SIF

seychelles islands foundation

ANNUAL REPORT 2012

CONTENTS

ACKNOWLEDGEMENTS

Written by: Rowana Walton, Nancy Bunbury

With contributions from: Wilna Accouche, Frauke Fleischer-Dogley, Philip Haupt, Marc Jean-Baptiste , Terence Payet, Christina Quanz, Jorge Luis Renteria, Anna Reuleaux, Heather Richards, Janske van de Crommenacker

Photos by: Richard Baxter, Jock Currie, Martijn van Dinther, Fotonatura, Dennis Hansen, Bärbel Koch, Christophe Mason-Parker, Jens Olesen, Christina Quanz, Anna Reuleaux, Heather Richards, Michal Šúr

MESSAGE FROM THE **CEO**


Fotonatura


B Koch

2012 has been a milestone year for the Seychelles Islands Foundation in many different ways. You may have difficulties in deciding which of our accomplishments detailed in the pages of this report should not be rated historical or major achievements. In fact it has not been easy to decide how best to present to you the amazing results of a dedicated team. As CEO it fills me with pride to acknowledge the work of the SIF team and I congratulate and thank them for their hard work.

One project that started decades ago has now written its final sentence - "Aldabra is goat free". History has been made because of the perseverance and commitment of the Aldabra champions; people who did not give up when it was impossible to imagine that the sun could be any hotter, the terrain any less forgiving and shade any harder to find. The success of this project is based on teamwork at different levels over three decades, which involved different nations and resources. The combination of expertise, technical skills, logistical support and tireless efforts were all equally important for this VICTORY. A cross section of humanity has served humanity in preserving an exceptional place. I am especially pleased with all the Seychellois who have been involved at different times and at different levels be it as support staff, team leader or tracker and have shown their dedication up to the last call.

Another extraordinary story in the report is the installation of the first and largest off-grid solar energy system in Seychelles on Aldabra Atoll. Even Aldabra's remoteness, which all too often seems to have the last word as to whether or not a project can be successfully implemented on the atoll, has not discouraged the determined team. Many tonnes of construction material and equipment were manually moved and painstakingly put in place. In addition the electricity grid of the whole station was laid underground. Since the operation of the new system started in April 2012, 94% of the energy we use on Aldabra has been generated by the power of the sun and we have avoided 71,000 kg of CO_2 emissions by increasing energy and using PV power. Finally, in addition to protecting this magnificent atoll we are able to substantially reduce our carbon footprint.

The Vallée de Mai is the first natural site in Seychelles to be awarded the Certificate of Excellence in 2012 by the popular internet site 'TripAdvisor'. This confirms that our team understands what is meant by visitor satisfaction and that our strategy of undertaking surveys and management effectiveness assessments have been key to identify how best to meet visitor expectations.

I am pleased to report that scientific research, originally being one of the main reasons to establish the Seychelles Islands Foundation, has found its rightful place in the Vallée de Mai and is again a core activity on Aldabra due to an increase in resources at our disposal, which will ensure that our conservation management is science-based.

Our commitment to directly contribute to the local community remains unchanged. The first SIF holiday camps held at the Vallée de Mai provided our Praslinois children with a very different holiday experience. All of the children who participated had much fun in learning about our natural and cultural heritage. Not long ago this knowledge would have been passed on, for example, through the story telling of grandparents in the afternoons. Today, with the change in our economy and the many developments in the country, children are differently engaged; together we must find innovative solutions to close gaps for them to stay connected with and grow into ambassadors for nature. I am convinced that these outdoor experiences will be the seeds to grow and nurture the love for nature that is fundamental for us to successfully protect such unique sites as the Vallée de Mai and Aldabra in the future.

Frauke Fleischer-Dogley
Chief Executive Officer

SUMMARY OF **SIF IN 2012**

This is a brief summary of SIF's milestones and achievements in the past year. More details can be found in the report:

Aldabra went solar with the full installation of a solar/diesel hybrid system in March

A momentous achievement was the completion of the Goat Eradication Project on Aldabra, with the last goat culled in August

Urgent action was launched with the discovery of introduced Madagascar Fodies and Red-whiskered Bulbuls on Aldabra. Subsequently a camp was established on Grande Terre to facilitate eradication of these birds

The Vallée de Mai hosted a celebration of International Biodiversity Day in May with over 100 schoolchildren in attendance

Aldabra's conservation success story was discussed at the Rio+20 earth summit held in Brazil, at which SIF was represented

The Education and Outreach programme was extended with the introduction of bi-annual 'Holiday Camps' for local schoolchildren held in August and December

Research began into invasive plant species in the Vallée de Mai

SIF received a makeover with the full implementation of three new logos

The SIF Newsletter was re-launched in October as an e-newsletter and is now available monthly from the website and the newsletter subscription list

The EU project on Assumption progressed with the first year of the introduced Red-whiskered Bulbul and Madagascar Fody eradication programme completed and more than 5000 birds culled

Vallée de Mai was awarded a 'Certificate of Excellence' by TripAdvisor, a UK-based travel recommendation website

Aldabra celebrated its 30th year as a UNESCO World Heritage Site. This was marked with a celebratory ceremony held in December during which the plans for an 'Aldabra House' on Mahé were announced to the public in December. This project aims to bring the experience of Aldabra to Mahé, and become a world class tourist attraction

A new scholarship programme was launched with the University of Seychelles. This will fund a student through a first degree at UniSey under the Professor David Stoddart scholarship award

3 scientific papers accepted/published on research conducted on Aldabra and in the Vallée de Mai

SIF STAFF CHANGES & NEW POSITIONS

Joel Souyave, Aldabra Island Manager

Aldabra Island Manager

Joel Souyave was promoted to the position of Aldabra Island Manager in February. After spending 1 year working as the Assistant Aldabra Scientific Coordinator Joel proved himself more than capable of taking on the Island Manager position. Joel brings over thirty years of experience in island management and conservation related work.

Philip Haupt, GEF project coordinator

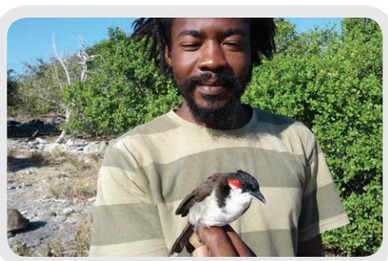
Aldabra GEF Project Manager

With the launch of the GEF project 'Strengthening Seychelles' protected area system through NGO management modalities' in 2011 a coordinator for SIF's activities under this project was urgently needed. Philip Haupt was recruited for this position in January 2012. With an MSc in marine conservation planning, excellent GIS skills, and a year's field experience on Aldabra, including 6 months developing the monitoring databases in 2011, Phil was the ideal candidate. Phil will be overseeing the management and implementation of this GEF project over the next two years.

Dylis Cedras, Visitor Services Sales Manager

Vallée de Mai Visitor Services Sales Manager

As our facilities and quality of service have improved and expanded at the Vallée de Mai it was necessary to employ a Visitor Services Sales Manager. Dylis Cedras was recruited for this position. Dylis has completed a BSc in Business Administration, with specialization in Marketing, with London Royal Holloway University in conjunction with the University of Seychelles. Prior to this Dylis was working as a secondary school teacher specializing in Geography and History and with this background has a good understanding of nature conservation.



Terence Mahoune, Assumption Team Leader

Assumption Bird Eradication Team Leader

Following the initiation of the EU funded project to eradicate invasive birds from Assumption Terence Mahoune was promoted to Team Leader on Assumption. Terence started his career 9 years ago with SIF as a ranger on Aldabra. Due to his outstanding performance SIF sponsored him fully for a BSc in 2006 in South Africa at the Nelson Mandela University in Port Elizabeth. Since returning from his studies he has been working on Assumption to reduce the major threat of invasive avian species to Aldabra.

30TH ANNIVERSARY OF ALDABRA AS A UNESCO WORLD HERITAGE SITE

In 2012 Aldabra Atoll celebrated thirty years of UNESCO World Heritage site status. Inscribed onto the UNESCO World Heritage list in 1982 the award recognised Aldabra's outstanding universal value, for all of humanity. The inscription acknowledged Aldabra's importance as the world's largest Giant Tortoise population, its role as home to the White Throated Rail – the last flightless bird in the Indian Ocean –and its status as one of the largest nesting sites for Green Turtles.

Aldabra has not always benefitted from protection and prior to the work of SIF, which has been the guardian of the atoll for over thirty years, the atoll was used as a source of food and products despite having the highest level of national protection since colonial times. Indeed the atoll was first leased in 1888 for the harvesting and export of tortoise, turtle, fish, and mangrove wood. It was then earmarked for the development of an American Military airstrip and radio relay station in the mid-1960s. Prominent scientists from the Royal Society and Seychellois who understood the value of Aldabra campaigned against this later development and successfully managed to overturn the decision. Aldabra was then managed by the Royal Society until it was handed over to SIF in 1979 and was then inscribed onto the UNESCO World Heritage list in 1982.

Since Aldabra has become a protected area however the green turtle population has increased eight-fold, the frigatebird population has risen by at least 10% and crucially the Aldabra Giant Tortoise population has been stable at 100,000 tortoises. Maintaining the high conservation and research standards befitting a World Heritage Site are a constant challenge on Aldabra, due to the remoteness of the atoll from the Inner Islands. Despite these difficulties SIF continues to develop and implement ecological research and maintain their protection of this unique and precious ecosystem.

The 30th anniversary celebration ceremony featured a message from the Director of UNESCO's World Heritage Centre, Kishore Rao, a play by pupils from Baie Lazare Primary School, testimonials from two youths who visited Aldabra in the first group of school children as winners of the eco-school star prize, and an overview of the key milestones in the last 30 years of Aldabra's history. The ceremony, held at the University of Seychelles' School of Education on the island of Mahé, was also attended by our Patron the President of Seychelles, James Alix Michel, as well as the Ministers of Education, Employment and Human Resources and President of Seychelles National UNESCO Commission; Foreign Affairs; Environment and Energy; and Tourism. Delivering the keynote address of the ceremony, SIF Chair, Ambassador Maurice Loustau-Lalanne announced ambitious plans for the construction of Aldabra House, which is intended to be a world-class visitor centre, on Mahé. The land to be used for the project is 4km from the centre of Seychelles' capital, Victoria, and is expected to prove a major attraction for the people of Seychelles and visiting tourists. This attraction will bring Aldabra to Mahé, giving Seychellois and the many international visitors the opportunity to remotely experience one of the world's natural wonders.

The celebration was also used to announce a new university scholarship programme, in honour of one of the "founding fathers" of Aldabra's protection, Professor David Stoddart. A Professor Emeritus with the University of Berkley, California, Professor Stoddart was one of the leading voices in the campaign to prevent Aldabra being handed over by the British colonial administration to the American military for the construction of an airstrip in the mid-1960s. His connection with Aldabra and SIF has remained a source of inspiration and guidance in the intervening years and his unique role in securing Aldabra's status as a World Heritage Site is recognised with the naming of the scholarship in his honour. It is hoped that this new scholarship programme will help develop a new, well trained generation of Seychellois scientists able to further the cause of island conservation and follow in the footsteps of Professor Stoddart. The scholarship will be awarded every two or three years and will fund a young Seychellois to undertake a first degree

Annabelle Constance receives her scholarship from SIF to undertake a BSc course at the University of Seychelles

at the University of Seychelles. The scholarship will be targeted primarily towards candidates seeking a BSc in Environmental Sciences, but may expand to cover other similar disciplines as the University of Seychelles curriculum grows. SIF is a partner of the University of Seychelles and contributed to the development of the university's Environmental Sciences BSc programme. SIF is currently sponsoring a second year student on this programme.

All in all, the ceremony was reported to be a great success, with much positive feedback. It was a wonderful opportunity to reflect on Aldabra's remarkable history and the many milestones reached since the site was awarded UNESCO World Heritage Status.

D Hansen

VALLÉE DE MAI MANAGEMENT

As for previous years the Vallée de Mai remained the most visited tourist attraction in the country in 2012. From a management perspective there have been intensified efforts to combat the poaching of Coco de Mer nuts from the Vallée, with increased security measures and follow-up of poaching incidents, which resulted in a prosecution for this offence. With a ban on the export of the Coco de Mer kernel implemented by the government and further outreach work in the local communities there was a 52% decrease in the number of nuts poached in 2012.

VALLÉE DE MAI RECEIVES TRIPADVISOR 'CERTIFICATE OF EXCELLENCE'

The Vallée de Mai was recognised for the outstanding experience its visitors enjoy with the award of a TripAdvisor Certificate of Excellence in 2012. The UK-based TripAdvisor website is the world's largest travel website and collects feedback from holidaymakers about their travel experiences, allowing them to praise the best holiday destinations and criticise those that fall short of their expectations. The Vallée de Mai was awarded the Certificate of Excellence after consistently achieving a score of 4.5 out of 5 by travellers who reviewed the site on the TripAdvisor website. The award of the certificate puts the Seychelles Islands Foundation (SIF) managed site in the top 10% of global tourist attractions rated by TripAdvisor's 60 million reviews and opinions in 2012.

