect the Ol Pejeta Conservancy (OPC). OPC is a vital part of the Laikipia ecosystem in northern Kenya, protecting critical migration corridors and diverse wildlife, including black rhinos and Grevy's zebra.

The project safeguards the Conservancy's wildlife, provides a sanctuary for great apes and generates income through wildlife tourism, which is reinvested in conservation and community development. The project is a joint programme between Lewa Wildlife Conservancy, FFI and the Arcus Foundation. Ownership of OPC was transferred from FFI to a Kenyan non-profit entity under a long-term management agreement. OPC is also supporting the management of two neighbouring ranches that provide connectivity to the wider Laikipia landscape

– the ADC Mutara ranch (25,364 hectares) and Eland Downs ranch (7,024 hectares).

In 2006, 27 eastern black rhinos were translocated to OPC. As a result, this conservancy now harbours the largest single population of the Endangered eastern black rhino in Africa. In 2009 four of the world's last seven known remaining northern white rhinos were translocated from a zoo in the Czech Republic to a specially built enclosure at OPC, in the hope that natural conditions would encourage them to breed. Mating has subsequently been observed, confirming that the natural conditions resulted in a resumption of reproductive cycles. Unfortunately, one of the four northern white rhinos died in October 2014 from natural causes; the remaining three individuals are now the last members of the subspecies surviving anywhere in the world.

⁸ Nicky Allsopp, Pippin M.L. Anderson, Patricia M. Holmes, Annalie Melin, and Patrick J. O'Farrell. (2014) People, the Cape Floristic Region, and sustainability. In: *Fynbos: Ecology, Evolution, and Conservation of a Megadiverse Region*. Editors: Nicky Allsopp, Jonathan F. Colville and G. Anthony Verboom. Oxford University Press, pp 337-360

Security at OPC has been stepped up over recent years in response to escalating rhino poaching across East Africa. Rangers now have official Kenya Police Reserve status giving them the power of arrest, and unmanned aerial vehicles (drones) are in use to observe and track wildlife and identify potential threats. An anti-poaching dog unit was established and in 2014 additional ‘multi-role’ dogs were trained.

During 2016 Ol Pejeta Conservancy remained the **most important rhino conservation area** in East Africa. It has been a particularly successful year for black rhino births; 12 calves born this year have brought the population at the conservancy to 115. In addition, there are 27 southern white rhinos within Ol Pejeta (with two calves born this year) and the three northern white rhino still remain. Unfortunately – despite all Ol Pejeta’s anti-poaching work – one black rhino was lost to poachers in April 2016.

There has been a significant increase in domestic Kenya tourism this year, which will strengthen this core income stream. The conservancy supports **community development** from its own income, and from additional grants, promoting access to education and healthcare as well as helping communities add value to agricultural livelihoods

activities through local processing initiatives. A new initiative started during 2016 (in collaboration with FFI and The Body Shop) to restore riverine habitats, improve water security for smallholder farmers, and

explore the potential for tea tree oil production.

Given the poor rainfall over the last two years, and anticipated drought conditions in 2017, OPC is strengthening its community development work with neighbouring pastoralists to help relieve the increasing pressure on rangelands across the Laikipia region.

In addition FFI continues to work with OPC to install innovative **whitespace wireless technology** in primary and secondary schools located around the periphery of the conservancy, along with projector kits and screens, solar power generators and storage, tablet computers, IT support and training of teachers to use the equipment and integrate its use within the Kenya curriculum. FFI is also working with OPC to explore the development of solar powered water pumps – which could both reduce the conservancy’s carbon footprint and develop additional income through sales of solar power to the Kenyan power network. FFI remains on the board of OPC and FFI technical staff continue to provide a broad range of support and advice to OPC’s conservation and community development work, as well as support with fundraising. Since 2014 Ol Pejeta has been included on the IUCN Green list, a new global standard for well-managed protected areas.

Area secured	37,000 hectares
Area of conservation impact	150,000 hectares

Anti-poaching unit. Credit: Juan Pablo Moreiras/FFI





Gorilla in Bwindi National Park. Credit: Juan Pablo Moreiras/FFI

NKURINGO, BWINDI IMPENETRABLE NATIONAL PARK, UGANDA

In 2003, Halcyon Land & Sea helped to buy a 12-kilometre strip of land, 350 metres wide, along the boundary of Bwindi Impenetrable National Park in Uganda. The area is home to the Critically Endangered mountain gorilla. Following community agreement, over 230 landowners were individually paid for parcels of land. Of this, a 200-metre strip just next to the park boundary (240 hectares) was added to the park. The rest (180 hectares) is managed as buffer zone, and is held by the Nkuringo Conservation Development Foundation (NCDF), which is run jointly by the local community and the Uganda Wildlife Authority.

The NCDF is developing community enterprises and tourism around the habituated Nkuringo group of mountain gorillas. Work with communities has enabled gorilla-friendly livelihood options to be developed, including growing fodder to reduce the extent of grazing lands required and the use of various techniques to prevent crop-raiding by gorillas and other wildlife. An eco-lodge has been built, which is owned by the local community and operated by a private company, and this has first refusal for gorilla permits (necessary for tourists to go gorilla tracking) for the area. The eco-lodge employs a number of local people and uses local produce, and the profits from this venture are accrued directly by the local community. Funds from the lodge benefit the community as a whole and uses have included provision of scholarships for Batwa children, supply of livestock to local families, building of teacher accommodation and paying for the education of nurses.

As a result of the purchase of the buffer zone, and the value placed on ecotourism revenue to local communities, human-gorilla conflict has been significantly reduced, and both the persecution of gorillas, and loss of livelihoods through crop-raiding, are no longer significant issues. Attitudes towards gorillas have improved significantly around the buffer zone, and local people benefit not only from gorilla tourism but also from a number of other

livelihood activities in the buffer zone.

The **results from the 2011 gorilla census** showed a 30% increase in the gorilla population in Bwindi Impenetrable National Park from 302 individuals in 2006 (the last census) to 400, with the total global population of mountain gorillas now being estimated as 880 individuals.

FFI, through the International Gorilla Conservation Programme, continues to provide support and training to NCDF, across its wide range of activities. In 2015 a year-long intensive assessment of human-wildlife conflict interventions in the buffer zone was completed and the **buffer zone management plan** was finally endorsed.

Delivery of this management plan proceeded in 2016, starting with the approval of terms of reference and operating procedures for local buffer zone committees. Some of the priority actions in the management plan have already been completed – such as gap filling of the thorn hedging that aims to prevent crop raiding. Support has also been given to target communities to develop tea as a key crop in the buffer zone, and a field visit this year assessed the results of the first tea-planting season. This found that around 15 hectares had been planted with tea, and at least 55 households had benefitted, to date.

Area secured	420 hectares
Area of conservation impact	620 hectares

"We are benefitting from the gorillas now. Because the guests and tourists come and buy our things. ...we like the gorillas. We and the gorillas, we are friends."

Constance Tumusiime
(runs a community co-operative)

AWACACHI CORRIDOR, ECUADOR

The Chocó bioregion is a global conservation priority, due to its exceptional species diversity and endemism. The region is extremely poor and the Chocó forest is under threat from commercial interests and unsustainable development. This threat has increased following the building of new roads, and the expansion of the oil palm industry.

Since 1999, Halcyon Land & Sea has purchased 11,500 hectares of highly threatened Chocó forest. This has created a biological corridor between two existing reserves, thus conserving an area of 354,000 hectares. To protect the corridor, FFI, through its partner organisation Fundación Sirua, engaged local communities in sustainable livelihood projects such as native bamboo production, butterfly farming, cacao growing and animal husbandry. These projects provide income support to local communities and encourage them to cooperate with conservation efforts.

In 2010 Halcyon Land & Sea helped to secure the Endesa concession – 2,230 hectares of Chocó rainforest, which adjoins the narrowest part of the Awacachi Corridor. The area was previously owned by a logging company (Endesa) who had secured permission to log it. Without intervention, this would have resulted in clear felling and would have paved the way for future oil palm plantations – a development that could have threatened the integrity of the corridor. This purchase also reinforces the Awacachi Corridor and reduces direct threats at its narrowest point. A Land Trust (of which Fundación Sirua, FFI and Grassvalley Trust are all trustees) has been established to hold the Endesa concession lands. In addition, a review of the project was started in 2010, documenting the history of the project, its impact to date and key lessons learnt.

In 2013, a Halcyon Land & Sea grant was used to address the growing issue of gold mining in and around the Awacachi Corridor. A review of the situation and of potential strategies was completed, and as a result Fundación Sirua was able to overturn the claims of a government-backed mining group to have rights to mine within the corridor. The mining review also provided important guidance for how 'green gold' might be used as a possible sustainable source of income for the reserve.

A further Halcyon Land & Sea award was made to the Awacachi Corridor project in 2014, focused on building the sustainability of the corridor and exploring alternative management opportunities. Work has continued since to identify a sustainable management strategy for the area.

During 2016 Sirua continued to work with the Ministry of Environment to have the corridor declared as Protected Forest. The potential to designate the corridor as a provincial or municipal protected area is still being explored, and it has been identified as a conservation priority for the Esmeraldas Conservation Strategy. The lack of funding for national government's environmental work makes it unwilling to take responsibility for additional protected areas; it had been hoped that the Awacachi Corridor would be absorbed into the national protected areas network, but this seems unlikely in the near future.

The social and governance context in the San Lorenzo municipality continues to be difficult, with problems of insecurity, widespread criminal activities, corruption and weak, underfunded local government. In the medium-term the **peace agreement** between the FARC and the government of Colombia, if confirmed, may reduce the cross-border drivers of some of San Lorenzo's problems, although it is hard to predict how the situation will evolve. In parallel, the financial situation in Ecuador more widely has affected government spending on the environment (which in turn has reduced one source of funding for Sirua, which had been collaborating on a governmental forest restoration programme).

Despite ongoing threats from logging and gold mining Awacachi remains an area of global biological value as one of the last remnants of Chocó forest at the southern end of its distribution here in Ecuador, and a corridor connecting the Cotacachi Cayapas and Awá reserves. **Three park rangers** continued to patrol the corridor to deter illegal activities during 2016. Sirua's board has become much more active and engaged with the operation of the organisation and now meets regularly; direct operations are currently overseen by the chair of Sirua's board. Financial pressures have seen a reduction in operating budgets and in active staff, including the number of ranger positions. Lack of funds continues to hamper Sirua's operation and its ability to protect the corridor as effectively as would be wished. On a positive note, however, all the outstanding lawsuits that challenged ownership of the corridor have been heard and found in Sirua's favour, although these proceedings have yet to be published. Work continued in 2016 to develop strong relationships with other international NGOs (particularly Nature and Culture International) that might provide significant support to Sirua in future.

Area secured
Area of conservation impact

12,489 hectares
354,000 hectares



Mist over secondary forest in Golden Stream Corridor Preserve. Credit: Juan Pablo Moreiras/FFI

GOLDEN STREAM CORRIDOR PRESERVE, SOUTHERN BELIZE

Home to Central America's five wild cats – the jaguar, jaguarundi, puma, ocelot and margay – this lowland tropical broadleaf forest was under direct threat of being destroyed by logging and conversion for citrus plantations and shrimp farming.

In 1998, Halcyon Land & Sea purchased an area of 3,866 hectares at Golden Stream, with subsequent purchases in the period up to 2004 increasing this to 6,057 hectares. This strategic intervention has effectively protected the entire Golden Stream Watershed – which is now conserved from the Mayan mountains to the coast (where it links to the Port Honduras Mountain Reserve). In 2006 the Global Environment Facility (GEF) provided a grant through the United Nations Development Programme (UNDP) for FFI and our partner, Ya'axché Conservation Trust (now named Ya'axché), a Mayan NGO, to continue our work throughout the Golden Stream Watershed. As a result, coordinated management and strategic planning is contributing to the conservation of a landscape area of over 113,000 hectares.

Working with Ya'axché, we have also helped to build a sustainable livelihood programme for local communities. At present over 100 families are involved in horticulture, beekeeping and cacao production projects. In addition Ya'axché runs a scholarship scheme for students from local communities, and conducts experiential environmental

education tours for local schools. Ya'axché assists local groups, including women's groups, providing a range of training from leadership and governance to business management and marketing.

The Ya'axché Protected Areas Management Programme has run courses and training for rangers to continue to professionalise and integrate new techniques for protected areas. Training has covered analysis of remotely sensed images to rapidly detect changes in forest cover, ongoing piloting of the Spatial Monitoring and Reporting Tool (SMART), building capacity for community management and biodiversity data collection, data basing and analysis.

From the initial work around the Golden Stream Corridor Preserve as a nascent organisation, Ya'axché has grown into an effective grass roots organisation, recognised locally, nationally and even internationally. As well as managing Golden Stream, Ya'axché took on formal co-management for the neighbouring Bladen Nature Reserve (a national Protected Area covering 39,000 hectares), and is taking a lead in integrated approaches to managing the wider landscape around these sites. Indeed, Ya'axché's appointment as manager of Bladen is a testament to its experience in protected area management and to the institutional capacity that has been built as a direct result of the Halcyon Land & Sea project at Golden Stream.

In the 2012 Belizean general elections Lisel Alamilla (previously FFI Belize Programme Manager and then Ya'axché Executive Director) was appointed as Minister for the new Department of Forestry, Fisheries and Sustainable Development, creating the opportunity for stimulating developments in Belize's Protected Area and climate change policies. Lisel left this position at the end of 2015.

In 2015 Ya'axché gained co-management status for the Maya Mountain North Forest Reserve, and a community-based forest concession was established there to test a new sustainable community agro-forestry model. During 2016 communities were supported in planting a range of crops, including cacao and in diversifying agricultural techniques. In addition, baseline biodiversity data for this reserve was collected during 2016.

During 2016 **regular patrols** continued within all the areas for which Ya'axché is responsible, including Golden Stream Corridor Preserve, Bladen Nature Reserve, Maya Mountain North Forest Reserve and Columbia River Forest Reserve, and the ranger team increased by three this year to a total of 12 rangers, plus a Protected Areas Manager. Ya'axché is now considering introducing the SMART monitoring system across some of these areas. Working in a consortium along with the government of Belize, Ya'axché is planning to further extend its work to monitor and explore illegal activities occurring in western Bladen, Maya Mountain North Forest Reserve and alongside the border of the Columbia River Forest Reserve.

The Golden Stream Corridor Preserve, originally purchased with Halcyon funding, continues to be actively and effectively managed for biodiversity conservation by Ya'axché. **Ongoing monitoring** of forest cover and biodiversity within Golden Stream demonstrates that indicators of forest health and abundance and diversity of species are higher within the protected lands than in surrounding areas. Golden Stream still supports all five of Belize's wild cat species along with a recovering population of howler monkeys.

The annual Biodiversity Synthesis report is available at the following link:
[http://www.yaaxche.org/files/Yaaxche Biodiversity Synthesis Report 2015.pdf](http://www.yaaxche.org/files/Yaaxche_Biodiversity_Synthesis_Report_2015.pdf)

Over the course of 2016 Ya'axché continued to focus on **protecting threatened tree species** (including rosewood, a major target of loggers) in their protected areas, through an ongoing collaboration with the Global Trees Campaign (an initiative spearheaded by FFI).

This year has seen a greater emphasis on integrating biodiversity and agriculture within Ya'axché's work. **Climate-smart agriculture** has been promoted to 120 farmers within the Maya Golden Landscape, along with wider training sessions and exchange visits. In addition, biodiversity monitoring protocols were piloted in five agroforestry farms.

A grant in 2012 and follow-up support to Ya'axche has helped the organisation to grow in response to taking on management responsibility for additional areas and also underpinned the development of enhanced fundraising capacity within Ya'axché. This investment is now paying dividends, in terms of year-on-year increases in funding independently sourced by Ya'axché.

A formal case study of the Golden Stream project was completed in 2015, and during 2016 field visits were undertaken as part of the Arcadia Review which provided a very useful external assessment of the partnership to date.

Area secured	6,057 hectares
Area of conservation impact	113,237 hectares

Golden Stream River spring. Credit: Juan Pablo Moreiras/FFI



YASQUEL CLOUD FOREST, ECUADOR

Yasquel is an area of 4,000 hectares of Andean cloud forest and páramo (a highly biodiverse type of high-altitude heathland) located in the Andes of Ecuador on the slopes of the Pichinche volcano. In 2009, Yasquel was offered for sale and was at risk of being converted into pasture land for cattle ranching. Given the importance of the site for conservation, Halcyon Land & Sea committed a grant to purchase the site.

At the beginning of 2011, after almost two years of negotiations, the vendors suddenly withdrew the property from sale. This was apparently due to disputes within the family selling the property regarding the use and division of income from the sale. In addition, the family was not willing to meet certain conditions of sale identified by FFI as being necessary to reduce our future liability (such as proper clarification of boundaries and historical issues over squatters and evictions).

CHACOCENTE WILDLIFE REFUGE, NICARAGUA

In 2001, Halcyon Land & Sea bought eight hectares of coast line, including beach and dry tropical forest, on the south Pacific coast of Nicaragua. This is one of the largest and most important remaining examples of dry tropical forest in the country. It is also one of the region's four mass-nesting sites for the Endangered olive ridley turtle, and a primary nesting site for the Critically Endangered Pacific leatherback turtle.

Poaching of turtle eggs has been a major threat to the species. The local communities are poor, and previously relied on the income earned from selling eggs. To help people find an alternative income, FFI is assisting farmers to increase their crop diversity and yields by introducing basic irrigation, and is helping local people to set up and run turtle tourism and other livelihood initiatives (such as 'weaving for nature', which recycles plastic waste into handicrafts). Our engagement at Chacocente helped to leverage funding from the Global Environment Facility of the United Nations Development Programme, which has now been delivered. This developed effective management of the area involving both private (landowners) and public (local community) stakeholders.

The area purchased at Chacocente is now integrated as part of the Rio Escalante-Chacocente Wildlife Refuge, and is managed within Nicaragua's Protected Area system by the Nicaraguan Ministry of Environment, with FFI leading and advising on marine turtle conservation efforts at the nesting beaches. In 2015 FFI provided additional support in the development of a new governance structure for

the refuge, which formalises a level of co-management by the community and other stakeholders at this site.

In 2016 **active protection of nesting sea turtles continued** at beaches within the Chacocente Wildlife Refuge. Nightly patrols by community rangers (and by Chacocente government wardens) protected the leatherback and olive ridley turtle nesting beaches, and a **community hatchery** was constructed to provide additional protection for the leatherback turtle eggs. Refresher training was given to all patrol members (some 30 individuals). The 2015/16 season saw only two clutches of leatherback eggs laid at Veracruz beach, both of which were protected, resulting in the release of 33 leatherback hatchlings from the hatchery. A further 244 olive ridley nests laid on Veracruz beach were also protected in the project hatchery, resulting in 14,230 hatchlings released. In addition, approximately 56,056 olive ridley nests were protected *in situ* at Chacocente's mass-nesting arribada beach, from which at least an estimated 419,527 hatchlings successfully emerged (estimated figures for the season, since full data collection data was precluded due to army patrols on the arribada beach).

Environmental education events for 2016 were delayed to avoid coinciding with the national elections, so the annual Sea Turtle Festival will be held towards the end of the year. A series of livelihood activities continue to operate at the project site, including enhanced tourism opportunities through a local cooperative which now offers tours of the reserve and home-cooked meals.

⁹ Although this purchase did not go ahead, FFI continues to identify other routes through which the property might be protected in future.



Ometepe. Credit: Jonathan Rogiest

Work continued in 2016 on efforts to eliminate destructive fishing practices from Nicaragua's Pacific coast, focusing on the marine area off the coast of Chacocente to restrict destructive fishing gear and practices and improving compliance with fishing and management plan regulations.

This year saw enhanced protection offshore; a surveillance committee has been established (including Chacocente's management committee and local fishermen), which works with the navy and the park authority to conduct marine patrols, checking for turtle by-catch and illegal activities such as blast fishing or gill nets placed in front of the turtle nesting beach. In addition, **marine monitoring** identified the presence of 129 species and the location of key areas for marine biodiversity, including habitats important as nurseries for juvenile fish.

Overall, the security of Chacocente remains strong and the management effectiveness at the site has grown substantially on the back of the initial Halcyon Land & Sea

support. The site now has an operational management plan, a trained park ranger team, improved infrastructure, better management and coordination with other agencies (such as naval patrols) as well as the annual management of the turtle nesting beaches.

Ongoing **monitoring of dry forests** and biodiversity (as well as turtles) is in place. Turtle data continues to show a positive upward trend for numbers of olive ridley turtles returning to nest. Since the project began almost 700,000 olive ridley nests have been recorded at Chacocente (the majority of which have been protected). However, despite the project having successfully released over 4,730 leatherback hatchlings, the status of the regional population of this species continues to be a significant cause for concern.

Area secured
Area of conservation impact

8 hectares
4,800 hectares¹⁰

CRISTALINO STATE PARK, BRAZIL

In late 2003, Halcyon Land & Sea made an emergency purchase to protect 1,600 hectares of the southern border of the Cristalino State Park in Brazil. This landscape is the most biodiverse reserve in the Brazilian Amazon and a key gateway to the southern Amazon. It has the second highest recorded diversity of bird species in the world, and is home to the Endangered white-whiskered spider monkey. Cristalino acts as a barricade between undisturbed forest in the north and intensive deforestation in the south, preventing the advance of cattle ranching, logging and soya farms. FFI's aim is to collaborate with other NGOs to use Cristalino and other reserves to prevent deforestation reaching the heart of the

Amazon basin. We hope to block the expansion of ranching by creating a sustainable forestry buffer zone. This will prevent natural resource conflict between ranchers and soya growers in the south and indigenous people in the north, and it will preserve large tracts of Amazonian wilderness.

With the generosity of the Grass Valley Trust and Brazilian entrepreneurs, the area of land protected has since been increased to 6,476 hectares and it is now managed by our local partner - the Cristalino Ecological Foundation (CEF). A site visit in November 2011 by FFI and Grass Valley confirmed the excellent status of forest and wildlife, and the reserves were judged to be well-managed and secure.

¹⁰ The project also acts to protect some 11,100 hectares of important marine habitat, but this is reported separately in the Arcadia marine initiative report.