The Vallée de Mai attracts around 40% of the total number of tourists who visit the Seychelles. The award of the TripAdvisor Certificate of Excellence is testimony to the environmental management and conservation undertaken at the site, as well as the work of SIF's frontline staff at the Vallée de Mai, who meet, greet and assist around 80,000 visitors per year. This award substantiates the investment in 2011 to redevelop the visitor facilities and add a cafe and souvenir shop, and this is shown through the visitor's satisfaction of their visit.

Certificate of Excellence from Tripadvisor

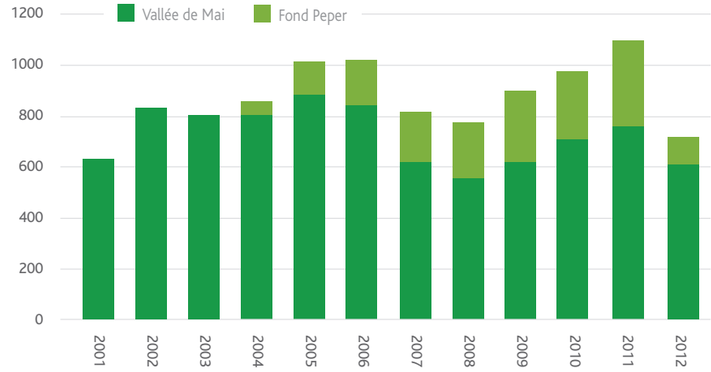
VALLÉE DE MAI STATISTICS

A total of 77,422 visitors entered the Vallée de Mai in 2012 which was a small decrease on the previous year, but in comparison to the trend in the last ten years the overall number of visitors is still increasing. The largest portion of visitors is still those that visit independently, rather than with a travel agent or tour guide.

Total number of visitors to the Vallée de Mai from 2001 to 2012

COCO DE MER STATISTICS

719 nuts were collected in total in Vallée de Mai and Fond Peper during 2012, which was a decrease of 34% from the number nuts collected in 2011. This was in part due to a shift in the management of the nuts. A new management strategy to encourage the regeneration of the Coco de Mer forest by leaving and monitoring nuts in the forest was implemented in 2012. This is a positive step for the conservation of the Coco de Mer and it is hoped that the regeneration scheme can be fully implemented in 2013. Further research is also continuing into the pollination of Coco de Mer to better understand the development of the nuts and the reasons for variation in nut production, and fine-tune guidelines to ensure sustainable harvesting.



Total number of nuts collected in the Vallée de Mai and Fond Peper from 2001 - 2012

Interestingly the number of Coco de Mer nuts poached from the Vallée de Mai and Fond Peper decreased by 52% from 2011, with the majority being taken from Fond Peper. We believe that this was mainly due to the ban on the export of Coco de Mer kernel and better enforcement within the Vallée de Mai.

COCO DE MER ANTI-POACHING AWARENESS

In reaction to the increase in poaching of Coco de Mer nuts in previous years SIF took steps to raise awareness of this issue in the local community. The Ministry of Environment and Energy, and Seychelles Broadcasting Council (SBC) filmed a series of interviews and footage with SIF staff at the Vallée de Mai. The documentary included information on the traditional uses of Coco de Mer, its economic value and the benefits of a long-term monitoring programme. It is hoped that this will raise awareness and understanding with the general public of the need to conserve the Coco de Mer and reduce poaching of the nuts. October 2012 also saw a notable prosecution of a renowned Coco de Mer poacher with a significant sentence (over two years) being given in a Coco de Mer poaching case. It is hoped that this will only assist in deterring other poachers in the area and protect the future of this symbolic species.

BAN ON COCO DE MER KERNEL EXPORT

An escalating trend in the poaching of Coco de Mer nuts in recent years led the Ministry of Environment and Energy to impose a ban on the export of all Coco de Mer kernel in May 2012. There has been an increase in recent years of the theft of Coco de Mer nuts, and there are fears in the not too distant future some poachers will fell entire trees to gain access to the nuts. Felling of these adult trees to obtain a few nuts would be particularly devastating for the species since each female tree can live for up to several centuries and bear hundreds of nuts in their lifetime. It is widely thought that the increase in poaching is driven by the demand for the export of the kernel to the Asian medicine market.

4 Tuesday May 15, 2012 NATION

NATIONAL NEWS

Ban imposed on export of coco de mer kernel

The Seychelles government has imposed, with immediate effect, a complete ban on the trade of coco de mer kernel (*nwa koko-de-mer*).

A communiqué from the Ministry of Environment and Energy says that the ban will ensure the long-term conservation of the species, which is restricted to Praslin and Curieuse.

According to the communiqué, recent reports indicate a significant increase in the frequency of poaching of coco de mer nuts on Praslin and Curieuse, including the indiscriminate clearing of female trees of all nuts regardless of their maturity, and also the felling of nut bearing trees to ease access to the fruits.

According to the environment department, the kernels are being extracted and illegally exported mostly to Asian countries.

"This disturbing trend, if not stopped immediately, will endanger the long-term survival of the flagship species of our country," says the communiqué.

Discussions are ongoing between the Ministry of Environment and Energy, the Praslin Development Fund, the Seychelles Island Foundation, the Seychelles National Parks Authority, private land owners with coco de mer plantations, the Seychelles Police and other stakeholders to put in place new measures to control and monitor trade in the species and also deter poaching.

The measures being considered include improving the records system for producers, dealers and exporters, introducing new tags, and monitoring by the different agents involved in the coco de mer management.

The ban will remain in force until the appropriate solutions are introduced.

In the meantime, enforcement officers and the police are intensifying their efforts to intercept and bring to justice coco de mer poachers.

Members of the public are being asked to give information they may have on any suspected transaction related to the trade of coco de mer kernel by contacting the green line number – 2722111.

All permits for export of coco de mer kernels are henceforth suspended. This ban does not affect trade in empty coco de mer nuts by licensed dealers.

Daily Horoscope

May 15, 2012

Aries (March 21 - April 19)
Travel for business purposes may bring the highest returns. Some relatives will be extremely perplexing. Social activity should be on your agenda.

Taurus (April 20 - May 20)
Risks will not be profitable. Take care when dealing with older relatives. Relatives will not agree with the way you are dealing with your personal problems.

Gemini (May 21 - June 21)
Opportunities for new friendships are apparent. You may find yourself in an uncomfortable situation if you have overloaded your plate unintentionally. You may get some opposition.

Coco de Mer kernel export ban featured in a national newspaper

An entire ban on all Coco de Mer kernel has helped to control this export and has been implemented with the support of local organisations. Alongside this ban the legal instrument to ensure that enforcement can be much effective, the Coco de Mer Management Act is being reviewed. Other measures have been taken to improve the record and certification system for Coco de Mer and work with local communities and landowners to deter poachers from their land. There are plans for a VHF system to be implemented in 2013 to enable better communication between the rangers and security staff in order to facilitate a quicker response to any poaching activity that is seen.

A NEW SOLAR ERA FOR ALDABRA

2012 marked a major milestone in the history of SIF and Aldabra. SIF staff have imagined, talked about and finally planned for a sustainable energy future on Aldabra for many years. The big day finally came in March 2012 and the dream became reality; solar power now supplies the Aldabra Research Station with at least 94 % of its power needs.

Early in 2012 our new photovoltaic (PV) system awaited clearance and shipment from Mahé to Aldabra while, on the atoll, the New Year continued with some demanding construction work. A local construction company was busy completing the new power house prior to the much anticipated arrival of the solar energy system. With no excavator on the atoll (for logistical and environmental reasons), the shifting of construction materials had to be done manually by the team.

Meanwhile, four containers filled with the solar energy system components, the backup generator and energy-efficient electrical appliances (e.g. fridges, freezers, washing machines) were waiting on Mahé to be shipped to Aldabra. Due to Aldabra's complicated logistics, tide dependency and remote location, the transport from Mahé to Aldabra is more complicated than between other islands of Seychelles. With no jetty or harbour on Aldabra, the PV system had to be unloaded by the supply boat landing onshore, which is only possible at very high spring tides otherwise the boat is at risk of being stranded. Coordinating all activities to ensure correct timing was one of the most difficult and crucial challenges of the whole project.

On 9th February 2012, 22 tons of solar equipment and accessories were finally unloaded on Aldabra. There was a 35-hour window to unload everything before the tide forced the boat to leave again. It was a memorable and exhausting day for the team and there were further challenges to come. Unfortunately all solar equipment, including 10 tons of batteries, needed to be unloaded manually due to a broken excavator. With 96 batteries weighing 115kg each, this entailed a huge physical effort and was only achieved before the boat's departure due to the participation of everyone on the island. After unloading everything, the team then spent another week moving all of the batteries and other equipment safely to the new powerhouse which is located about 600 m away from the beaching location.

Re-wiring of the distribution system with 3-phase underground cables has been on the SIF agenda for many years and implementation was essential to ensure smooth running of the new PV system. Aldabra staff came together to dig the 800 m long trench necessary for the underground cable. After completion of construction work in February 2012, the Aldabra team took over assemblage of the mounting structure and placement of the solar panels, inverters, batteries, communication and control boxes. At the end of March two technicians from SIF's supplier, IBC Solar, arrived for the final commissioning and training of our staff.

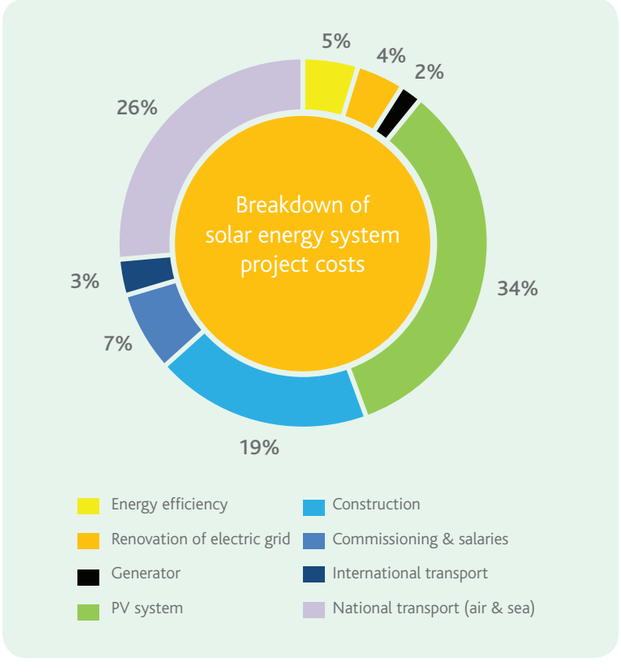
On the evening of 31st March 2012 the Aldabra community celebrated a historical and peaceful moment, of dining for the first time under solar powered lights without the sound of generators constantly running in the background.

Since the day of the launch, the operation of the new PV system has been impressive. During the day, the entire research station runs on solar power (12 staff houses, offices – including several air conditioning units, shop, library, laboratory, research facilities, as well as the desalination plant and water pumps). Overnight, batteries (charged by the solar panels during the day) supply the station, and occasionally the new efficient diesel generator backs up the system. Successful operation of the six air-conditioning system units on PV power has been innovative. The new A++ energy-certified fridges and deep freezers, combined with implementation of other energy efficient measures over previous years have reduced Aldabra's electricity consumption by 57%. In 2012, the PV system supplied 94% of the station's energy with solar power, and this is set to increase. Diesel demand has decreased by 97% to only 87 litres per month. In total 71,870 kg of CO_2 were avoided by reducing the electricity demand as well as covering the remaining electricity needs with PV power.

A web-based monitoring system has been installed to support the smooth running of the system over its lifespan. With an expected lifetime of 20 years and overall project costs of almost €500,000 (including transport to and within Seychelles, testing, commissioning, construction, labour, materials and tools) the current expected payback time of the system is 8 years. Accounting for only the PV system investment cost (€158,000) would amount to a payback time of only 3 years.

This project has revolutionised operations of the Aldabra station and has been even more successful than our hopes and predictions. SIF is very proud to have left the days of inefficient, environmentally damaging, loud generators, heavy fuel drums and polluting emissions behind. Our hope is that the set up and highly successful operation of a renewable energy system on an island as logistically and physically demanding as Aldabra, will act as a successful example and inspiration for other islands within and outside Seychelles. The Aldabra story demonstrates that the switch to sustainable energy can be achieved even on the most remote and inaccessible of islands. Due to its World Heritage status and international recognition, Aldabra is in a uniquely special position to showcase the use of solar power on islands and we hope that this project will result in wider application of the most available and easy to harness renewable energy source, the sun.

Our deepest thanks go to all the staff and associates who worked above and beyond the physical labours to make this dream a reality, our financial supporters – the Mauritius Commercial Bank, the Finnish Embassy in Nairobi and the Indian Ocean Commission, local partners PUC, Seychelles Energy Commission and Islands Development Company, our supplier IBC Solar, plus our many contributors and supporters at all levels.