Relative to the status at project initiation, the threats to the Cristalino private nature reserves are judged to have been much reduced as a result of (i) regular patrols; (ii) the award-winning ecotourism business, which has demonstrated the economic value of the forest; (iii) environmental education work with local communities; and (iv) increased knowledge of the biodiversity value, through research.

There were no problems with fires at the private reserves this year. CEF has also been following a plan to further enhance its financial stability and to use increased visitor fees to help underpin running costs.

During 2015 CEF continued to actively manage and protect the private reserves and to use the areas for both tourism and educational purposes. The area is regularly visited by ornithologists and bird researchers, which reflects the good conservation status of this area. FFI and Grass Valley continue to work with CEF to resolve some outstanding matters with regard to land title within one of the reserves. CEF received a grant in 2016 to develop biological monitoring protocols and research guidelines. This will help to ensure that research in the reserves is in

line with the needs of the management plan and can contribute directly to supporting management decisions and meeting the reserves' biodiversity monitoring priorities. There are **regular patrols throughout the private reserves**, in parallel with their use for tourist activities, and a permanent ranger lives in the northern part of the reserves and patrols these parts of the site. During the wild fire season (June to September), the frequency of patrols is increased to detect fires and respond quickly. No infractions or fires were reported in either of the reserves in 2016. Income from tourism continues to underpin site management and generates sufficient funding to underpin basic management activities in the area.

The key legacy of the original Halcyon Land & Sea support is that areas purchased are being actively conserved and protected, and this in turn provides effective protection to the western border of Cristalino State Park. At the same time, restructuring of the Environmental Agency of Mato Grosso has resulted the more effective implementation of the park's management plan.

Area secured	6,476 hectares
Area of conservation impact	184,000 hectares

ESTANCIA LA QUERENCIA, PATAGONIA

In 2001, Halcyon Land & Sea began helping to conserve a vast and remarkably intact example of dry grassland in Patagonia. The area is a vital nesting habitat of the Endangered Andean condor. Halcyon Land & Sea investment facilitated a collaboration between FFI, the landowner and three other NGO partners (Earthvoice, ProNatura USA and the Wildlife Land Trust), to develop plans for establishing a 'Condor Conservancy' to conserve the exceptional biodiversity and ecosystems of La Querencia.

Working with these partners and the landowners, FFI helped to establish a foundation to protect the biodiversity of the *estancia* for the long term. The

board of this foundation developed a plan to promote wildlife, habitat and ecotourism, focusing on the protection of condors, austral rails and many other typical steppe species. In 2004-5 FFI led the development of a management plan for the *estancia*, combining wildlife conservation, habitat management and exploration of ecotourism potential at the site. FFI's work also contributed to the site being listed as an Important Bird Area.

The land remains **secured under management** for the foreseeable future.

Area secured	85,000 hectares
Area of conservation impact	85,000 hectares

Patagonia's dry grassland. Credit: FFI





Local children in Ventanas learn about the bird species found in their forest (Awacachi Corridor). Credit: Juan Pablo Moreiras/FFI

STRATEGIC INITIATIVES 1998-2016

Strategic Initiatives 1998-2016	Country
2011-14 Implementing carbon finance for Aceh's forests	Indonesia
2009-13 Kachin highlands	Myanmar
2005-13 Rapid Response Facility	Global
2007-13 Halcyon Climate Change Programme	Global
2010-11 Support to the BLUE Foundation and Fish2Fork	United Kingdom
2002-10 Cardamom Mountains	Cambodia
2008-09 Sankuru Reserve	Democratic Republic of Congo
Total	

IMPLEMENTING CARBON FINANCE FOR ACEH'S FORESTS, INDONESIA

The forests of Ulu Masen cover some 738,000 hectares and contain some of the highest levels of biodiversity in the world. Rapid biodiversity assessments conducted during 2007 identified 329 bird species and 87 amphibian and reptile species (including 15 endemics and 11 species that may be new to science), along with globally important populations of the Sumatran tiger, Sumatran orang-utan and Sumatran elephant, all three of which are Critically Endangered. The forests of Ulu Masen are under ongoing threat from large-scale logging and conversion into agricultural land and have been disappearing at a rate of 1% a year.

One potential mechanism to protect the forests of Ulu Masen is to develop economic benefits from them as an intact resource, rather than from more damaging exploitation such as logging and conversion to oil palm. Carbon finance linked to Reduced Emissions from avoided Deforestation and Degradation (REDD+) initiatives provides a mechanism to change the economic drivers of forests from destruction in favour of protection.

Initially in 2007 FFI started working with the government of Aceh to develop a pilot REDD+ project for the forests of Ulu Masen. Once a valid REDD+ project has been produced, the government of Aceh will receive a long-term (30-year) funding mechanism for the Ulu Masen forest with parallel benefits for its communities. However, due to a change of governor, the project subsequently refocused, specifically working to ensure that local communities could receive

appropriate benefits from carbon finance revenues. This is essential in order to ensure their support for future protection activities, and thus the sustainability and effectiveness of the project. In 2012 the project (in collaboration with the Legal Aid Institute) helped to draft Aceh's first land tenure policy, which specifically aims to resolve conflicts over land and natural resources. In addition Halcyon Land & Sea funding helped to leverage a substantial European Union Climate Change grant in 2014.

As part of a multi-stranded approach to securing key areas of Aceh's forests, the project is focusing on securing **community tenure and management rights** for some 15,000 hectares of forest, while tackling illegal logging around the Ulu Masen ecosystem (738,000 hectares), as well as at provincial level (3.5 million hectares of forest).

FFI continues to support the development of village forests - a new approach to forest protection that includes both community and biodiversity targets. In 2015 participatory planning was used to develop management plans for the five village forests (*hutan desa*) that were previously developed by the project. These village forests cover 11,281¹¹ hectares of forest and could directly benefit 5,000 community members. A changing institutional landscape in the government, with the merger of the Ministry of Forestry and the Ministry of Environment, resulted in delayed approval of the village forests. Following engagement with, and lobbying of, the new ministry, formal approval was received at the end of 2015.

¹¹ Revised compared to 2014 figures due to government area verification.

Loading timber onto a truck. Credit: Juan Pablo Moreiras/FFI





Planting seeds. Credit: Juan Pablo Moreiras/FFI

Also, with FFI's support, **three forestry management plans were developed** in 2015; these cover an area of 1.23 million hectares, encompassing the Ulu Masen ecosystem and its 12 districts.

Work has continued to **map and demarcate the village forests**, and to collect the information needed for the certification of carbon credits from these areas. Biannual forest cover assessments are made using satellite images, to track the effectiveness of village forests in maintaining forest cover. Evidence to date suggests village forest areas are effective – either showing an increase in forest cover or a rate of forest loss that is less than that expected in other forest areas.

In 2016 **forest ranger patrols** involving 75 community rangers continued across the target forests, and the ongoing presence of tigers and elephants has been confirmed.

During 2016 **support to the government** in its application of REDD+ approaches continued, including support for the drafting of additional regulations linked to the Government of Aceh's strategy and road map for climate change mitigation and adaptation.

Area to be secured
Area of conservation impact

11,281 hectares
738,000 hectares

KACHIN HIGHLANDS, MYANMAR

In 2010 Halcyon Land & Sea funded work to start conservation of the forests of north-east Kachin State in the Myanmar Himalayan border region with China. Initial surveys have revealed highly biodiverse mountain forests, populated with rare magnolias and primates. As a result of Halcyon Land & Sea-funded surveys we were able to confirm the presence of a monkey species previously unknown to science – the Myanmar snub-nosed monkey. This species has now been formally described but it is immediately considered to be Critically Endangered given its small population size and limited distribution.

These surveys – conducted with local partner BANCA – also revealed a number of immediate threats to the region's forests, including destructive logging by Chinese timber companies leading to severe habitat degradation and hunting for local use and for the wildlife trade to China. One of the greatest threats to these forests was the proposed development of hydro-power projects that would result in in-migration of a large Chinese workforce (thus increasing demand for firewood and wildlife products), coupled with increased forest conversion as the valley floor agricultural lands were flooded.

Without careful planning these large-scale infrastructure projects will decimate the wildlife of these exceptional forests. The surveys have provided the understanding and rationale to move forward with a proposed protected area, using the Myanmar snub-nosed monkey as the key flagship species.

In addition, village agreements for the boundaries of a Community Protected Area were made, which would become a core zone in the proposed national park, and community patrol groups were established. During 2012 and 2013 field activities were delayed due to an upsurge in violence in the region between the Kachin ethnic army and the Myanmar military, which meant that delivery of the project was slower than originally planned. However, during this period, project staff were still able to monitor illegal logging along the Myanmar-China border next to the project site and found that there was already a significant reduction in logging. Staff participated in a high-level forest sector reform workshop in Myanmar and as a result the government announced a log export ban, starting in 2014, which will help to prevent further Chinese logging in the Kachin highlands.



Setting camera traps. Credit: Jeremy Holden/FFI

A key aim of the project is the gazettelement of a new national park in Kachin (Imawbum National Park, which will cover the range of the Myanmar snub-nosed monkey), which was approved in principle by the Ministry of Forestry and Environmental Conservation in 2013. This park will secure over 150,000 hectares of forest under conservation management and will protect the watershed of the main tributary of the Ayeyarwaddy River, the biggest and longest river in Myanmar.

In 2015 the team completed a biodiversity report of the Imawbum area, which will underpin the nomination of the new national park ('The Conservation Status of Mammals and Birds in The Imawbum Mountains, Kachin State, Northern Myanmar'), and helped lead a public consultation process in relation to the proposed park. The gazettelement of the park moved a step further in 2016 when the new Minister of Natural Resources and Environmental Conservation (following government change at the start of the year) confirmed the government's intention to create the Imawbum National Park. There is now a 90-day window for the public to register legitimate complaints; a land settlement committee was formed to oversee the designation and consultation process.

During 2016 the project supported the establishment of **three further village conservation groups**, bringing the total to 26, which together cover most of the villages that are located next to the proposed Imawbum National Park. In addition, the project coordinated environmental awareness activities that reached over 1,300 people. The protection of the wider Community Protected Area was upheld in 2016, through the village conservation groups, with no logging, agriculture, trapping of threatened species or hunting of the Myanmar snub-nosed monkey (although subsistence hunting of common species is allowed).

The project undertook **camera trapping** this year within the range of the Myanmar snub-nosed monkey (and a number of community members were trained to undertake the camera-trap surveys themselves). Village patrol members also received training in biodiversity monitoring. Livelihood assistance in 2016 continued, including training in agricultural techniques and livestock husbandry and small grant support (for example for purchase of livestock, planting of walnut and cardamom, development of a local shop and of a nursery school).

Area secured
Area of conservation impact

156,300 hectares
c.400,000 hectares

RAPID RESPONSE FACILITY

The Rapid Response Facility (RRF) is a partnership between the UNESCO World Heritage Centre, the United Nations Foundation and FFI. It was established in late 2005 to provide timely and flexible resources to address threats and emergencies affecting the ecosystem security of selected Natural World Heritage sites and surrounding areas. The fund is unique in its speed of response: decisions are made within eight days, meaning that funds can be made available within a couple of weeks from the receipt of an application. A legacy report looking at the impact of the fund was produced in 2014 (see http://bit.ly/RRF_LegacyReview)

As in previous years, a contribution from Halcyon Land & Sea in 2016 leveraged significant funding from UNESCO via the Fondation Franz Weber. Grant funding was provided to three World Heritage sites under threat this year, as the other proposals received failed to meet the grant criteria. Since 2005 the facility has provided 40 grants, which have supported efforts to protect 33 sites. During 2016 a redesign of the RRF website was started, and should be completed by early 2017.