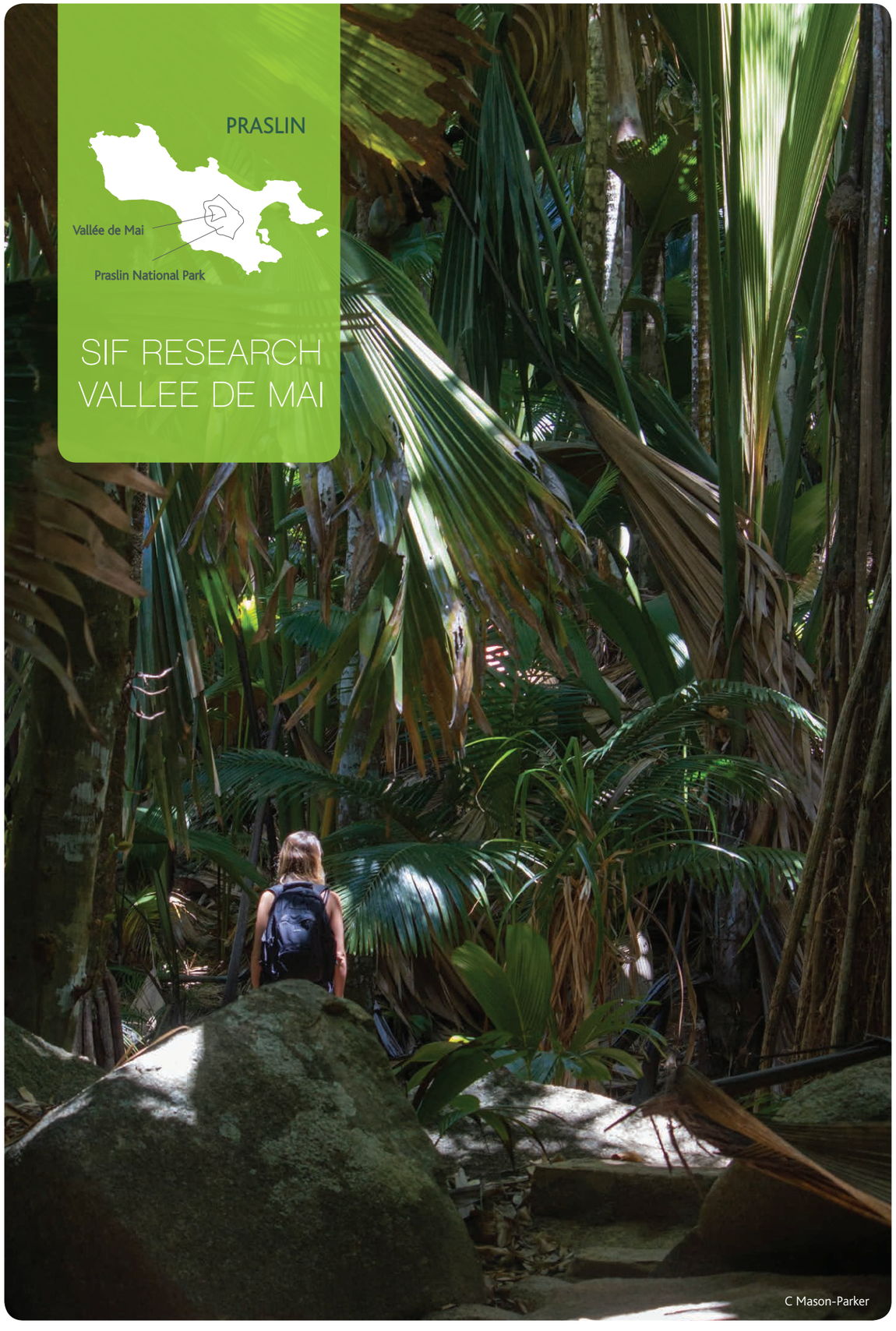



The equipment arrives on the supply boat (C Quanz)


The final solar panel installation and the team that made it happen (R Baxter)


A jubilant team when the last battery was placed in the powerhouse (C Quanz)


The team install the solar panels (C Quanz)



Research progressed in the Vallée de Mai in 2012 with more data collected and fieldwork completed. The Black Parrot research programme had a successful season with more nests monitored than ever before, a new management system for the harvesting of Coco de Mer nuts was implemented, and fieldwork on the Sooglossid frogs continued.

COCO DE MER

Coco de Mer sustainable regeneration

In 2012, a decrease in nuts collected was recorded compared to previous years. The lower number of nuts could be a result of the poaching activities over the last 10 years and the introduction of a regeneration scheme introduced in 2012. This scheme was developed following research results from Dr Fleischer-Dogley's PhD in 2006 confirming that almost all Coco de Mer nuts on the forest floor were being harvested. A paper subsequently published by Rist *et al* in 2010 (see SIF Annual Report 2010/2011) applied population modeling to the question and recommended that at least 20% of fallen nuts should be left on the ground to germinate to ensure sustainable regeneration of the Coco de Mer forest. A review of the scheme every year will be undertaken to look at its effectiveness the regeneration of the Coco de Mer.

Long-term monitoring on growth and pollination

The Coco de Mer is known for its long life cycle which necessitates a long-term monitoring programme. Work continued to monitor growth of the Coco de Mer in 2012 with data on individual trees collected every three months. Growth monitoring involves the measurement of leaves on 15 selected trees of each growth stage; juveniles, seedlings, and immature individuals. A review of the data collected so far was done in May 2012, where it was concluded that similar data was needed from adult trees to provide a clearer picture of growth rates of all stages of Coco de Mer. Adult trees were not included initially due to a lack of specialized tree climbers and difficulties accessing adult trees. Training in tree climbing was conducted by members of the Black Parrot research team and a further 15 male and 15 female mature trees were selected for monitoring and are now included in the programme. As a long term programme on a very long-lived species it will take some years to gather enough data to make any significant conclusions on longevity and growth but it is hoped that this could be as early as the end of 2013.

The reproductive output of Coco de Mer continued to be researched on selected males and female trees in Fond Peper. This involves checking flowering catkins and the number of nuts at different stages (immature, mature, ripe) every 6 months. This monitoring work will quantify nut loss and gain and total individual productivity over a given period. Sadly, due to high poaching levels in Fond Peper, eight of the 15 female trees that were being monitored under this programme had all of their nuts poached and the individuals had to be replaced. In addition to being a devastating loss of nuts, the continued poaching incidents make reliable long term data collection and research extremely difficult.

Research in to the ecology and role of pollinators of Coco de Mer was started in 2011 and continued through 2012. The experiment is designed to identify the role of different groups of pollinators by applying selective exclusion measures against geckos, wind and flying insects on flowering female trees. In addition to the experiments, infra-red camera traps were set up to capture potential pollinators on camera. Data collection for the projects should be completed in 2013 with the importance of different potential pollinators finally revealed!

Further genetic research

In collaboration with Dr Chris Kettle, Dr Chris Kaiser-Bunbury and SIF board member Prof Peter Edwards at the ETH Zurich (Swiss Federal Institute of Technology) research to investigate population demography and the genetic identification of Coco de Mer was initiated. Emma Morgan, a PhD student from ETH will begin her research in 2013. The research has three main objectives; (1) to understand the population dynamics and population demography of the Coco de Mer using genetic tools; (2) to examine the causes of varying reproductive success between individuals; and (3) investigating management issues including genetic sexing, determining ideal conditions for regeneration and potential genetic differences between varying shaped nuts. Collection of samples will begin in early 2013 and initial results expected in 2014.

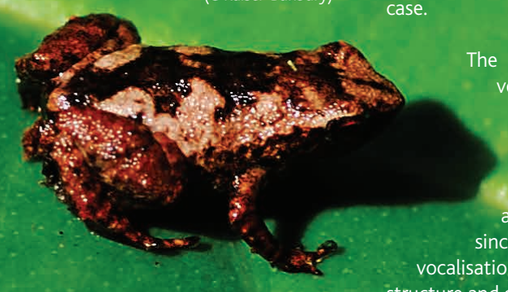
Above: A Coco de Mer palm with many nuts
Below: A day gecko and endemic slug feeding on the flowers of the male Coco de Mer catkin, these are some of the various pollinators that are being researched (J Olsen)

HERPETOFAUNA

Sooglossid research continued

Sooglossus sp.

Jim Labisko conducting fieldwork (C Kaiser-Bunbury)



Raymond Sahuquet

Research into the recently discovered Praslin sooglossid frog (*Sooglossus* sp.) was continued by Jim Labisko from the Durrell Institute of Conservation and Ecology (DICE) at the University of Kent supervised by Prof. Richard Griffiths and Dr Jim Groombridge. Originally on a Masters by Research programme, during his first period of fieldwork in 2011 – 2012 Jim collected sufficient data to be able to extend the study centred on Praslin's new frog, and upgrade his research to a PhD.

The Praslin *Sooglossus* appears visually similar to *Sooglossus sechellensis* (found on Mahé and Silhouette) so the aim of the research for Jim's first visit focussed on establishing how related to *S. sechellensis* the Praslin frogs are. Initial genetic analysis identified the Praslin frog as being separate and distinct from *S. sechellensis* but apparently more closely related to frogs from Silhouette, posing questions as to how this may be the case.

The surprisingly loud vocalisations of these often tiny amphibians are of particular interest. The calls can act as an audible 'signature', since each species makes vocalisations of different length, structure and composition. Following Jim's first season of fieldwork it was identified that while *S. sechellensis* and the Praslin *Sooglossus* bear physical similarities, the structure and composition of their vocalisations are quite different. Calls often contain different 'pulsed' notes and are considered complex; an uncommon characteristic in frogs globally. Jim's second season of field work started in late 2012 with the aim of broadening and strengthening the material available for understanding the family tree of these distinct frogs. This included obtaining high-quality recordings of *Sooglossus* frogs, in tandem with ongoing genetic work, supported by obtaining samples from all four species of sooglossid across their known ranges. This will help to identify where the Praslin *Sooglossus* sits within this globally important and unique group of amphibians.

Recording good quality vocalisations of nocturnal, cryptic animals that thrive in moist areas has been an arduous task for Jim, involving night work in the upland areas of three islands. Such information, however, along with an understanding of ecology and careful measurements of the frogs, are important pieces of the puzzle. Jim's work is continuing on the genetics of these endangered frogs; further analysis of physical characteristics; detailed study of vocalisations; and the development of a comprehensive understanding of their preferred habitat. Ultimately, this research will allow an effective action plan to be developed for the protection of sooglossid habitat, and therefore, of course, the frogs themselves. The status of the focal frog in this research, the Praslin *Sooglossus*, should also be clarified; possibly being a sub-species of *Sooglossus sechellensis*, or perhaps a new *Sooglossus* species entirely. The fieldwork for this project is expected to be completed in 2013 with preliminary results to follow.

BLACK PARROT BREEDING SUCCESS

2012 saw the SIF Black Parrot research programme finish a third and start a fourth breeding season, with two full-time researchers and increasing involvement of the fully trained Vallée de Mai rangers. The Black Parrot breeding season lasts from November to March so 2012 saw the end of the 2011/2012 season and the beginning of 2012/2013; two breeding seasons which could not have been more different.

During the 2011/12 breeding season breeding activity was very low. The parrots' behaviour indicated that many individuals did not attempt to breed at all or failed early on. Only one active nest was found by our team and it is unlikely that there were many more. The single monitored nest was situated near the top of Glacis Noir and produced one healthy fledgling. Such poor breeding success is a serious concern for the population and its causes are not yet understood but thought to be linked to limited fruit and bud availability of the endemic palm species, which are a major part of the parrots' diet. The link to food availability, however, needs to be confirmed with long-term monitoring over several breeding seasons. Fortunately, the subsequent breeding season has had a good start and promises to be more successful.

Preparations for the 2012/13 breeding season started in October and included visiting over 100 known potential cavities in Vallée de Mai, Fond Peper and Fond Ferdinand to monitor breeding activity. All sites were checked regularly using an infrared camera, which is a very time-efficient way to monitor a large number of potential cavities. In addition the team followed females who were making breeding calls. After much preparation and initial monitoring, the first eggs were found at the beginning of December and by the end of 2012, 17 nests had been found and 16 chicks had hatched. This is already more nests monitored than ever before in a single breeding season. One of the most important insights of this season so far is the impact of rats, which have predated at least two nests and were documented injuring and killing two chicks at a nest surveyed with a trail camera. Evidence for predation by Indian Mynah birds was also found at two nests.

Top: Black Parrot at nest entrance in the cavity of a dead tree (A Reuleaux) **Bottom:** Rat photographed by trail camera leaving Black Parrot nest

OTHER BLACK PARROT RESEARCH

Ringing and Sampling

Efforts to catch, ring and sample as many Black Parrots as possible were continued. In 2012 55 adults and one chick were colour-ringed on their legs, breaking the 100 parrot barrier and bringing the overall total to 112 ringed parrots by the end of the year. The rings are important for recognising individuals and making behavioural observations. All parrots captured also had a blood sample taken for genetic studies. In December results were received from Simon Tollington (DICE) confirming the sex for Black Parrots sampled prior to April 2012. This was very useful for interpreting the behaviour of males and females and defining their breeding roles.