Malpelo Fauna & Flora Sanctuary, Colombia

represents an area of some 857,500 hectares of 'marine wilderness' constituting the largest no-fishing zone in the Eastern Tropical Pacific, and supports important populations of apex predators and pelagic species, such as giant grouper, tuna, billfish and numerous shark species (including hammerhead, silky, and whale sharks). The site is a top dive location, and four mooring berths are provided for dive boats, to prevent them dropping anchor on the coral reefs that surround the island of Malpelo. Storm damage to two of these moorings had put them out of action, increasing the risk of damage to the fragile corals from boats dropping anchor. The RRF grant was provided to enable replacement of the two damaged moorings, and this work will be completed in November 2016.

Volcanoes National Park, Rwanda is home to an important population of mountain gorillas, and neighbours the Virunga National Park (Democratic Republic of Congo) and Mgahinga Gorilla National Park (Uganda). During 2016 plans were announced to build a climate observatory (to be operated by the Massachusetts Institute of Technology) at the top of Mount Karisimbi (within the park) accessed by a cable car with associated tourism infrastructure. This would transect primary mountain gorilla habitat, fragmenting High Conservation Value forest and

allowing increased access to previously highly protected forests. An initial assessment showed the project's Environmental Impact Assessment had been wholly inadequate. A grant from the RRF enabled key in-country stakeholders to make representations to government about the significant environmental and social risks posed by the project, and the need for an improved impact assessment procedure, with full cross-sectoral stakeholder involvement. A new cross-sectoral advisory committee for the project has been proposed by the government, and in the meantime decisions on the project's development are on hold. Representation with key decision makers continues; following direct meetings with the Massachusetts Institute of Technology, it has stated that it will not pursue the development unless it meets international best practice standards and can be implemented without undermining the biodiversity values of the site.

Tonlé Sap Biosphere Reserve, Cambodia covers the floodplain of Tonlé Sap Lake, including an area of seasonally inundated forest. The 21,342-hectare core area supports diverse fish species and a rich fishery along with significant numbers of breeding waterbirds - including the greater adjutant stork (Endangered), the Bengal florican (a Critically Endangered bustard), and the Manchurian reed warbler (Vulnerable). In 2016 the scale of the El Niño event caused the largest fires in living memory in the area; extensive fires began in early March and continued until June. These started in grasslands at the remote north-western edge of the area and spread south and east towards the lakeshore. An RRF grant supported fire-fighting efforts in the reserve, through the purchase of essential fire-fighting equipment. This allowed water to be pumped from the lake, into streams and then to holding tanks close to the centres of the fires. Over 72 local residents were involved in these fire-fighting efforts, including rangers, community volunteers, police, army and Buddhist monks. The fire was completely extinguished in early June before it reached the key area for nesting birds.

The value of last year's grant for anti-poaching equipment in Garamba National Park was highlighted in mid-February 2016. An unidentified helicopter was reported in the north of the park; as a result of the new equipment this was spotted at a much greater distance than was possible before. The park's aircraft was immediately deployed and the helicopter left the area.

Area of conservation impact (since 2005) 29,608,667 hectares

HALCYON CLIMATE CHANGE PROGRAMME

One of the greatest emerging threats to global biodiversity is climate change. The sites that we are protecting are likely to be subject to significant changes in the habitats and species they support over the coming decades. At the same time, the importance of natural habitats in locking up carbon is becoming increasingly recognised – the destruction of such habitats (particularly forests) is estimated to release around 20% of total annual global greenhouse gas emissions.

Halcyon Land & Sea effectively provides a central mechanism for the 'avoided destruction' of natural habitats, and has effectively locked up significant stores of carbon that would have been released if sites had been destroyed. Since 2007 three strategic small grants from Halcyon Land & Sea have helped us to:

- Develop a methodology to assess carbon stored within Halcyon Land & Sea sites, and to estimate avoided emissions as a result of this protection. In 2010 we were approached by a multinational business and asked to apply this learning to assess the carbon stored within its land holdings.
- Consider how Reduced Emissions from avoided Deforestation and Degradation (REDD) schemes could be applied as a key mechanism to secure large tracts of forest habitats. As part of this we developed a process to assess the likely feasibility of REDD for different sites through a series of principles to

underpin future REDD projects. Two publications were publicly disseminated in 2011: a review of how biodiversity underpins carbon storage in forest systems and lessons learnt from Halcyon Land & Sea projects that could be applied to emerging REDD initiatives. Finance from Halcyon Land & Sea was central to us securing an innovative partnership to jointly develop a series of REDD projects.

- Review the potential for new (non-forest) carbon markets – including markets based around grassland carbon and so called 'blue carbon' in marine habitats.
- Develop the tools to undertake climate risk assessment and climate foresight planning for Halcyon Land & Sea sites. Our climate adaptation tool has since been utilised in climate adaptation planning training for projects supported by other donors.

Between 2011 and 2015 we received external funding to apply the climate adaptation planning tool to more projects – with a focus on sites in agricultural landscapes. This has enabled us to continue to provide further **publicly available guidance** on the interface of biodiversity, agriculture and climate change, and on risk assessments for threatened tree species at further risk from a changing climate.

Forest in Saint Lucia. Credit: Jenny Daltry/FFI



Publications on trees and climate change¹² and the role of biodiversity in underpinning REDD+ were developed¹³ and the adaptation planning toolkit was made widely available¹⁴. Through this process **bespoke 'climate foresight planning'** was conducted for six sites in Kyrgyzstan, Tajikistan, Nicaragua, Liberia, China and the Philippines. Four of these have been shared as case studies (as above), and some have also been shared at national levels.

This project enabled us to lead processes on **climate adaptation planning** with communities in a range of areas of high biodiversity, in advance of other agencies, and we also ensured that biodiversity considerations were incorporated into future agricultural responses to climate change.

In 2016 work continued to mainstream climate adaptation needs within FFI, including a high-level risk assessment conducted across the whole portfolio, followed by more detailed explorations of

climate vulnerabilities for those projects where risks were identified (eight conducted during 2016), leading onto the discussion of 'climate-smart' project strategies.

In addition, in Nicaragua, funding was secured to implement elements of the climate adaptation plan for Ometepe (developed through our work there in previous years); this has resulted in 30 additional farms in the project area employing new 'climate-smart' practices and technologies across a total of 200 hectares. Similarly, proposals are pending for follow-up work based on the climate adaptation plan developed in Tajikistan.

In 2016 FFI actively engaged in a series of external forums to **share our experience and learning on climate adaptation**, highlighting to other conservation NGOs our work on the implications of human responses to climate change for biodiversity (rather than just direct climate-mediated threats).

SUPPORT TO BLUE MARINE FOUNDATION

The BLUE Marine Foundation (BLUE) was formed by the team behind the film *The End of the Line* and aims to be a new and innovative force for marine conservation, with a particular agenda to develop large-scale Marine Protected Areas (MPAs).

In 2010 Halcyon Land & Sea provided a small core grant to help establish the foundation, and key staff time. This initial investment helped to leverage a US \$5 million 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.

We also supported the operation of Fish2fork – an innovative website that reviews restaurants on the basis of their approach to using sustainable seafood, in order to bring about changes with regard to the fish they serve, and their sourcing and labelling policies.

In 2011, further support was provided to help the

development of BLUE and Fish2fork and to develop a more diverse income base for both organisations. By investing in a Development Consultant they were able to access substantial further funding.

BLUE has since grown its project portfolio further and has diversified and strengthened its income streams and has developed strong internal systems and structures to enable the successful delivery of its conservation programme. BLUE has stated that:

"The Halcyon Land & Sea grants were awarded to BLUE at a crucial time in its development, enabling BLUE to recruit staff, develop its project portfolio and its donor base... None of this [success] would have been possible without the provision of seed-funding such as that provided by Halcyon Land & Sea at a pivotal stage."

¹² This is publicly available at <http://globaltrees.org/wp-content/uploads/2013/08/Trees-Species-Vulnerability-to-Climate-Change.pdf>

¹³ Publicly available at <http://www.fauna-flora.org/wp-content/uploads/Does-the-long-term-success-of-REDD-also-depend-on-biodiversity-Hinsley-et-al-2015.pdf>

¹⁴ Available at <http://www.fauna-flora.org/initiatives/climate-change-adaptation-planning/> and <https://www.weadapt.org/knowledge-base/ecosystem-based-adaptation/fauna-flora-international-climate-adaptation-planning-project>



Local fisherman with day's catch. Credit: Juan Pablo Moreiras/FFI

An FFI marine expert was seconded to BLUE during 2013-14, providing vital scientific support and assisting in the strategic development for new and existing projects. The impact this had on BLUE's projects has been strongly recognised, not only in terms of funds raised, but also because she helped to set up a strategic process that enabled the successful implementation of many of BLUE's projects.

During 2016 BLUE continued its work to lobby the UK government to establish sizable MPAs around oceanic UK Overseas Territories, as part of the **Great British Oceans coalition**. This year saw a closed area of 234,291 square kilometres around Ascension designated as an MPA, along with MPAs around Pitcairn, Tristan da Cunha and St Helena – in total the UK government has now placed over four million square kilometres of ocean under protection. The UK government has committed £20 million for monitoring and protection of these MPAs over the next four years.

BLUE is also now concluding its work in Lyme Bay, which has created a scheme where **sustainable fisheries** working within the voluntary sustainable management framework of the Lyme Bay Marine Reserve are receiving a 20% and 30% premium for fish sold under the Reserve Seafood scheme. Scientific evidence points to continued recovery of marine habitats and taxa in the reserve.

Lessons from Lyme Bay are now being applied to work in the Solent, where native oyster beds are being restored with cage-grown oysters. Here, FFI provided considerable support toward the development of Blue's work in the Solent, alongside continued fundraising advice and support.

BLUE also worked in the Caspian Sea this year on the issue of beluga (European sturgeon) management, and subsequently the Azerbaijan government has banned the import of gill nets and has started to clear gill nets from the Caspian delta (through a net recovery scheme). BLUE also started work in Italy this year, and supported local officials in the Aeolian islands (north of Sicily) to declare a zoned Marine Protected Area around the islands, and is now identifying ways to support the development of sustainable fisheries models for the area.

Fish2Fork's website continues to support **responsible seafood sourcing** in the restaurant trade, by providing a public-facing rating system. Fish2Fork now operates in a direct partnership with the Marine Conservation Society, directly using its Good Fish Guide database.

Area of conservation impact

54,896,250 hectares¹⁶

¹⁵ Does not include any of the funding leveraged for Turneffe Atoll which is instead reported in the Arcadia Marine Programme report.