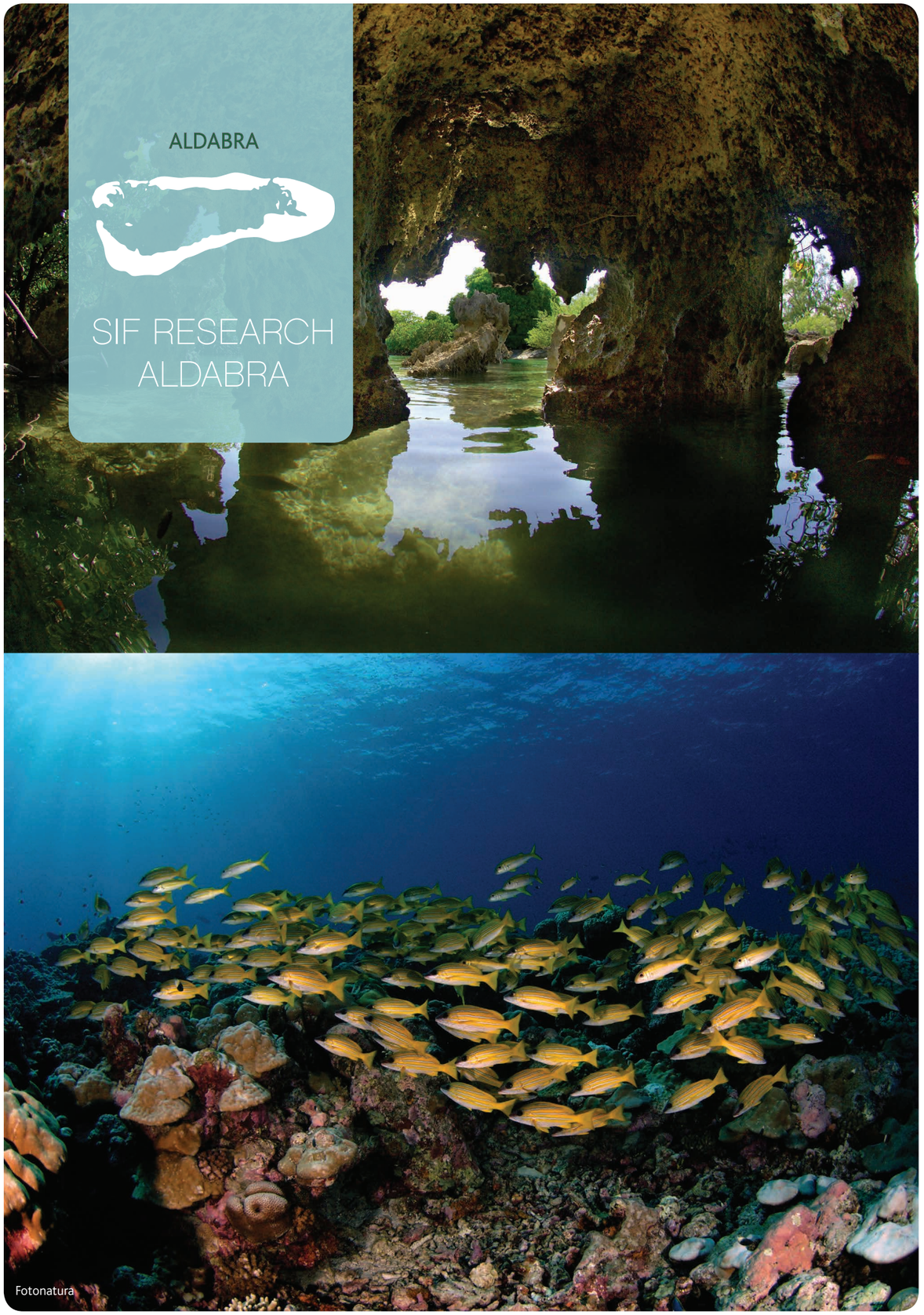
Feeding ecology

Four new species were added to the list of plants that Black Parrots' feed on, bringing the total to 52 plant species known to be eaten. A systematic study to obtain feeding observations in all habitat types was continued, with 100 feeding walks on 25 transects completed. The results so far provide more evidence of the importance of native and endemic species in the parrots' diet and the large variety of plant species and parts (fruits, buds, flowers, seeds and leaves) that the parrots eat. The potential connection between food availability and level of breeding activity needs to be investigated further.

Genetics study

An MSc student, Maeve Quaid from the Durrell Institute for Conservation and Ecology at the University of Kent, supervised by Dr Jim Groombridge, conducted further research on the genetic status of the Black Parrot. Maeve analysed the blood samples that had been collected in the first three seasons of parrot work and compared them with museum samples of the other populations of Black Parrots in Madagascar and the Comoros. Genetic analysis of these samples should shed light on the origin of the Seychelles Black Parrot and whether it should be considered distinct from the closely related Black Parrots of Madagascar and the Comoros. Working with DNA from museum samples, however, is time-consuming and difficult so further genetic studies are needed to complete this work.

Above: Researchers using mist nets to catch Black Parrots in order to ring and sample them
Below: Black Parrot feeding on endemic palm fruits (H Richards)



Fotonatura

2012 was another busy year for the research programme on Aldabra with a range of new and continuing projects. The marine programme was successfully launched, with all field work for the outer reef mapping completed. Some important bird censuses were conducted, with results indicating that the rail and frigatebird populations are increasing. Research into the Giant Tortoises continued and saw the application of more GPS transmitters and limited but crucial data was collected from the turtle satellite transmitter tags.

GEF PROTECTED AREA PROJECT

In 2010 SIF qualified for funding from the Global Environmental Facility (GEF) for the multi-partnered project: 'Strengthening Seychelles' protected area system through NGO management modalities'. The main aims of this project on Aldabra are to: 1) increase the extent of the Marine Protected Area (MPA); 2) improve surveillance; 3) develop a sustainable financial mechanism for the atoll; and 4) develop thresholds and bio-indicators as benchmarks in the management of Aldabra's ecosystems.

Progress on these objectives in 2012 includes:

1) Increase the extent of the Marine Protected Area (MPA)

The Aldabra Marine Protected Area boundary provides complete protection up to 1 km offshore from the mean high water mark. In November 2012 underwater survey data was collected by SIF and Bangor University, Wales, which will be used to map the marine seaward reef habitats of Aldabra. The reef-mapping work, which also involved reef fish and pelagic species inventories, provided information on the spatial extent of the reefs, habitat types and species composition. This exercise is showing for the first time exactly what is being protected in Aldabra's offshore realm, as well as helping to identify further protection requirements. The work so far is confirming what is already known about Aldabra's marine life and more – that the reef system is remarkably pristine, healthy and thriving, with incredible diversity, but is also extremely vulnerable. It has also identified that the reef extends over the 1km protection zone in the East and therefore an extension of the protected area should be considered (see section below for a focus on this work).

2) Improve surveillance, enforcement and compliance capacities

The harsh conditions of windblown sea spray and subsequent corrosion resulted in Aldabra's digital V-Satellite (VSat) system breaking down. This equipment digitally connects Aldabra to the world, and also provides essential atoll-wide coverage for VHF communications. In 2012 a technician travelled to Aldabra to repair the VSat connection, and established the requirements for repair of the Aldabra repeater station.

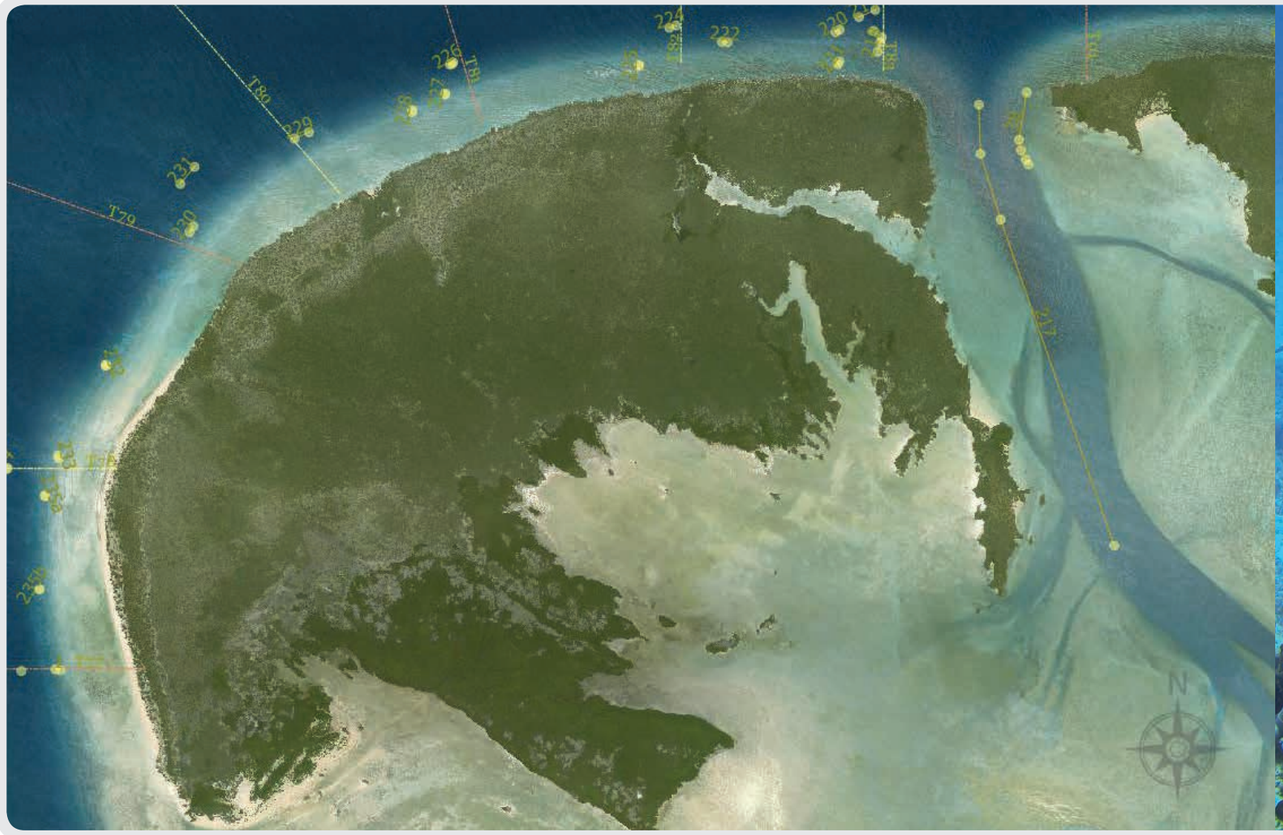
3) Develop a sustainable financing strategy for Aldabra

In 2011 a consultant conducted a financial analysis to identify mechanisms to improve Aldabra's financial sustainability, in order to mitigate the decline of tourism to Aldabra as a consequence of piracy. One of the recommendations, which echoed SIF's long term goals, was the establishment of Aldabra House which was announced at the 30th anniversary celebrations in December 2012. This project will be developed over the next few years.

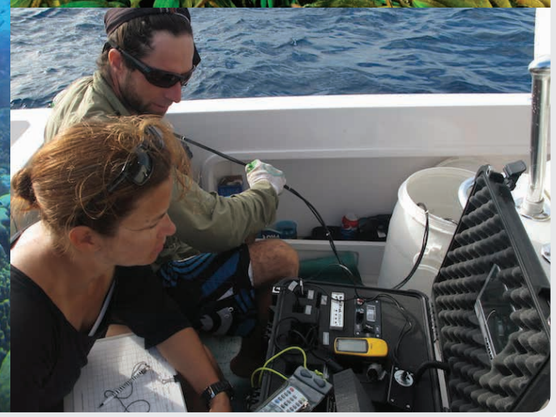
4) Develop thresholds and bio-indicators as benchmarks in the management of Aldabra's ecosystems

After the development of Access databases in 2011 for storage and analysis of Aldabra's monitoring data, planning started for revisions to the bird monitoring programmes. Bird species can act as indicators with which threats to the World Heritage site values can be assessed but need to be monitored regularly for this to be used. This programme is due to be further developed in 2013. Detailed protocols for all of Aldabra's monitoring programmes have been updated and finalised, and are available as a reference point for SIF staff and a research resource for other organisations.

Identification of meaningful threshold values of potential concern requires up to date 'baseline' information on the current state of Aldabra's biodiversity. To this end, several surveys that were launched in 2011 to assess the abundance and distribution of certain bird species were continued in 2012; including a survey of breeding frigatebirds to establish population trends, a census of Aldabra rails on Picard, and monitoring of landbird nesting success on Picard. Giant Tortoises are also a key indicator species for Aldabra and work also continued on monitoring, tagging, sampling and tracking of Giant Tortoises as part of the Zurich-Aldabra Research Platform in collaboration with the University of Zurich.







MAPPING THE REEFS AROUND ALDABRA:

EXPANDING THE ALDABRA MPA

Several esteemed scientists and naturalists, including Charles Darwin, Sir David Attenborough and Professor David Stoddart, have marvelled at the natural wonder of Aldabra and strongly advocated its protection, which has provided the impetus for its conservation for more than 150 years. Yet there is limited information about the marine environment to underpin these management and conservation efforts. The most basic conservation tool – essential for all management and conservation work – is mapping habitats. In Aldabra's case, understanding of the rich and geomorphological diverse marine habitats and ecosystem, with its channels between the lagoon and sea and the expansive coral reefs, was needed to provide evidence based rationale for effective protection of the existing marine area and also to expand the current 1km offshore MPA. Aldabra's isolation, large size, inhospitable coastline, currents and ceaseless wave action, conspire to make any marine survey work very challenging.

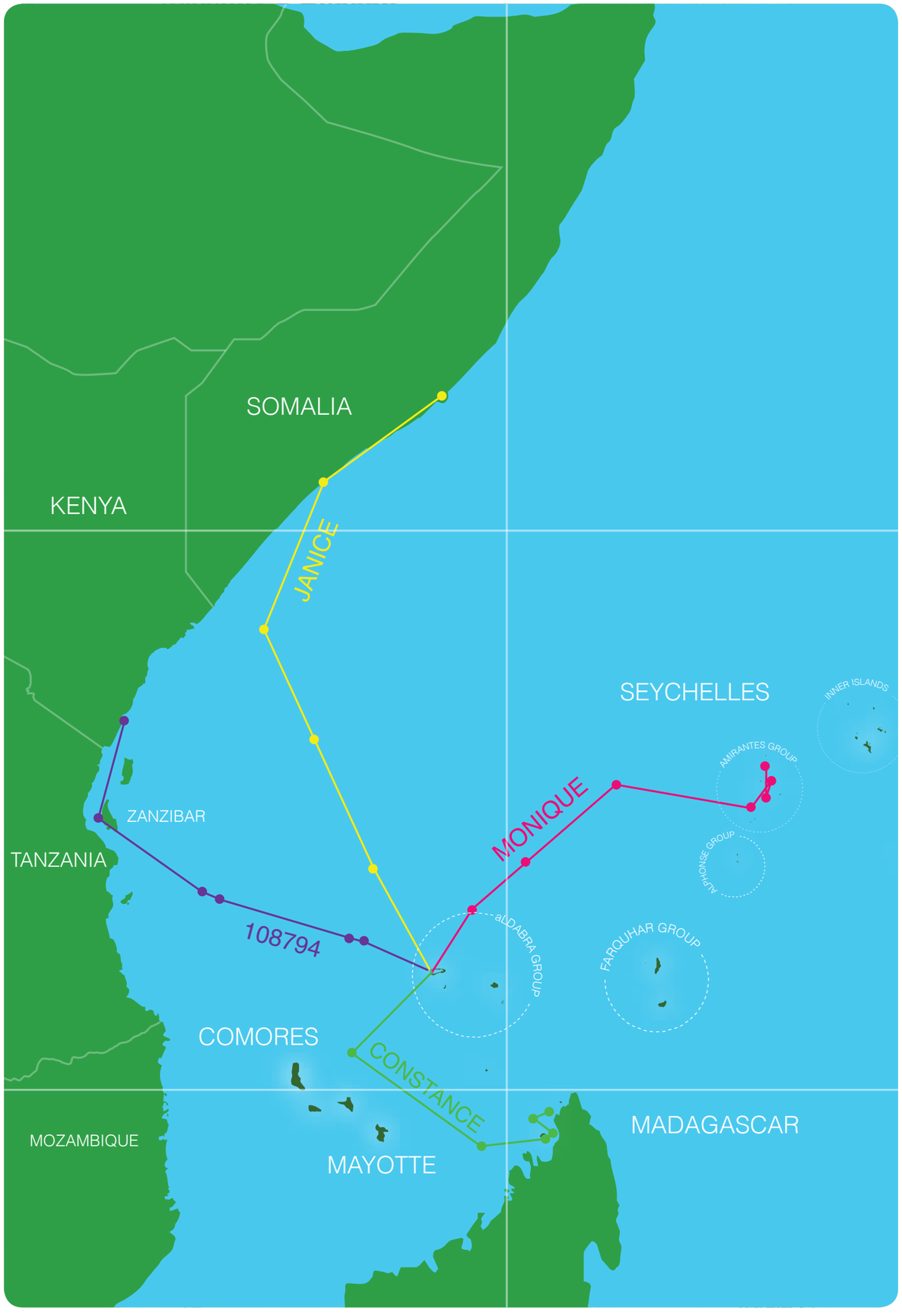
Using remotely sensed imagery, such as satellite imagery or photographs taken from aeroplanes, provides a mechanism by which scientists and fieldworkers can combine technology with field surveys to obtain much needed data. Throughout 2012 planning was underway in collaboration with the project partners, Dr John Turner and Dr Rebecca Klaus from the School of Ocean Sciences, Bangor University, UK to organise the fieldwork. In December, SIF undertook the long awaited reef mapping field work and Rebecca joined the team on Aldabra to provide guidance on the ground. The objective of the fieldwork was to collect habitat data, which would then be registered to a specific point on the ground (geo-referenced). This data were then used to derive meaningful habitat classes (e.g. >80% live coral cover or 60% seagrass/40% sand). In turn the habitat classes were used in conjunction with the processing of the remotely sensed imagery, and then finally to produce the habitat map of the reef.

The field work, led by Philip Haupt (GEF project coordinator at SIF) and Rebecca, involved detailed SCUBA diver surveys, unmanned towed video camera (Seaviewer Dropcam) surveys, and walked video camera surveys. The entire atoll was divided into 83 transects, 1 km apart. On 30 of the 83 transects detailed dive surveys were conducted to collect data on the habitat and fish species within the same area. On these dive surveys, a visual assessment of each site was conducted to derive a habitat assessment score. This was based on the rugosity of the landscape, the number of coral growth forms, composition of seafloor, and a high level overview of live coral cover. Underwater photographs were taken of the benthic cover using a camera mounted to PVC frame. A few target fish species representing the functional feeding groups (herbivores, piscivores, corallivores, etc) were also recorded at each site. Once divers were back on the boat a description was completed for each site.

Unmanned underwater video data was collected and geo-referenced using a GPS. 315 videos were totalling 40 hours of footage were collected. These sites represented various habitats around the atoll. The shallow lagoon reefs (inaccessible by boat at low tide or under high swells) were recorded using underwater video cameras mounted on PVC poles and geo-referenced.

Left: Map showing dive transects off Picard for reef mapping. **Middle:** Diver taking photos of benthic cover on reef (A de Groene). **Bottom Right:** Conducting Seaviewer Dropcam surveys. **Top Right:** The mapping surveys also included the seagrass beds on the outside of the atoll (Fotonatura)

The GEF project manager from the GEF/UNDP Project Unit based in Victoria, Michelle Etienne, was able to not only visit the site for project implementation evaluation, but actively participated as a volunteer to help collect survey data. The rest of the team included two rangers, Michel Malbrook and Shanni Etienne, and three volunteers, Arjan de Groene, Lotte Reiter, and Calum Ferguson, two skippers Jude Brice (senior skipper), and Murvin Green (skipper), and a medical doctor, Dr Naomi Adeline. A fantastic team effort, great spirit and luck of good weather saw all the data collected by 16th January 2013.



TURTLE SATELLITE TAGGING PROJECT

Top: Green Turtle. Middle: Green Turtle with satellite tag attached to carapace. Left: Map showing the movements of the tagged turtles. Bottom: Turtle tracks back to the sea (M Dinther)

Aldabra hosts the second largest nesting population of green turtles in the Western Indian Ocean which makes it a key site for the species and vital for their long-term conservation in the region. To monitor survival and nesting success of breeding females, a successful 40-year atoll-wide monitoring and flipper-tagging programme is producing valuable information. The efficiency of this method in monitoring turtles while away from Aldabra, however, is limited, since up to several hundred turtles must be tagged for a single tag return (from elsewhere) and this is indicative of only a single location of the turtle.

In 2011 SIF initiated a satellite tagging project, funded by the International Seafood Sustainability Foundation (ISSF), to find out more about Aldabra's breeding Green Turtles migration routes and foraging areas. The satellite monitoring involves attaching a Platform Terminal Transmitters (or PTTs) to the turtle's upper shell. The tag sends a message to a satellite whenever the turtle comes to the surface to breathe and the locations of the turtle are then plotted onto a map. Satellite tracking has the clear benefit of following an individual over time and long distances across water. By satellite tracking a number of female Green Turtles from Aldabra's growing population, we can identify the migration routes and foraging areas of these turtles and improve understanding of the threats posed to them when they are not in the vicinity of the atoll. Between October 2011 and July 2012 six female Green Turtles found nesting on Settlement Beach were fitted with a satellite transmitter. The transmitters were glued to the turtle's shell using marine epoxy following an existing protocol used in other tagging projects.

Preliminary results were exciting as the tagged turtles migrated in all directions, using the territorial waters of at least six countries (Seychelles, Madagascar, Comoros Islands, Tanzania, Kenya, Somalia). They appeared to be using locations across the Western Indian Ocean to feed and rest while away from Aldabra. The early results indicate no set migratory route or foraging location for Aldabra's Green Turtles. This emphasises the urgency for transboundary protection measures for marine turtles and the importance of internationally agreed protective measures such as the Convention on Migratory Species (CMS) to which the Seychelles is party.

Unfortunately by the end of September 2012 the last tag had stopped transmitting data. This was significantly earlier than anticipated and it is still unclear as to why the tags stopped transmitting. Possible reasons are related either to the ability of the GPS antenna to transmit a signal or that the tags may have become detached from the shell. Further investigations will be needed to determine the cause and until this is confirmed the project has been put on hold.

Other turtle monitoring

The flipper-tagging programme progressed in 2012 with 230 Green Turtles, and 23 Hawksbill turtles tagged around Aldabra. Turtle track monitoring has also continued with only a small decrease compared to 2011's peak in the total number of emergences for Green Turtles. Interestingly the seasonal pattern for Green Turtle emergences at Settlement Beach was different in 2012 to previous years. Whereas previously emergences peaked in March/April with another peak in December, in 2012 there was a much lower peak in April followed by a long period with a similar rate of emergences. Possible reasons for this change include sea surface temperature or the arrival of different female foraging groups. Ongoing monitoring will provide a longer term view and more insight into whether this pattern was an anomaly or an indication of a longer term change.

BIRD MONITORING

Long-term monitoring of Aldabra's land bird populations indicates that populations of all species remained stable in 2012. The frigatebird survey continued with interesting results which will be published next year and SIF were delighted to have the opportunity to attach data loggers to Red-tailed Tropicbirds breeding on Aldabra in order to track their long distance movements.

ALDABRA RAIL RESEARCH

The global range of the Aldabra White-throated Rail (*Dryolimnas cuvieri aldabranus*), the last surviving flightless bird in the Indian Ocean, was restricted to only three islands of Aldabra Atoll in 1998: Malabar, Polymnie and Île aux Cèdres. In 1999, following the eradication of cats from the island of Picard, 18 Aldabra rails were re-introduced. The re-introduction was successful and population growth on Picard was predicted to continue to carrying capacity of ca. 1000 pairs by 2010. In 2011 a survey was conducted on Picard to establish whether the population size of the re-introduced population had reached the predicted size. Results indicated a population size of approximately 1100 pairs, and a number of single birds, which produced a population estimate of almost 3000 birds, which is well above the previous predicted carrying capacity. The survey, together with earlier population estimates for Malabar and Polymnie, puts the total estimate at ca. 10,000 birds for the entire atoll. Despite this increase the rail still only occurs on Aldabra and only on smaller islands, where cats are absent, so remains vulnerable to several potential threats. For example, sea level rise would reduce the available habitat, the accidental introduction of a predator (e.g. cats spreading to the islands where the rail occurs) or pathogen could devastate the population. Further steps are therefore needed to ensure the continued conservation and protection of this unique population. This survey was carried out under the GEF Protected Area project: 'Strengthening Seychelles' protected area system through NGO management modalities' (see p15 for further details).