¹⁶ Not included in Halcyon Land & Sea area calculations

CARDAMOM MOUNTAINS, CAMBODIA

In 2002, an emergency grant from Halcyon Land & Sea established a ranger force to protect wildlife and habitats across 570,000 hectares of the Cardamom Mountains in Cambodia. The grant initiated protection measures to prevent forest crime in the wildlife sanctuaries of Phnom Aural and Phnom Samkos. Workshops were held for the police, military, judiciary and other enforcement agencies to clarify the new laws and the need to counter poaching and illegal logging. This initial small grant proved successful in paving the way for a much larger 'Cardamom Mountains Wildlife Sanctuaries Project', co-funded by the Global Environment Facility and United Nations Foundation (2003-2006), to strengthen the management of the sanctuaries to conserve wildlife and enable the sustainable development of local communities. A series of Community Protected Areas have been established within Phnom Samkos Wildlife Sanctuary, which are patrolled by community rangers.

Since 2009 Halcyon Land & Sea has provided additional funding to develop sustainable finance strategies for the area. In 2010 this funding helped to leverage a portfolio of projects focused on 'Payments for Ecosystem Services' (PES) supported by funding from the European Union.

In 2011 work began to deliver these projects and to build in-country awareness of PES approaches. Research was commissioned, which showed the relative economic benefits of forest protection in relation to proposed hydropower schemes, illustrating the value of the PES approach. In addition, the work supported the mapping of community lands – establishing land title, resolving land conflicts, developing community land use plans and Community Protected Area management plans and building capacity of community-based organisations. The project also provided training in horticulture, and support for sustainable forest product use and livelihood development. As a result approximately 441,000 hectares of land within the Cardamoms has been brought under sustainable management and protection through Community Protected Areas. In 2016 work continued with communities within the Cardamom Mountains on varied initiatives to protect endangered species and also create livelihood development opportunities, with new support from the UK's Darwin Initiative.

Area secured
Area of conservation impact

441,000 hectares
570,000 hectares

SANKURU RESERVE, DEMOCRATIC REPUBLIC OF CONGO

The forests of the Congo basin are an important stronghold for a range of threatened wildlife such as forest elephant, okapi and numerous primates – including the Endangered bonobo. FFI has worked with the Democratic Republic of Congo's (DRC) Protected Areas Authority, Institut Congolais pour la Conservation de la Nature (ICCN) for many years. As a result of this partnership we were asked to help develop the management structures and local institutional

arrangements for newly established protected areas in the Congo basin, in partnership with local communities. In 2008 a grant from Halcyon Land & Sea was used to develop the institutional base, access the information – and leverage the funds – to help bring about on-the-ground conservation for a newly established nature reserve at Sankuru.

Rangers on patrol. Credit: Stuart Nixon/FFI



In 2009, however, it was found that neighbouring areas had higher biodiversity and the government planned to de-gazette the reserve. We instead focused our efforts on engagement with the managers of the more biodiverse neighbouring forests (the Tshuapa, Lomami and Lualaba) – but no formal partnership for this area has yet been forthcoming.

FFI also worked centrally within DRC, in collaboration with

both ICCN and the Ministry of the Environment, to support the country's Climate Change and Reduced Emissions from avoided Deforestation and Degradation (REDD) processes, in order to support the government in developing links between internal forest protection and international carbon markets.

STRATEGIC SMALL GRANTS 2008-2016

Small Grants 2008-2016	Country
2015-16 Belize Protected Area legislation	Belize
2014-15 Saint Lucia forest management	Saint Lucia
2013-2014 Mount Mabu	Mozambique
2010 -2014 Shark aggregation sites	Australia
2013 Soils for the Future	Global
2013 Halcyon Learning Grant	Global
2012 Increasing security for Borana Ranch	Kenya
2012 Developing a new approach to conserving rangelands	Australia
2011 Emergency response for saiga antelopes	Uzbekistan
2009-11 Valuing the Ustyurt steppe	Uzbekistan
2010 Using REDD to protect forests	Vietnam
2009 Tongwe forest protection	Tanzania
2008-09 Ishaqbini Community Conservancy	Kenya
2008 Burnett Mary Region	Australia
2006 Cape Private Nature Reserves	South Africa
2003 Conservation Incentives	South Africa
2003 Biodiversity Conservation Programme	Philippines
Total	



Aristolochia, Belize. Credit: FFI

BELIZE LEGISLATION

The protected areas of Belize support significant biodiversity, encompassing large areas of tropical forest as well as the Belize barrier reef. There are currently 103 protected areas in Belize, including national parks, nature reserves, wildlife refuges and private protected areas, among others. However, lack of integration and old legislative frameworks undermine the effectiveness of the system of protected areas.

The main identified threats to the effectiveness of state-protected areas include: limited available human and financial resources; sub-optimal use of available resources (including those of co-managers and communities); and weak accountability for management of individual areas and of the overall protected areas system. These are systemic issues, which can only be partly addressed without reform of existing legal and institutional framework.

As well as state-protected areas, Belize has a growing number of private protected areas (such as Golden Stream Preserve, established with Arcadia/Halcyon Land & Sea support). However, the contribution and sustainability of private protected areas is currently limited. At present the

biodiversity protection and ecosystem service contributions of private protected areas are not recognised. There are no tax breaks or incentives for landowners to encourage them to manage land for conservation, and private protected areas cannot access financial support from the Protected Areas Conservation Trust, while NGOs co-managing state-protected areas receive only minimal support. Without such financial measures, few private protected areas can survive in the long term.

The creation in 2012 of the Ministry of Forestry, Fisheries and Sustainable Development (MFFSD), and the appointment as minister of Lisel Alamilla (previously Director of Ya'axché Conservation Trust), created an opportunity to develop a more effective protected area framework, and to better incorporate private protected areas into the legislation. The MFFSD specifically requested FFI's help to drive forward the enactment of this new legislation, to identify improved and sustainable financing mechanisms for the National Protected Areas System, and to build support for the reform of protected areas institutions.

Drafting of the new **National Protected Areas System legislation** started in late 2014. The project supported work to refine the draft National Protected Area System Act in response to feedback, to advise on the potential governance and financing of the National Protected Areas System – including the Protected Areas Conservation Trust (which finances protected areas), to support a strategic planning process for MFFSD itself, determining its future direction and structure, and to advise on media relations and associated building of support for the proposed National Protected Areas System Act and new protected areas financing mechanisms.

As a result of this work a new National Protected Areas System Act and the Protected Areas Conservation Trust (Amendment) Act was gazetted in October 2015. This provided a clear institutional framework for Belize's protected areas as an integrated system, with better planning, monitoring, financing and accountability. The legal framework recognised private protected areas as part of the system, with landowners assuming responsibilities but also benefitting from government support and incentives. Under this legislation the Protected Areas Conservation Trust should prioritise the funding of core protected area management costs, including those for co-managed protected areas. In addition, a high-level strategic plan for the ministry

was also developed during 2015. However, a sudden dissolution of the government and snap elections in November 2015 intervened in the process, and means there has been a hiatus in activity following restructuring of the department under the new government (and appointment of a new minister). A larger ministry was created, to wrap in the Departments of Agriculture, Fisheries, Forestry, the Environment and Sustainable Development. Whilst the new legislation had been passed before the change in government, regulations under the new Act had not been fully developed or approved, which affected the implementation of this legislation. There is thus an ongoing need to work with the government and other stakeholders, and advocate for specific regulations to ensure the expected outcomes from the new Act for private protected areas, protected area funding and biological corridors.

During 2016 the project was on hold, while the new ministerial structure took shape and a **new PACT board** was formed. The new Minister of State has shown interest in picking up the implementation of the new legislation, and FFI is now poised to work with in-country partners to support this process. An additional top-up grant from Halcyon Land & Sea was agreed this year to support these efforts.

Area of impact

1,150,000 hectares

STRENGTHENING FOREST MANAGEMENT IN SAINT LUCIA

Saint Lucia is noted for its extraordinarily high levels of endemism and its unusually large concentration of globally threatened species, a number of which are classified as Critically Endangered. Many of these species are associated with Saint Lucia's forest systems. Forests cover approximately 34,000 hectares, which is more than one third of Saint Lucia's land area. As well as supporting a range of important endemic and threatened species, these forests would release 20,381,496 tonnes of CO₂ if they were destroyed, as they are estimated to contain over 5.5 million tonnes of stored carbon.

The geography of the island results in the presence of a surprising diversity of forest types, ranging from cacti-dominated dry forests on offshore islands, to lush montane rainforests in the upland areas. Around 30% of these forests are within the network of government Forest Reserves, which have a total area of around 10,000 hectares.

However, the existing reserve system is not representative of all forest types on the island, being dominated by montane and cloud forests. The most threatened lowland forest types are currently under-represented (or in some cases entirely unrepresented) within the reserve system. The Saint Lucia Forestry Department is keen to bring additional, strategic areas under its protection.

At present the forests outside government reserves are owned privately. The most threatened lowland forests are at direct risk from habitat conversion for tourism developments and over-collection of economically important species such as the lansen tree. Even within forest reserves, the traditional management systems established to manage forests solely as an economic resource require review in order to focus on conservation alongside their commercial use.

They must also be prepared to tackle escalating threats (such as illegal incursions, increased incidence of erosion and landslides, and invasive alien species), while putting in place direct protection for the most at-risk forest species.

The Saint Lucia Forestry Department approached FFI in 2014 to request support in developing a new strategy for the management of its forest reserves, and to modernise and upgrade the way it operates, to ensure the long-term future of the critical, globally important biodiversity and other natural assets under its custodianship. The department had not had a forest management strategy since the early 1990s, and even then, it was focused solely on optimising timber production. The lack of a strategy reduced the department's ability to address many of the threats to Saint Lucia's biodiversity, and prevented it maximising the opportunities related to the natural assets under its management.

A strategic small grant from Halcyon Land & Sea underpinned the development of a new strategy for the Forestry Department and new National Forest Management Plan – a process which involved all forestry staff with the assistance of external experts in protected areas management planning.

The Forestry Department's new Strategy and Implementation Plan 'Saint Lucia Forests and Land Resources Department: Strategic Directions 2015-2025' was successfully finalised, approved and published in 2015. The more modern and inclusive mission for the department has now been fully embedded, and is widely used to communicate its work.

A first priority action in the strategy – development of a detailed plan and toolkit for establishing and managing tourism concessions in the Forest Reserves – was also completed and approved, with the first three concessions having been tendered this year. This means that the government can now devolve management of some of the more popular tourist trails to the private sector, thus freeing up the time of 10-15% of Forestry Department

staff for other, more urgent, tasks, including applied conservation management.

The Forestry Department is actively implementing the **Strategy and Implementation Plan** and other outputs developed by the Halcyon-funded project to improve the management of forests and forest biodiversity, both inside and outside of the protected area system. The plan is being used to guide the monthly work plans of the various units within the department (e.g. Wildlife Unit, Enforcement Unit, Environmental Education Unit) and is helping them to think more logically and strategically about what to do and when. According to the Chief Forest Officer in October 2016 *"I can tell you that even the Range Offices are planning their work according to the Strategic Plan. They can even quote whole sections of it"*.

Elements of the strategic plan are being integrated into all new projects, including at least seven projects operating with external donor support; within the last year, the Forestry Department has set up a pipeline of forest conservation projects over the next four to five years. This plethora of new projects will enable the Forestry Department to implement its new strategic plan.