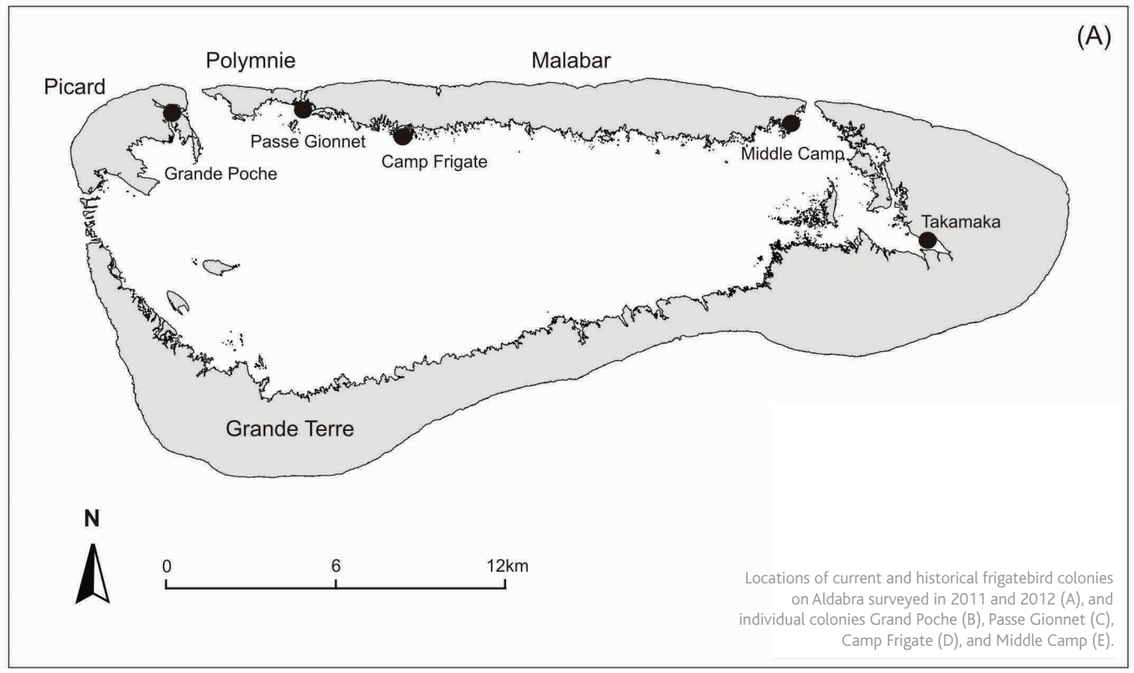
TROPICBIRD DATA LOGGERS

Aldabra supports the largest breeding population of Red-tailed Tropicbirds (*Phaethon rubricauda*) and White-tailed Tropicbirds (*P. lepturus*) in the Seychelles. The migration patterns of these breeding birds in the Indian Ocean are not known, but research is needed to improve understanding of their ecology and any threats they are exposed to when away from Aldabra.

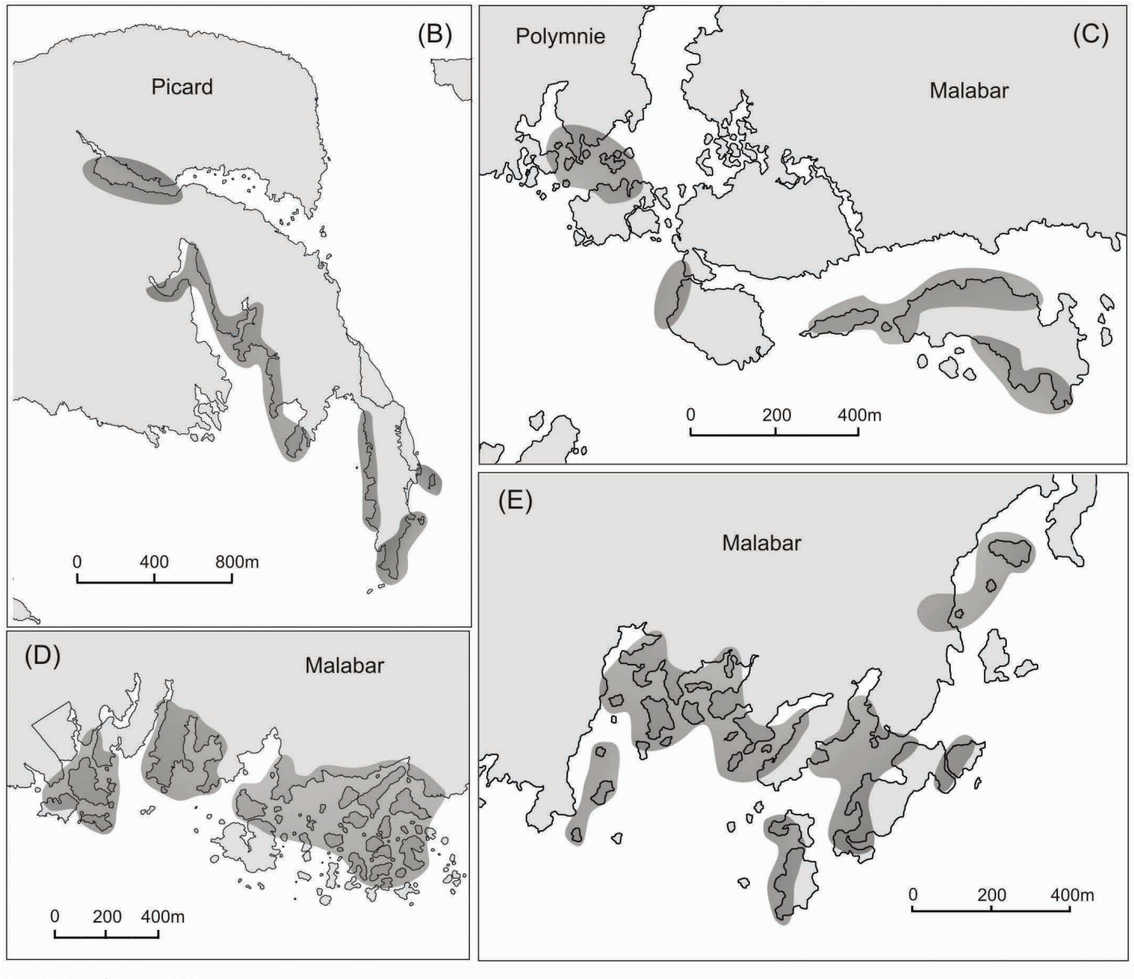
Dr Jannie Linnebjerg (University of Aarhus, and EU project consultant on Assumption) and Dr Jerome Fort (University of Aarhus) kindly provided SIF with a number of light level geo-locaters (GLS). Light level geolocation is the calculation of position from ambient light level readings with reference to time, and is a highly effective technique for tracking long distance migratory species. The logger (geolocator) is a battery powered instrument with an in-built microprocessor and a memory for data storage. After data download, decompressed data is processed by software to estimate position: latitude from day/night length, and longitude from the absolute time of local midday/midnight.

The data loggers were pre-attached to 6.5 mm plastic bird rings and had around one year of battery life remaining. A single data logger was attached to ten different Red-tailed Tropicbirds during routine tropicbird nest monitoring on the La Gigi islets (between Picard and Grand Terre) from April to June 2012. To allow for individual recognition, birds were also fitted with two coloured rings: one coloured ring with the data logger on the right leg and one coloured ring on the left leg. Tag return rate is expected to be low, due to some loggers being lost at sea, and some birds not returning, but staff will be eagerly awaiting the return of any tagged birds from early 2013 and the hope of shedding some light on where they have been while away from Aldabra. An update will be provided in the 2013 report on the data collected from these loggers.

Top: Red-tailed Tropicbird **Bottom:** A data logger attached to the leg of a tropicbird (M Dinther)



Locations of current and historical frigatebird colonies on Aldabra surveyed in 2011 and 2012 (A), and individual colonies Grand Poche (B), Passe Gionnet (C), Camp Frigate (D), and Middle Camp (E).



FRIGATEBIRD SURVEY

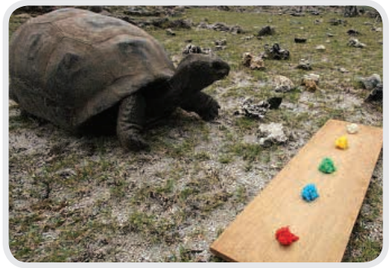
Healthy seabird populations usually indicate a healthy marine ecosystem so the fact that 28% of all species are considered globally threatened is a major cause of concern. With this in mind, SIF started a two-year survey of Aldabra's frigatebird populations in early 2011 under its component of the GEF Protected Area project (see p15). Aldabra hosts the largest frigatebird colony in the Indian Ocean, with both lesser (*Fregata ariel*) and greater (*F. minor*) frigatebirds nesting in the same colonies, so it is a key site for seabird monitoring.

The survey covered all nesting frigatebird colonies on Aldabra, including Passe Gionnet, Camp Frigate, Middle Camp and the recently established colony of Grand Poche. Frigatebirds are very sensitive to human disturbance so care was taken by the researchers to disturb the birds as little as possible, keeping at least 15m away from them at all times. Surveys were conducted by counting the number of adult birds on nests, number of chicks and the number of fledged birds.

The Grand Poche colony on Picard was one of the biggest discoveries of the survey: it is almost a century since the last confirmed report of frigatebirds breeding on Picard, with the initial colony having been made locally extinct following exploitation by the small human population on Aldabra. It is therefore heartening and extremely encouraging to see that this colony has not only re-established, but is doing very well with almost 20% of the frigatebirds counted in the survey occurring at this colony.

The survey estimated a breeding population of approximately 6600 pairs of Lesser Frigatebird and 4400 pairs of Greater Frigatebird in 2011. This is a potential increase of at least 10% since the last surveys in 1976/77 and 2000. The estimate in 2012 dropped considerably, with approximately 3500 pairs of Lesser Frigatebird and 3000 pairs of Greater Frigatebird counted. The decline, mainly caused by a lower number of chicks, could reflect normal fluctuations in annual numbers of nesting frigatebirds on Aldabra and elsewhere. Frigatebirds feed on flying fish and squid associated with subsurface predators, such as tuna. Such prey patches are highly unpredictable and frigatebirds are known to focus on areas with higher productivity on a regional scale. This could result in annual population fluctuations, particularly when considering the potential impacts of tuna fishing on this association. Alternatively, food availability in late 2011 at the onset of breeding may have been lower than usual, thereby impacting upon breeding. The birds were initially monitored over two years, 2011–2012, as frigatebirds can take up to 19 months to fledge and leave the nest. Given the markedly different estimates from the two consecutive surveyed years, however, the monitoring will be extended for the next few years to obtain a better picture of the extent and pattern of the fluctuations and ultimately the factors driving this.

A major aim of monitoring and research on Aldabra is to improve management. One key management outcome as a direct result of this research is that SIF has revised the tourism guidelines of Aldabra to ensure minimal disturbance to the frigatebird colonies. The changes include a site change, to minimise disturbance to larger colonies, and increasing the minimum approach distance of visitors to 30m. In addition, visits will no longer be permitted during the peak breeding season and visitors will be encouraged to take close-up photographs of roosting birds outside the nesting colony. The revised guidelines, in combination with Aldabra's current protection status, will help to maintain a stable or increasing frigatebird population. The survey so far has provided a very good example of research results being directly applied to management strategies.



Left: Aldabra Giant Tortoise (Fotonatura)
Top: A 'toasted' code on a Giant Tortoise carapace (R Baxter) Bottom: The tortoise food preference experiment in action (R Baxter)

GIANT TORTOISE RESEARCH AND THE ZARP PROJECT

The Giant Tortoise project that was started in September 2011 under the Zurich-Aldabra Research Platform (ZARP), has been running throughout 2012 with Project Officer Rich Baxter conducting fieldwork on Aldabra. Implementation of a long-term study of the Aldabra Giant Tortoises is the first part of a collaboration between SIF and four researchers from the University of Zurich (Dr. Dennis Hansen, Dr Arpat Ozgul, Dr. Erik Postma, Dr. Gabriela Schaepman-Strub and Dr. Lindsay Turnbull). Key objectives for the project are: (1) marking, measuring and sampling a large proportion of the Picard island tortoise population to provide 'baseline' data for the island's wild tortoise population; (2) Giant Tortoise population dynamics and genetics; (3) linking tortoise densities and behaviour to vegetation dynamics; and (4) linking vegetation dynamics to climate variability and trends.

Preliminary findings using 14 years of monitoring data from Aldabra indicate that the Giant Tortoise population has remained stable during this period. Picard Island, where the Aldabra research station is based, provided the ideal setting to study family relationships in more detail. In 1967 only a small number of tortoises lived on Picard and, by 1997, this had increased to an estimated 2000 individuals. With some individuals that are over one metre in length and up to approximately 140 kg, this includes some of the largest tortoises on the atoll. Over 1000 tortoises were individually marked on Picard in 2012 with a three-letter code which is 'toasted' onto their carapace. The toasting is done with a heated branding iron which is placed in the centre of their shell. On consultation with experts at Zurich zoo this is not thought to be felt by the tortoises at all. These tortoises can now be followed individually over time, which will allow 'individual-based' monitoring and produce valuable data on breeding systems, movement patterns, behaviour and ecology. In addition, 491 blood samples were collected in 2012 from tortoises across the entire atoll to analyse DNA, hormone and nutritional status.

GPS transmitters have been attached to 31 tortoises on Picard, Malabar and Grand Terre in different habitats, recording tortoise movements, as well as acceleration and temperature. The tags will remain attached for 8 - 10 years, collecting long-term data on individual movement patterns. The resulting data will shed light on many aspects of tortoise behaviour, including their role in seed dispersal, habitat preferences and effects of climate on behaviour and movement patterns, which is crucial for understanding the long-term effects of climate change.

Also under the ZARP project, satellite imagery is being used to identify whether Aldabra's vegetation has changed since the 1960s in response to tortoise density, and climate change. To examine vegetation responses to seasonal and long-term weather trends, tree and shrub core samples have been collected and will be analysed by looking at the tree-growth rings (if found). ZARP will also re-initiate and maintain large scale 'exclusion plots' a past experiment that prevent tortoises from grazing on a patch of vegetation. This will reveal how a large natural population of tortoises affects vegetation, and how this relates to changes in vegetation and tortoise densities. This part of the project is scheduled to be started in 2013.

An interesting experiment was also conducted to examine the role of colour in food preference of Giant Tortoises. Tortoises were presented with five differently coloured balls (~2cm diameter) of cooked rice stained white, yellow, red, green or blue. The preferred colour and sequence of the rice balls was recorded for more than 120 individual tortoises. So far, the tortoises show a preference for yellow and white but this study will be continued in 2013 to confirm the results.

INVASIVE SPECIES ACTIVITIES

EU-FUNDED PROJECT

Significant progress was made in the second year of the EU-funded invasive species project. The most notable achievement under the project was the historical event of the eradication of goats from Aldabra. Invasive plant work on Praslin started and the eradication of invasive birds from Assumption was continued, with 5000 birds caught by the end of the year. A parallel emergency project was launched on Aldabra to eradicate newly invading introduced bird species. Preliminary preparations were also made for work on introduced Ring-necked Parakeets on Mahé and rats and cats on Aldabra and these activities are due to launch in 2013 so will be covered in more detail in subsequent reports.

ALDABRA IS GOAT-FREE

The invasive species project secured its first major success when, on 3rd August 2012, history was made for Aldabra, for Seychelles, and for international conservation, with the shooting of the last feral goat (*Capra hircus*) on Aldabra. This marked the end of more than 25 years of eradication efforts and an intensive programme for the previous five years. Considered a major threat to Aldabra's endemic biodiversity, elimination of the goats has long been a priority for SIF and the EU funding made it possible to achieve this goal.

Following the helicopter survey by the Indian navy at the end of 2011 and no sightings of non-Judas animals for almost two years, it was decided in early 2012 that it would be necessary to give the eradication the final stamp of approval via external verification. Two consultants were hired to eliminate all but one of the remaining four Judas goats and to cover Grand Terre on foot searching for signs of goats. The consultants stayed for a total of nine weeks on Aldabra from January to March 2012 and covered more than 1000 km on foot. They only found signs of the Judas goats, therefore three of the four remaining Judas goats were shot by April 2012 to remove confusing signs of goat presence, and the final goat, J8, was monitored to determine whether he would seek out any other animals. In June and July 2012 it was confirmed that J8 was alone, and finally, on 3rd August 2012, J8 was tracked and shot. Since then, subsequent visits to the area have not found any signs of goats. The removal of J8 marks the end of feral goat inhabitation on Aldabra and the completion of an eradication programme that lasted for more than a quarter of a century.

TACKLING INVASIVE SPECIES IN THE VALLÉE DE MAI

Invasive alien species activities started in October 2012 in the Vallée de Mai. The first activity was the development and implementation of a complete plant survey of the Vallée de Mai and part of the surrounding Praslin National Park (a 200m buffer zone around the Vallée de Mai). There were two key aims of the survey; the first to create a baseline of the native and introduced species present in the Vallée de Mai and the second to determine which of the invasive alien species are most abundant and pose the most serious threats to the native palm forest. In total, 196 plots (10 x 10 m) covering 32 ha have been surveyed so far and the plant survey will be finished in 2013.

Alongside the plant work, work on Yellow Crazy Ants (*Anoplolepis gracilipes*) continued. The first survey of this highly damaging invasive species in the Vallée de Mai was done in 2010 as part of an MSc study. Two more surveys were completed in 2012, one at the end of the wet season in April 2012 and one at the end of the dry season in November 2012.The aim of the surveys was to monitor the distribution and spread of the ant colonies, which are known to spread rapidly elsewhere. Fortunately the results of the two 2012 surveys indicate that the species is not spreading in the Vallée de Mai: the population appears to be static in both distribution and abundance. What is clear, though, is that this species will require continued attention and monitoring in the Vallée de Mai.

Top: Photo: C Mason-Parker Bottom: Members of the Invasive Alien Species team undertake a plant survey at the Vallée de Mai

Madagascar Fody caught in mist net

ASSUMPTION INTRODUCED BIRD ERADICATION

One of the most challenging activities under the EU project, the eradication of introduced birds from Assumption to protect Aldabra's birds, kicked off in October 2011, led by project consultants Prof. Chris Feare and Dr Jannie Linnebjerg. The first three months of the project concentrated on obtaining estimates of the land bird population sizes and trialling various capture techniques to decide which methods would be used in the eradication. There were some surprises in store even in this first phase of the project. The population sizes of both introduced species on Assumption, Red-whiskered Bulbuls (*Pycnonotus jocosus*) and Madagascar Fodies (*Foudia madagascariensis*), were substantially larger than expected, with more than 4600 individuals estimated of each species. The birds also proved impossible to catch with traditional trapping methods, which were expected to be the main method of capture. This prompted an early re-think and fortunately both species were easily caught in mist-nets so this quickly became established as the main eradication method.

The second phase of the activity, the main eradication work, started in January 2012. A second annual survey at the end of October 2012 confirmed that the eradication had had a major impact on the introduced bird populations. Using mist-netting as the main method and supplementing this with firearms and continual trials of traps, the team managed to catch over 5000 birds by the end of 2012, which equated to over 60% of the estimated Red-whiskered Bulbul population and over 55% of the Madagascar Fody population.

As well as doing all the preparatory work, establishing the methods and launching the eradication, the two consultants worked intensively with local team members for 6 months to train them to a high level in all eradication methods, monitoring techniques, data entry and bird processing skills. This worked so well that, subsequent to the consultants' departure, the eradication continued with two local team leaders, Paul Benoit and Terence Mahoune successfully leading the mixed local/international team for more than a year to date. Terence has since been transferred to Aldabra to use the skills he learned on Assumption to lead the introduced bird eradication there (see next section). This makes the activity successful not only in terms of bird numbers but also in terms of substantially increasing local capacity, which is a main objective of the project.

With the time-frame for this project extended, the Assumption eradication will continue in 2013.

Top: Introduced bird eradication team members on Assumption Bottom: Team members with Red-whiskered Bulbuls caught in one month

United Nations Educational, Scientific and Cultural Organization

World Heritage Convention

Top: Takamaka Hut on Grande Terre Middle: Comparison between male Madagascar Fody (on left) and Aldabra Fody (on right) Bottom: Comparison between female Aldabra Fody (on left) and Madagascar Fody (on right)

NEW UNESCO FUNDED PROJECT TO ERADICATE INVASIVE BIRDS FROM ALDABRA

Despite the successes in SIF's invasive species work, a sobering reminder that invasive species threats require constant vigilance and efforts came in March 2012 when the first ever introduced bird species were confirmed to be present on Aldabra. The two species, the Madagascar Fody and the Red-whiskered Bulbul, are the two species being eradicated by SIF from Assumption, and this island is their presumed origin. The populations were initially estimated at 100-300 Madagascar Fodies and 1-3 Red-whiskered Bulbuls, and the fodies were confirmed to have established breeding territories with the population already covering a large area of the Takamaka region on eastern Grand Terre, which suggests that their arrival on Aldabra almost certainly pre-dates the eradication attempt on Assumption. The eradication on Assumption was intended to prevent the spread of these species to Aldabra and their presence on Aldabra confirms their ability to move across open ocean between islands. The threats posed to Aldabra's bird fauna are now very real and include possible hybridisation with closely related species (Aldabra Fodies), competition for food and breeding territories, disruption of ecological processes and transmission of novel pathogens.

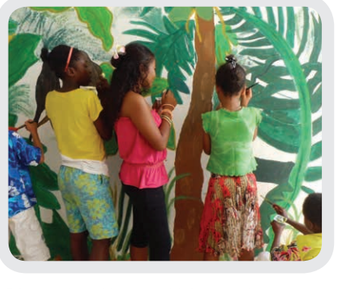
Until this discovery, Aldabra was one of the largest tropical islands in the world with an entirely native avifauna, and swift action was needed to prepare for and initiate an eradication programme to remove these birds rapidly before their increase in numbers and range made it impossible. An eradication of these species on Aldabra faces different challenges to Assumption due to the difficulties of distinguishing introduced Madagascar Fodies from native Aldabra Fodies (*Foudia aldabrana*) and the presence of many native and endemic bird species. Thanks to a generous and rapidly processed emergency funding grant from UNESCO, the team was able to start preparations for a major eradication programme in mid-late 2012. Takamaka is one of the most remote and difficult to access areas on Aldabra so the first step was to build a suitable field hut with a good water harvesting system to be able to maintain a full time team presence on site. The new Takamaka hut had been completed by December 2012, with some birds already targeted and recruitment was underway to launch the full eradication in January 2013.

EDUCATION AND OUTREACH

Now in its second year the SIF Education and Outreach programme has gone from strength to strength in providing environmental education to a local and international audience. The year was marked by the launch of the SIF holiday camps at the Vallée de Mai which gave local schoolchildren their first opportunity to join a week long environmental workshop.

FRIENDS OF VALLÉE DE MAI CLUB

This school club was created in 2011 by SIF with the intention of having a presence in the local schools to enhance the environmental education that the children receive. The club is optional and part of the Extra Curricular Activities (ECA) that each school runs every week. It gives the children the opportunity to learn about the unique biodiversity and importance of the Vallée de Mai. The club has continued growing in 2012 and a new Friends of Vallée de Mai club was formed at the Vijay International School. It comprises of 16 pupils aged 8-10 years old. To help the school meet the club's objectives the Education Officer, Maria Brioche, conducted regular visits to the school and actively participated in the clubs activities, giving presentations and assisting with creating educational activities for the children. All children of the Friends of the Vallée de Mai club receive an introductory visit to the Vallée de Mai to give them the opportunity to visit and learn about the forest, as many of them have not visited before. Other activities from Friends of the Vallée de Mai club participants included: working in groups to produce large scale paintings of the Vallée de Mai ecosystem and the interactions between its flora and fauna, participating in a scavenger hunt within the Vallée de Mai, helping the staff of the Vallée de Mai clean up the firebreak surrounding the forest.



Friends of the Vallée de Mai club paint a mural

Traditional dancing at Creole festival at the Vallée de Mai

FESTIVAL KREOL

Following on from previous years, a week-long programme of activities was organized to celebrate the 27th Seychelles Creole festival. This year the national theme was 'Selebre Nou Kreolite dan Nou biodiversite', and the focus was on celebrating both the Creole heritage and our valuable biodiversity. The Vallée de Mai was the main venue for this programme and there was a variety of displays and activities throughout the week.

This year we introduced a 'historical corner' to the exhibition in the visitor centre where traditional costume and other traditional household items were displayed. An area was also set aside to showcase all the traditional uses of the Coco de Mer nut. Visitors had the opportunity to learn about why they were used and their place in the history of the Seychelles. The popular Kokosye café at the visitors centre promoted traditional herbal teas such as Citronelle, Grobonm, Bazilik, Lanmant, Bigarad and Tokmaria, as well as serving traditional snacks including gato kreol, salad mang, konfitir papay trounen, nouga Koko, nougat bannann, breadfruit and banana chips, and galet. There were live demonstrations by local artisans in weaving and painting and their work was on display.

The annual performance of the traditional kamtole by 'Ton Charles' and his group was on the programme and this year they joined with a group of teachers and hotel staff to perform the traditional dance. The Vallée de Mai was also honoured to be hosting the Mayor of Bras and his delegation from Reunion during this festival week. In addition to the activities on Praslin, SIF was also invited to attend the national exhibition for the Creole festival on Mahé where souvenirs from the Vallée de Mai were displayed alongside information on SIF's work and activities.

SIF HOLIDAY CAMPS LAUNCHED

Group of children from the SIF holiday camp

For the first time, in 2012, SIF hosted two holiday camps at the Vallée de Mai. The camps were held for a week in August and in December during the school holidays. A total of 44 children participated in these intensive environmental education programmes. The aim of the camps was to try to engage the children in caring for their environment and to learn more about the natural world around them. The Vallée de Mai provided an excellent venue for this learning experience and the children learnt about a wide variety of topics. These included outdoor activities in the palm forest such as river exploration, insect searches, bird-watching and Coco de Mer surveys. To complement this there were also more formal activity workshops where the students received lessons and presentations on the use of local palms and seeds, nutrition, and insects.

To mark the end of the holiday camp, on the last day the children presented their artwork, crafts, stories, poems and songs that they had created during the camp to their parents, the facilitators, and the Vallée de Mai staff. Sharing what they had learnt during the week will hopefully be the first step in taking the environmental lessons learned at the Vallée de Mai to the rest of the Praslin community.

SIF received support for these camps from several local organisations and experts who all contributed in some way to making these camps a success. The children thoroughly enjoyed the experience, with some describing it as 'an experience of a lifetime'. Following on from the success of these camps SIF will continue to host them in 2013.