The Forestry Department has very strong ownership of the Strategy and Implementation Plan and related tools. All of its staff and closest partners have been involved in developing the strategy - in sharp contrast with plans in the past, which were typically led by consultants and involved only a few staff. The Forestry Department is showing signs of becoming a more effective organisation as a result, and has restructured its internal organisation to help deliver the plan. Two of the key Saint Lucian government staff involved in the development of the strategy have since been promoted to Chief Forest Officer and Deputy Chief Forestry Officer respectively, and are therefore well placed to guide the implementation of the strategy over the coming years.

Signage. Credit: Jenny Daltry/FFI





Lansan tree. Credit: Jenny Daltry/FFI

FFI continues its strong relationship with the Forestry Department, and our new Saint Lucia Racer Project Coordinator has been offered desk space to be based within the department.

The Forestry Department's new strategy has inspired the Department of Agriculture and other departments in the

Saint Lucia government to develop their own strategies and implementation plans, following a similar model. Also, several other forestry departments in the Eastern Caribbean have now approached FFI for assistance in developing a similar strategy and plan.

Area of impact

30,000 hectares

PROTECTING THE 'GOOGLE FOREST' OF MOUNT MABU, MOZAMBIQUE

The forests of Mount Mabu in northern Mozambique were only recently discovered in 2005 as a result of their identification on Google Earth. Since then this site has been recognised as an important hotspot of biodiversity. This area contains the most extensive continuous mid-altitude wet forest in southern Africa (approximately 7,900 hectares) supporting a number of newly described and endemic species (including several new species of reptiles and butterflies). It also supports a wide range of bird species, including an important second population of the *Namuli apalis* (Mozambique's only endemic bird species).

The forests of Mount Mabu have been increasingly under threat from commercial logging. Previously, poor infrastructure prevented the incursion of logging vehicles into these forests, but recent bridge repair and the accessibility to the coast is contributing to the extensive growth of logging in this region. The forest is also affected by traditional slash-and-burn agriculture, hunting and the influx of workers to a neighbouring tea estate.

The project aimed to establish a community protected area for Mount Mabu, with legally recognised status. FFI worked with two local NGOs to engage the local community in developing and promoting the sustainable use of natural resources, linked to the provision of opportunities for socio-economic development. An Environmental and Social Impact Assessment was completed and a Land Use Plan for Mabu forest was developed. A Community-Based Organisation was established with the participation of

local communities around the forest.

The project drew on changing conservation legislation in Mozambique, which for the first time recognised Community Conservation Areas as Protected Areas. In 2016 a management plan for the Mount Mabu area was developed with support from FFI. Subsequently, however, the relationship with the local project partner (Justica Ambiental) ran into difficulties. As a result FFI took the difficult decision to withdraw from this project, as it was not feasible to continue to deliver without an effective local partnership to operate through.

We understand that Justica Ambiental is planning to continue the project, and that it still aims to see Mount Mabu registered as a Community Conservation Area, in line with the original project plan. This outcome would build on the important achievements from the Halcyon investment – the development and legal registration of four Community-Based Organisations, training and capacity building of community members, registration of Mount Mabu as a globally recognised Important Bird Area, development of the preliminary management plan for Mount Mabu and initial development of the Environmental and Social Impact Assessment. All these elements represent vital steps required in the process of gaining Community Conservation Area status for Mount Mabu.

Area to be secured

7,900 hectares

Area of conservation impact

7,900 hectares



Grey nurse shark. Credit: Carley Bansemer/GNSRCEP

SHARK AGGREGATION SITE, AUSTRALIA

A grant in 2010 supported a new collaboration between FFI, the Burnett Mary Regional Group, the University of Queensland and the federal government to identify key aggregation sites for grey nurse sharks off the coast of Queensland. This project directly contributes towards the Australian government's recovery plan for the grey nurse shark, a species recognised as Critically Endangered off the east coast of Australia. It is also providing key data to guide the government in protecting important offshore sites for this species. The Halcyon Land & Sea grant leveraged a significant donation (AUD 300,000) from a private individual.

The project established 'Grey Nurse Shark Watch' in 2011 – a web-based interface for divers and photographers to upload reports of grey nurse sharks on the east coast of Australia. In addition, a desk-top review identified 200 potential areas as the basis for marine surveys to find 'missing' information on key shark aggregation sites. Surveys of the potential sites were initiated, and sharks were tagged (with a mix of acoustic and satellite tags) to follow their movements and identify whether they use suspected aggregation sites (where acoustic listening stations have been deployed). By 2013 the number of volunteer divers registered with Grey Nurse Shark

Watch had reached 221 – they have helped collect images of individual sharks, which can then be identified and tracked, based on their unique markings. In parallel to this project, the government has already made moves to strengthen protection around the existing known aggregation sites. Some of the sites being identified are already in protected areas, and the project team is working closely with the Queensland government to ensure protection for other sites located.

In 2014 a further grant was made from Halcyon Land & Sea in support of ongoing work on grey nurse sharks by the University of Queensland. This work focuses on identification of further key aggregation sites along the Queensland coast. Six aggregation sites have already been identified, of which Wolf Rock is currently considered the most important (as it supports around 60% of the breeding population of grey nurse sharks during their gestation period) and has been effectively gazetted as a 'green zone' (closed area). In addition diving in the area is regulated to reduce potential disturbance. The location of the remaining 40% of females during their gestation period is unknown, and given the fact that the species is considered Critically Endangered in Australian waters, identification and protection of these sites is vitally important.



Credit: virtualwolf (<https://creativecommons.org/licenses/by-sa/2.0/>)

An array of 25 **acoustic listening stations** was deployed in 2014-15 across some 600 kilometres off the Queensland coast to detect the presence of acoustically tagged female grey nurse sharks entering the area. 21 sharks were acoustically tagged over the course of the project (including a number of recently mated/pregnant females). During the project grey nurse sharks were detected as far north as Lady Elliot Island, and as far south as Montague Island off Narooma, New South Wales. Data was also collected on the physical structure and fish assemblages for each of the sites where listening stations were deployed.

Preliminary results of this project increased understanding of the use of Wolf Rock as a gestation aggregation site, and two adjacent rocky reef sites (the Pinnacles and Round Rock) were also identified as grey nurse shark aggregation sites. The data will be used to better understand grey nurse shark migratory movements, particularly within Queensland waters. Information from this study has been provided to the Queensland Parks and Wildlife Service to contribute to management of the Great Sandy Marine Park and Queensland's waters more widely.

SOILS FOR THE FUTURE, TANZANIA

Whilst mechanisms for REDD+ are well developed as a means to enable forest conservation projects to access carbon finance, at present there are few examples of carbon funding being used to prevent the loss of carbon from grasslands. Grasslands support very important stocks of soil carbon, which can be released through inappropriate management, such as agricultural conversion, over-grazing or soil erosion. One of the constraints to greater inclusion of grassland projects in carbon finance schemes is the lack of appropriate methodologies for assessing soil carbon that could be applied under Verified Carbon Standard assessments for carbon finance projects.

Soils for the Future has been developing grassland soil carbon methodology, which would then be available to a broad range of communities living on grasslands and savannahs. This would help them access carbon finance for improved grassland management approaches (with an initial focus on Tanzania). A Strategic Small Grant from Halcyon Land & Sea in 2013 was used to complete the development of a suitable methodology for grassland carbon, and specifically to validate the

methodology in relation to the Verified Carbon Standard.

In 2015 the grassland methodology was approved by the Verified Carbon Standard and is available for use by project developers, i.e. anyone interested in developing carbon projects related to fire and grazing. This opens the door for community organisations and NGOs in countries such as Kenya and Tanzania to access sustainable financing for grassland conservation through carbon finance (as previous carbon methodologies are not suitable for them). The Soils for the Future team has confirmed to us that Halcyon Land & Sea finance was received at a critical time and the methodology would not have been completed without it.

During 2016 the finalised **soil carbon methodology was accessed** by a number of individuals from different regions, while Soils for the Future continues to develop three projects exploring carbon-related finance in Kenya and Tanzania. The methodology is open access and available at: <http://bit.ly/VCS-MASGAFG>.

Potential area of impact

100,000 hectares

HALCYON LAND & SEA LEARNING GRANT

Under the 2013-2017 Arcadia grant agreement we proposed to ring-fence one Strategic Small Grant per year, which could be applied to build capacity – in line with the aims of the fund – either of partners or of our own staff. In 2013 specific criteria were developed to ensure effective application of this strategic funding, enabling the best match with, and benefit for, Halcyon Land & Sea.

In 2013 an award was made towards the costs of developing a legal skills base within our team. One of the technical specialists within our REDD+ team

has been given the opportunity to complete legal training, partly supported by a Halcyon Learning Grant. Having this legal expertise in-house will enable FFI to be in a much stronger position with regard to framing our legal engagement on both REDD+ forest protection initiatives and land purchase.

No award was made in 2015 or 2016 due to lack of suitable opportunities being identified.

2013 Halcyon Land & Sea investment US \$50,000

INCREASING SECURITY FOR BORANA CONSERVANCY, KENYA

Borana Conservancy extends over 12,950 hectares of natural savannah at the north-eastern edge of the Laikipia Plateau on the slopes of Mount Kenya. It supports a range of savannah species such as impala, giraffe, elephant, zebra and buffalo, as well as predators such as lion and leopard. Borana Conservancy was identified as being suitable for the introduction and protection of black rhino, and Kenya Wildlife Service stated its intention to introduce a number of rhinos into Borana Conservancy in 2013, as long as effective security could be put in place. It is hoped that once the rhinos become established in the area, the fence with the adjoining Lewa Wildlife Conservancy will be dropped, enabling management of a much larger wildlife area. A long-term vision is to also incorporate the communities of Lekurruki and Il Ngwesi.

However, in order to ensure security for black rhino and other wildlife, further measures needed to be put in place to increase infrastructure and protection at Borana Conservancy before the rhino introduction could proceed. This created an 'Intensive Protection Zone' and included a detailed rhino security plan.

In 2012 Halcyon Land & Sea provided a Strategic Small Grant to help Borana Conservancy increase its security operations, to enable the conservancy to monitor and protect the introduced black rhino against the backdrop

of escalating rhino poaching across East Africa. This funding was used specifically to purchase digital radios with GPS (Global Positioning System) capability and to provide extensive training for scouts in anti-poaching techniques by an external security firm, including advanced military-style techniques.

The grant from Halcyon Land & Sea enabled a dedicated and armed anti-poaching team to be created, as part of a wider rapid response team with Lewa Wildlife Conservancy. The anti-poaching security team operates almost exclusively at night, in response to current poaching trends. These men work on the front line in protecting rhinos and other species against heavily armed gangs, in harsh, cold and uncomfortable conditions.

As a result of this **increased security**, 21 black rhino were introduced to Borana Conservancy in August 2013 (animals were sourced from Nakuru National Park and Lewa Wildlife Conservancy), and active efforts are in place not only to protect but also to intensively monitor these individuals. The Borana Conservancy has told us that it considers the Halcyon Land & Sea grant to have played a timely and crucial role in allowing the rhino reintroduction to proceed.



Impala. Credit: Juan Pablo Moreiras/FFI

Since the grant, Borana and Lewa have removed the dividing fence, creating a 37,600-hectare rhino sanctuary with the capacity to hold 110 black rhinos, which is supported by a combined force of 99 rangers backed by armed Kenya Police Reserve officers.

The digital radios procured through Halcyon funding provide a **secure security network**, compatible with that used at neighbouring Lewa, and this has helped improve communication and monitoring of armed teams at night, thus increasing their safety and Borana's capacity to counter poaching threats. Building on the original training provided through the Halcyon grant, Borana rangers have received **extensive yearly training** that has made them proficient in military tactics, intelligence gathering, first aid, and military-style decision making, thus creating a highly effective anti-poaching unit. The training is ongoing and two tactical refreshers, one medical refresher and a specialist skills course are held each year. The rangers also receive training in deployment of the team of specialist tracking dogs and of a support aircraft.

During 2016 Borana also **refined its wildlife monitoring system**, adopting the SMART system in line with Lewa. Vegetation monitoring demonstrated that there has been little degradation, suggesting that grazing is being appropriately managed. Community relationships around the reserve remain strong, with the reserve operating a mobile health clinic, education support programmes, and grazing initiatives; the **ranger team also supported communities** to respond to inter-ethnic stock thefts this year. Within the reserve, the ranger accommodation has been expanded and upgraded and the road system within Borana has been extended to assist in anti-poaching response; the reserve also invested heavily in intelligence gathering over the year. During 2015-2016 there were **five live rhino births** at Borana, and only one rhino was lost to poaching.

Area of conservation impact

37,600 hectares

DEVELOPING A NEW APPROACH TO CONSERVING RANGELANDS, AUSTRALIA

Over the last 200 years, Australia has suffered the largest documented decline in biodiversity of any continent. Rangelands cover approximately 81% of the Australian continent and contain a significant number of Australia's threatened plant, animal and ecological communities, including a range of iconic Australian marsupials such as wallabies, marsupial moles and dunnarts. However, protecting biodiversity within these huge areas – predominantly designated for agricultural grazing – has proved a difficult issue. Rangeland biodiversity is threatened by unsustainable agricultural practices, over-grazing, inappropriate fire regimes, invasive weeds, alien mammals and – increasingly – extreme climatic conditions. It is estimated that between 30 - 55% of rangelands are in some way degraded, although many of these areas could

be suitable for restoration efforts, which would benefit wildlife.

This project proposed to link the rehabilitation of degraded Australian rangelands to the generation of carbon credits. This would deliver tradable domestic offsets, while ensuring benefits for habitats, local communities and farmers. The initiative proposed to build upon Australian legislation effective from 2012 known as the 'Carbon Farming Initiative', which allowed landowners to generate carbon credits through sequestration of carbon and other greenhouse gases on private land holdings.

In order to improve the biodiversity and carbon value of rangelands, restoration would need to be undertaken, which would include activities such as: reducing grazing pressure through the removal of domestic stock and feral grazers (goats, camels, rabbits); improved fire management and removal of alien species (particularly non-native predators). Once operational, this approach could be key in supporting the improved management of vast areas of Australia's rangelands.

A Strategic Small Grant from Halcyon Land & Sea enabled the development of this initiative in 2012. The project developed the first Australian rangeland carbon sequestration methodology, which was submitted for approval under the government's Carbon Farming Initiative. The relevant government department subsequently took on the further development of the methodology, which was also field tested at a 500,000-hectare site in Central Australia. A series of 10 sites, covering more than seven million hectares, were

identified where rangeland management could be implemented under this model, which could be applicable to some 40% of Australia's mainland.

In 2013 the government of Australia changed its position on carbon pricing and taxation, and in 2014 it repealed the Carbon Tax, making the future for the Carbon Farming Initiative and any further projects based on the generation of carbon credits very uncertain. However, the draft methodology remains and can be built upon, when and if government policy changes again. In addition, a private sector agricultural land management tool has been developed based on some elements of the rangeland methodology developed under this project, and can be used to assess the resilience of agricultural systems based on current management practices and future climate scenarios.

Potential area of conservation impact

7,244,634 hectares

EMERGENCY RESPONSE FOR SAIGA ANTELOPES, UZBEKISTAN

The Ustyurt Plateau is a vast and remote wilderness covering some 20 million hectares straddling Uzbekistan and Kazakhstan, and is considered to be a globally important site for steppe biodiversity. Over the last 70 years the plateau ecosystem has been increasingly affected by human activities. A number of species or subspecies have since declined or become extinct (including the wild ass and the Central Asian cheetah).

One of the species to have suffered the most dramatic decline has been the Critically Endangered saiga antelope – a key species of the plateau. The trade in saiga horn for traditional Chinese medicine has brought this species to the edge of extinction – with steep population declines reported since the 1980s, and a further decrease in saiga numbers over the last year. From a population that once numbered in the millions, only an estimated 1,700 individuals remain in the Ustyurt region. Similarly, the numbers of other key ungulates such as the goitered

gazelle and urial have also declined markedly. Such significant decreases in the main grazing species are likely to result in changes to the structure of the steppe and associated species (including a number of globally threatened birds).

Effective protection of the plateau and its wildlife relies on government ranger patrols. However, at present the Uzbekistan State Committee for Nature Protection lacks the most basic resources – vehicles, field equipment, communications, fuel – required to patrol and thus protect the plateau.

Whilst the Uzbek government has confirmed its commitment to the protection of the species, current economic conditions preclude substantial investments. Effective patrols would require at least two well-equipped four-wheel drive vehicles and effective communications to coordinate efforts across this vast territory.

Saiga habitat. Credit: Paul Hotham/FFI





Newborn saiga antelope. Credit: Igor Shpilenok

In 2011 an initial award was made from Halcyon Land & Sea to support the government of Uzbekistan in strengthening law enforcement capacity through the provision of vital equipment – primarily for three vehicles and associated running costs. However, the delivery of this work was severely disrupted due to difficulties in gaining the necessary registration as an NGO in Uzbekistan. In 2012 the decision was made to shift operations to Kazakhstan, where the most recent socio-economic studies have shown significant threats from poaching and illegal trade in saiga. An initial assessment was conducted, which identified the need to provide further support on ranger training and equipment. Two motorbikes were subsequently provided in order to increase anti-poaching capacity for saiga protection agencies, along with a trailer to transport them to site. This was further reinforced by increased funding from the Kazakh government to support the Ustyurt ranger force. In addition, training for rangers from across the saiga range states was initiated in 2014.

With separate funding, the project also provided four odour-detection ('sniffer') dogs to the Kazakh customs service. The dogs, and their handlers, have been specially trained to detect saiga horn and associated products being illegally exported from the country.

A formal monitoring trip to the site was conducted by key Kazakh agencies in 2016, to check that agreed modifications had been made to the border fence

between Kazakhstan and Uzbekistan. Following recommendations developed by FFI, the Convention on Migratory Species and other partners, 125 animal-friendly gaps have been made in the 150 kilometres of fence that cross the Ustyurt plateau, thus enabling the migration of saiga and other wildlife. In addition, after failed attempts over the last two years, five saiga were finally caught in 2016 and **satellite tracking collars** were attached to enable data to be collected on their movements, which will inform conservation and landscape management actions.

FFI recently received agreement from the Kazakh government to **establish an independent ranger team** for the Ustyurt plateau to improve protection of the saiga antelope and its habitat in this steppe and semi-desert landscape. This will be fully operational by early spring 2017. In addition, FFI's in-country collaborations were strengthened this year, with the increased integration of work across all three Kazakh saiga landscapes; FFI formally joined the Golden Steppe Conservation Initiative in order to bring the existing work in Ustyurt under the umbrella of this partnership. Results from the **annual aerial survey** of saiga were positive this year, with all three populations in Kazakhstan showing an increase in numbers from last year. Nevertheless, saiga numbers are still at a dramatically low level with fewer than 2,000 animals counted.

Area of conservation impact

3,000,000 hectares

VALUING THE USTYURT STEPPE, UZBEKISTAN

The Ustyurt Plateau is a vast arid steppe that supports a wide array of plants and animals (around 900 species recorded). Despite its size the Ustyurt Plateau is facing a range of threats including direct grassland destruction for cultivation, overgrazing, aridification (resulting from diversion of water supplies), and poorly planned mining and oil developments. However, these fertile grasslands could represent an important store of natural carbon – and one that could potentially be linked to new non-forest carbon markets.

In 2009 Halcyon Land & Sea supported a strategic small project to investigate the carbon storage potential of this and other grassland habitats, and to consider the potential for, and hurdles to, developing such sites for carbon finance. The project specifically focused on the Saigachky Nature Reserve (approximately 730,000 hectares). The study included assessments of how carbon is stored in grasslands, how this carbon store is affected by different threats affecting grasslands, and the potential role of carbon finance in achieving grassland conservation. In addition, a specific feasibility study of the Ustyurt Plateau demonstrated that, as a whole, it was a store for around 821 million tonnes of carbon, with the proposed Saigachky Nature Reserve storing around 30 million tonnes. However the study identified a number of hurdles to accessing carbon finance for this area.

The outcomes of this study are now being used in a number of ways:

- The carbon report is informing ongoing work aimed at mainstreaming biodiversity in extractive industry being undertaken by UNDP¹⁷;
- The report findings are also being utilised by a NERC¹⁸ / FFI funded Imperial College London PhD study into biodiversity offsets on the Ustyurt Plateau.

In 2012 a parallel study was conducted, which specifically focused on the potential role of carbon finance in the parts of the Ustyurt Plateau located within Kazakhstan (9,565,400 hectares). This study indicated that the Kazakh area of the Plateau could store some 392.5 million tonnes of carbon.

Although a number of significant hurdles exist to developing a carbon finance project for extensive grasslands in countries with poor enforcement regimes, this study has contributed important intelligence to the debate about long-term financing of steppe protection on the Ustyurt Plateau. In addition, this investment was key to leveraging important co-finance from USAID for the protection of the Ustyurt steppe.

USING REDD TO PROTECT FORESTS, VIETNAM

The biodiversity of Vietnam is exceptional, and most is associated with the country's 12.9 million hectares of forests. Over half the country's forest was lost between 1943 and 1990 and, whilst plantation development means overall forest cover is beginning to increase, important natural forest sites continue to be lost.

One opportunity to change the drivers of forest destruction would be to link Vietnam into the growing opportunities around REDD (Reducing Emissions from avoided Deforestation and Degradation) finance. If successful this would provide financial incentives to protect Vietnamese forests rather than to exploit them. There was initially some question as to whether market-driven

carbon finance is appropriate for the political regime in Vietnam, but the government has been engaging with FFI to develop exemplar projects. Indeed, the government has requested assistance with the initial development of such projects, and with targeted capacity building for staff to help them access opportunities from international government support funds.

This project supported the national government in engaging with the wider REDD agenda and provides an important example and opportunity for lesson sharing more widely in Vietnam. To date, we have already seen significant development of understanding about REDD and its complexities within the regional authorities and technical agencies.

¹⁷ United Nations Development Programme

¹⁸ Natural Environment Research Council

We worked with the Department of Forestry to help them design a REDD+ ¹⁹ project in the forests of Kon Tum in the Central Highlands. Kon Tum Province is a globally recognised biodiversity hotspot, and is home to species such as the grey-shanked douc langur, yellow-cheeked gibbon, and the endemic chestnut-eared laughing thrush. This area has seen significant forest loss since 2000 and has suffered 75% forest degradation rates, threatening these important watersheds and the biodiversity they support.

In 2012, some initial pilot areas were agreed with provincial, district and commune authorities. Socio-economic baselines for 13 target villages were established in line with carbon project standards, and research was conducted to better understand the drivers of forest degradation in the vicinity. The

communities who were provided with information about the project were positive, and could see the potential advantages to them of a REDD+ approach.

As a result of this work the **Hieu Commune REDD+ project was established**. This creates a direct link between healthy forests and improved well-being of ethnic minority forest-edge communities. The project helps communities secure forest rights and manage forests to create climate and biodiversity benefits, alongside opportunities to increase the well-being of all community members. The project is securing land tenure, and will put in place community-led forest management for all the villages in Hieu Commune.

Potential area of conservation impact

740,000 hectares

TONGWE FOREST PROTECTION, TANZANIA

The Tongwe people reside on the eastern side of Lake Tanganyika, in an area adjoining the Mahale Mountains National Park. Their traditional lands include several areas of intact forest and *miombo* woodland and these support important populations of chimpanzee and elephant. The Tongwe have traditionally managed their forests sustainably, but their lands are under increasing pressure from agricultural conversion and felling of trees for fuel and charcoal (particularly by migrants from elsewhere in the country). In addition, a series of mining exploration projects are planned in the area, including on a large strip of land running through the Tongwe tribal area.

In 2009 Halcyon Land & Sea provided a grant to help the Tongwe Trust to establish the Ntakata Village Land Forest Reserve (under Tanzanian law), thus securing the largest and most intact forest in Tongweland. To achieve this, the project will put in place the necessary land tenure, ownership and use rights in order to secure this area against future

environmental challenges and development impacts. Participatory forest management planning processes for the Ntakata Forest Reserve were completed and by-laws for the reserve have been formulated by the village councils themselves. Forest guards have been trained and equipped, and ranger posts established, and an airstrip was completed to allow tourist access to the site.

Ntakata Forest is awaiting final sign off for formal Village Land Forest Reserve status. **Legal tenure rights were established** for the two neighbouring villages, giving them legal ownership and responsibility for managing the reserve. These villages have formed a Joint Natural Resource Board, which meets quarterly to deliberate on issues of forest conservation and associated matters. The area set aside for conservation has increased from the 18,300 hectares originally anticipated to 48,500 hectares, including some 2,000 hectares of High Conservation Value humid forest.

¹⁹ "REDD+" goes beyond REDD (deforestation and forest degradation), and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.

Ntakata forest valley. Credit: Jimmy Greenwood





Hirola in Ishaqbini sanctuary. Credit: NRT

A community-ratified management plan and by-laws are in place for the reserve, which is patrolled and monitored by 15 forest guards, recruited from the local villages. Rangers arrested five people in 2016 for infractions of the forest by-laws. Monitoring indicated that the populations of key species remained stable. The ranger's work was made easier in 2016 by the purchase of a number of mountain bikes, to help them access the more remote areas of the forest; this was financed by a crowdfunding campaign.

A survey conducted by another organisation at the site in 2016 indicated a **resident population of 300 chimpanzees** in the forest.

FFI previously supported the Tongwe Trust to develop an organisational strategic plan and a financial sustainability plan in 2015. **Development of ecotourism opportunities** was taken forward by the trust in 2016, with further scoping assessment undertaken, and a tour guide is working in the forest to open up tourist trails, and identify options for wildlife viewing and camp facilities.

Area secured	48,500 hectares
Area of conservation impact	300,000 hectares

ISHAQBINI COMMUNITY CONSERVANCY, KENYA

The Ishaqbini Community Conservancy was established to protect savannah grasslands alongside the Tana River in north-eastern Kenya. The Ishaqbini area supports one of the most important populations of the Critically Endangered hirola antelope – at certain times of year up to 62% of its global population can be found here. This species has seen severe declines over recent decades as a result of over-hunting, disease, drought, habitat loss and competition with livestock. A survey in 2011 estimated the global population of hirola to be around 430 individuals, with the Ishaqbini Conservancy representing one of only two concentrations of this species.

The area also includes an important forest reserve within its boundary, which was established to protect two Critically Endangered primate species - the Tana mangabey and Tana River red colobus. Ishaqbini also supports populations of African wild dog, reticulated giraffe, lesser kudu, gerenuk, lion, leopard and desert warthog. The site was threatened by local land rights disputes between the traditional pastoralist Somali community, who had engaged successfully in conservation efforts, and incoming agriculturalist communities keen to convert land for shifting agriculture. The Ishaqbini Community Conservancy was established with customary and ancestral land rights.

Unfortunately, complex land tenure in this region undermined the ability of the community to prevent encroachment into the conservancy, undertake anti-poaching activities or develop proposed ecotourism operations. Support from Halcyon Land & Sea in 2008 enabled a review of tenure rights and legal options, and led to successful engagement with the neighbouring community over future conservation management. These improvements in relationships have enabled hirola anti-poaching operations to be strengthened.

In 2011 the Ndera Community Conservancy was established on the western side of the Tana River and adjoins the Tana River Primate National Reserve. Scouts from the two conservancies now work collaboratively, and a memorandum of understanding is in place to allow the future establishment of a joint venture tourism operation focusing on both conservancies. Subsequently a 2,300 hectare hirola sanctuary was established by the Ishaqbini community and was made safe from predators.

During 2016 Ishaqbini Conservancy continued to be well governed and effectively protected, with **daily**

patrols by 22 rangers preventing poaching and collecting data. Numbers of hirola in the sanctuary continued to increase with **22 births to date during 2016**, bringing the total population in the sanctuary to 118 (a 30% annual increase since its establishment). If numbers continue to increase at this rate the conservancy will soon be in a position to release surplus animals back outside the sanctuary to reinforce the wider population.

The conservancy continued to work closely with the local community in 2016 and organised **a mass livestock vaccination** (of over 15,000 cattle) after reports of livestock disease outbreaks. In addition, a new water tank was installed to help improve access to clean water for two villages within the conservancy. However, the poor rains in spring led to increased conflict over grazing rights, and increasing incursions in the core conservation area; wildlife populations also became concentrated in this area and incidences of human-wildlife conflict increased. The Conservancy Board intervened to develop measures to deter grazing in the core areas.

Area of conservation impact

68,174 hectares

BURNETT MARY REGION, AUSTRALIA

In Australia we are working with the Burnett Mary Regional Group (BMRG) – the organisation tasked by the Queensland government with promoting effective environmental stewardship across the Burnett Mary region. This area covers approximately 5.6 million hectares of land and around four million hectares of coastal zone habitats. The region is home to over half of Queensland's

native mammals, almost 80% of its native birds and just under half of the state's native reptiles, frogs and vascular plants. The area continues to be cleared at around 8,000 hectares per year, resulting in fragmentation and loss of remnant habitats. Threats also exist from alien species, fires and increased salinity. Future threats from land development are likely to escalate.

Bar-tailed godwit. Credit: FFI



Halcyon Land & Sea funding supported the successful nomination of the Great Sandy Biosphere (1.24 million hectares) as a UNESCO Man and the Biosphere Reserve (formally approved in 2009).

As a result of the first Halcyon Land & Sea grant in 2008, FFI has continued to be able to support the operations of BMRG. Since we started working together, we have seen changes within BMRG as a result of its engagement with FFI. It has increased its partnerships and the community engagement in the Sandy Links Biosphere, and is now working to

develop an appropriate governance structure through dialogue with local councils and other critical stakeholders. As a result of direct FFI support, BMRG is now **diversifying its income base**, further to government cutbacks, including establishing an innovative environmental brokering company. In addition, the partnership supported work on the **cultural heritage of Fraser Island** and active protection of critically endangered lowland rainforests within the Great Sandy Key Biosphere Reserve.

Area of conservation impact

9,000,000 hectares

CAPE PRIVATE NATURE RESERVES, SOUTH AFRICA

In 2006, a grant from Halcyon Land & Sea was used to study the feasibility of establishing a revolving fund for land acquisition and conservation of private land in South Africa. This will serve as the basis for exploring further options for the strategic development of private nature reserves in South Africa. The report explores the options for securing land under sustainable land management and establishing a permanent covenant ensuring

conservation use. Once secure, these conservation lands could again be sold, thus returning proceeds to the fund. The report has been widely circulated with conservation partners in the Western and Eastern Cape.

Opportunities to promote novel legal instruments and restrictions to **secure key areas of Cape habitat** continue to be explored.

CONSERVATION INCENTIVES, SOUTH AFRICA

FFI discovered that tax laws in South Africa were encouraging the destruction of nature, and leading to the loss of priority *fynbos* land. FFI therefore supported a legal team to review laws influencing land use. As a result, **legislation was changed**, and landowners now have greater incentives to retain land under wild *fynbos*, rather

than ploughing it for viniculture, wheat production or other purposes.

PHILIPPINES BIODIVERSITY CONSERVATION PROGRAMME

The Philippines has more Endangered and Critically Endangered endemic species than anywhere else in the world, and the fragments of natural forest that support these unique species are under imminent threat.

In 2003, Halcyon Land & Sea helped create a plan to conserve some of these key areas. It proposed **developing the institutional capacity of local NGOs** to prepare, finance, implement and sustain their long-term conservation programmes.



Credit: NRT

HALCYON LAND & SEA 2013-2017

Our plans for 2013-2017 listed a series of indicative activities, outputs and outcomes for the five-year period. Key outputs and activities this year are summarised below.

Securing sites for conservation

We continued to develop our key new projects: securing a large-scale forest corridor at Zarand in Romania; purchasing highly biodiverse tumps within Transylvanian grasslands; and improving the operations and protection of Chuilexi Conservancy. In addition, work continued to gazette Imawbum National Park in northern Myanmar, while the Tongwe Village Lands Forest Reserve is just awaiting final ratification.

During 2016, no new projects to secure sites for conservation were developed, as project development was put on hold during the process of the Arcadia review.

Improving management of existing sites

We provided follow up support to the government of Saint Lucia in improving the management of its Forest Reserve system, and continued to invest in the develop of an effective management platform for Chuilexi Conservancy.

Supporting communities

Benefits for communities, including livelihoods diversification and enhanced governance and land tenure rights, continue to be harnessed in a range of ongoing projects including Zarand and Târnava Mare (Romania), Flower Valley (South Africa) and Northern Rangelands Trust (Kenya).

Investing in local capacity

Ongoing capacity building support was given to a range of partners including: ADEPT and Association Zarand

(Romania), Ya'axché (Belize), and the government of Kazakhstan, and training of rangers continued at sites including Chuilexi Conservancy (Mozambique), South Sudan and Northern Rangelands Trust (Kenya).

Developing innovative finance mechanisms

In Romania we are testing whether income from EU farmland subsidies can be used to underpin conservation efforts, while Chuilexi Conservancy is testing a concession-based model to generate tourism income in Niassa National Reserve, Mozambique. Ya'axché also explored new income streams in Belize and has established a separate trading arm.

Strategic Small Grants

A Strategic Small Grant extension supported the implementation of redrafted national-level protected areas legislation in Belize.

Monitoring and evaluation

Seven project evaluations are complete and three are ready for public dissemination.

Grant administration

All grant management systems were deployed effectively this year.

IF YOU HAVE ANY QUESTIONS OR
WOULD LIKE MORE INFORMATION
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