Top: Students completing the trail quiz on Biodiversity Day Bottom: Ready to clean the firebreak on Clean up the World day

THEME DAY ACTIVITIES

There are many global environmental days that are marked throughout the year. SIF has adopted some of these significant days as an opportunity for environmental education and awareness in the local community.

INTERNATIONAL BIODIVERSITY DAY

Also celebrated in previous years this year a bigger event was held at the Vallée de Mai in celebration of Biodiversity day in May. Over 100 local schoolchildren came to the Vallée de Mai for a whole day of educational games and activities. Visitors were also encouraged to participate in the event and many enjoyed the additional element to their visit to the Vallée de Mai.

SIF staff gave presentations to students and visitors on a range of topics such as: Life on Aldabra, Coco de Mer and Invasive Alien Species. Elsewhere at the visitors' centre children had the opportunity to get their face painted with some of the unique animals from the Vallée de Mai, from the Chameleon to the Black Parrot, and it was a very popular stand. There was also the opportunity to take a guided tour with one of SIF's guides or senior staff to learn more about the impressive biodiversity within the Vallée de Mai. Also in the forest there a biodiversity quiz trail was set up, leading from the entrance around one of the forest paths. This was busy throughout the day as children and adults alike attempted to find the answers to the quiz using the fact sheets placed around the forest. There were lots of prizes to be won including educational books on Aldabra and the Vallée de Mai and other souvenirs.

Aldabra staff marked Biodiversity Day with a full beach clean on Settlement Beach Picard, which not only cleaned the environment of rubbish but facilitated access to the beach platform by nesting turtles.

CLEAN UP THE WORLD DAY

SIF again participated in this important global event in July 2012. A celebratory fair was held on Praslin by the Ministry of Environment and Energy which gave SIF the chance to showcase and discuss some of the work that is conducted in the Vallée de Mai and Aldabra. Alongside staff from the Vallée de Mai, rangers from Seychelles National Parks authority spent the day clearing invasive creeper plants from the firebreak around the Vallée de Mai. This exhausting but essential work is crucial to protect the valuable Vallée from fire damage and also slow the spread of invasive plant species.

WORLD ENVIRONMENT DAY

To mark World Environment Day a group of Young Police Leaders accompanied by their instructor visited the Vallée de Mai in June 2012. The main aim of this activity was to sensitize the young police officers about the threat of poaching pressure to the regeneration of Coco de Mer nuts. A presentation was given to the police officers to illustrate the importance of the site and the Coco de Mer to the Seychelles and to global biodiversity. During the presentation they were briefed on the existing law in the Seychelles concerning the Coco de Mer (the Coco de Mer management Decree). Time was then given to discuss the weaknesses identified within this law and develop a proposal to revise the existing law. The presentation was followed by a guided tour in the Vallée de Mai which was thoroughly enjoyed by them and they were pleased to have the opportunity to discover the magnificent beauty of the Vallée.

DEVELOPMENT OF EDUCATIONAL FACILITIES

Following the developments made at the visitors centre in 2011, SIF commissioned WWT Consulting UK (from the Wildfowl and Wetlands Trust) to reinterpret the educational materials available at the Vallée de Mai both in the forest and the visitors centre. The objective of this redesign was to ensure that every visitor to the Vallée de Mai has the chance to experience, enjoy and learn about this World Heritage site which will in turn foster a sense of appreciation of the need for its long term conservation. Several materials are to be produced and implemented and 2012 saw initial designs being completed. The project should be completed in mid-2013 so full details of the materials will be included in next year's report.

The three new logos for SIF

NEW BRANDING AND LOGO FOR SIF

SIF took on a new look in 2012 with the creation of a brand new logo for Aldabra and the adoption of a new logo for the organisation. The new logos have been adopted to better reflect the professionalism, international outlook and environmental commitment of SIF. The former SIF logo, showing a frigate bird soaring over the organisation's name held little meaning for the broader public and was easily confused with the logos of numerous other local and international organisations and companies which also feature Frigatebirds. Furthermore, while Aldabra hosts the second largest frigatebird colony in the world, these birds are not unique to Aldabra, and the logo was therefore not thought to capture the essence of the site and SIF's work there.

The new SIF logo shows the three letters of the organisation's acronym in a custom-designed font. The blue of the S was chosen to represent the waters of Aldabra, the green of the F to represent the forest of the Vallée de Mai, with the turquoise of the letter I representing a blend of the two sites. This conveys the unique twinning of Seychelles' two UNESCO World Heritage Sites, with Aldabra benefitting from the financial support of the Vallée de Mai and in turn providing the international-standard research and conservation capacity developed on the atoll to the Vallée de Mai. The design remit for the new SIF logo was that it be clean, clear, unique and useable. The design team was charged with creating an image which was distinct, represented the unique responsibility of the Foundation and would incorporate themes from Aldabra and the Vallée de Mai.

To reinforce the connection between the two World Heritage Sites, it was decided that the Aldabra logo should echo the key design elements of the Vallée de Mai logo, created in 2009. Following the Vallée de Mai logo template, flagship species from Aldabra and a key theme of the atoll were to be incorporated into the design. The new Aldabra logo shows a silhouette of a rail, inside a cut-out silhouette of an Aldabra Giant Tortoise, in turn superimposed on top of a representation of the many colours of the water coursing through a channel into the Aldabra lagoon.

Minor changes to the font of the Vallée de Mai logo were adopted to ensure continuity with the new Aldabra design and reflect the unique, professional image and values of the organisation. The Vallée de Mai logo, developed some years ahead of the new Aldabra and SIF logos, shows a gecko silhouetted in front of the head of a Black Parrot, in turn silhouetted in front of a palm leaf. The colours of the leaf range from dark green to a rich red, giving a taste of the diversity of colour and species that awaits the visitor to the Vallée de Mai. Both site logos are intended to represent SIF's work and protection of both the endemic species for which the sites are famous, as well as the broader ecosystems.

PUBLICATIONS


Seychelles NATION

Aldabra adopts solar energy


ENVIRONMENT

Aldabra is now 'goat-free'

MEDIA PUBLICATIONS

- 30/01/2012 – SIF shares research on heritage sites (Nation)
- 19/03/2012 – 100 Black Parrots Ringed (Nation)
- 12/04/2012 – Study cites risk of invasive birds spread to Aldabra (Nation)
- 08/05/2012 – Up-close with the chief executive of SIF, Dr Frauke Fleischer-Dogley (Nation)
- 15/05/2012 – Ban imposed on export of Coco de Mer kernel (Nation)
- 20/06/2012 – Aldabra in the spotlight at Rio+20 (Nation)
- 25/06/2012 – EU funds help SIF tackle invasive species (Nation)
- 23/07/2012 – Aldabra adopts Solar Energy (Nation)
- 17/09/2012 – Aldabra is now 'goat free' (Nation)
- 15/10/2012 – Aldabra named Site of the Month (Nation)
- 22/10/2012 – Vallée de Mai: a site of excellence (Nation)
- 24/11/2012 – Bird count hits milestone 5,000 on week 55 (Nation)
- 27/11/2012 – Up-close with conservationist Terence Mahoune (Nation)
- 19/12/2012 – 30 years of paradise (Nation)

STAFF TRAINING		
Feb-May	Marc Jean-Baptiste	DESMAN course with the Durrell Institute in Jersey, Channel Islands
August	Philip Haupt	Remote sensing course at the Institute of Marine Sciences in Zanzibar, Tanzania
October	Marcus Pierre & Matthew Harper	Business planning for Natural World Heritage Site Managers in Kenya
OVERSEAS TRAINING		
April	Andy Gouffe	EarthWatch training course on Coral and Coastal Ecology
September	Marcus Pierre, Andy Nourrice, Gerry Rose	Law Enforcement training
November	All participants of reef mapping project	Training in conducting underwater surveys and operating photo quadrats


Seasonality of Green Turtle (Chelonia mydas) Reproduction at Aldabra Atoll, Seychelles (1980–2011) in the Regional Context of the Western Indian Ocean


Observations of dugongs at Aldabra Atoll, western Indian Ocean: lagoon habitat mapping and spatial analysis of sighting records

SCIENTIFIC PUBLICATIONS

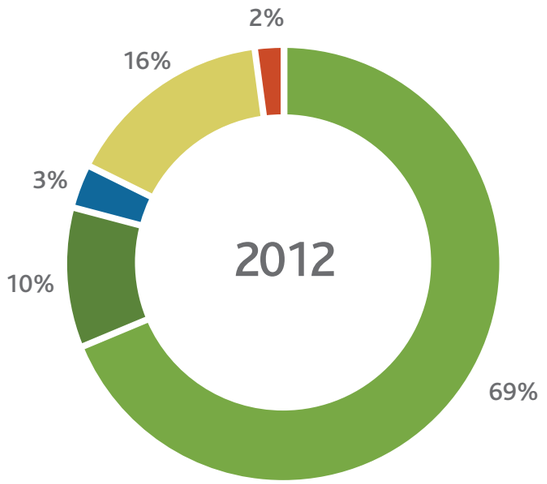
Hagan AB, Hamylton SM & Doak N. 2012. Observations of Dugongs (*Dugong dugon*) at Aldabra Atoll, Seychelles, Western Indian Ocean: Lagoon Habitat Mapping and Spatial Analysis of Sighting Records. *International Journal of Geographical Information Science*,26 (5): 839-853

Mortimer J. 2012. Seasonality of green turtle (*Chelonia mydas*) reproduction at Aldabra Atoll, Seychelles (1980–2011) in the regional context of the Western Indian Ocean. *Chelonian Conservation and Biology*,11(2): 170–181

Taylor ML, Bunbury N, ChongSeng L, Doak N, Kundu S, Griffiths R & Groombridge JG. 2012. Evidence for evolutionary distinctiveness of a newly discovered population of sooglossid frogs on Praslin Island, Seychelles. *Conservation Genetics*,13: 557–566

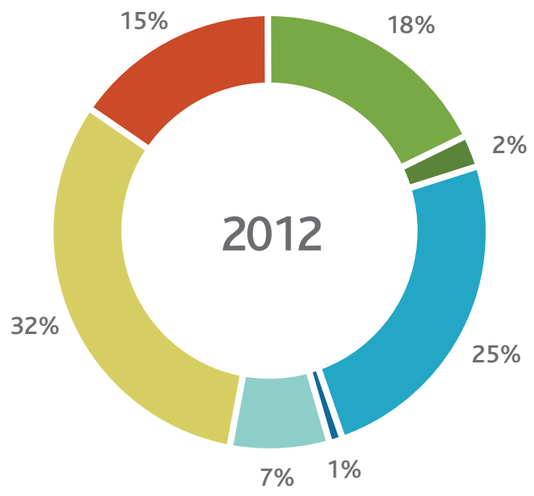
FINANCIAL INFORMATION

SIF's income is becoming increasingly diversified and the reliance on the Vallée de Mai entrance fees has decreased by 10% compared to 2010, when it was at its highest. With 16% of income coming from funding by the EC and GEF projects this has led to SIF being less reliant on tourism than it was previously. Following this increase in project funding SIF have been able to reduce operational costs by absorbing these into project implementation. Staffing and operation costs have dropped at both sites for this reason. In addition Head Office and administration expenditure has not increased despite the increase in project implementation, and stands at only 15% of the total expenditure. With research activities being a constant feature at both sites our budget continues to allow for permanent allocations for these.



INCOME

- Vallée de Mai entrance fees
- Vallée de Mai sales
- Aldabra landing fees
- EU/GEF projects
- Other



EXPENDITURE

- Vallée de Mai staffing/operation
- Vallée de Mai research/projects
- Aldabra staffing/operation
- Aldabra research/projects
- EMS project
- EU/GEF projects
- Head office

SIF BOARD OF TRUSTEES

The Patron of the Seychelles Islands Foundation, the President of the Republic of Seychelles James Alix Michel, appointed a new board of trustees in 2012. From October 2012 the SIF Board of Trustees are:

Chair remained: Ambassador Maurice Loustau-Lalanne
Outgoing Trustees: Dr Elvina Henriette, Mr Frank Hoareau, Ms Christelle Jacques, Prof Lars Kristoferson, Dr Carl Lundin
Remaining trustees: Prof Steve Blackmore, Dr Frauke Fleischer-Dogley, Ms Jeanette Larue, Mr Victorin Laboudallon, Mr Pat Lablache
New trustees: Dr Lindsay Turnbull, Dr Geoffrey Mauvais, Dr Jack Grove, Mr Tim Smith, Mr Joceyln Ah-Yu, Dr Marie-Reine Hoareau, Prof. Peter Edwards

SIF STAFF

Dr Frauke Fleischer-Dogley (Chief Executive Officer)
Dr Nancy Bunbury (Science & Projects Programme Coordinator)
Wilna Accouche (Science Programme Officer)
Mary Maria (Financial Controller)
Marille Benoit (Administration &Human Resources Officer)
Annette Bonne (Accounts Technician)
Laurette Bareau (Accounts Assistant)
Felix Francourt (Logistics Assistant)
Wilna Jean (Housekeeper)
Matthew Harper (Communications and Outreach Coordinator)
Philip Haupt (GEF Project Coordinator)
Annabelle Constance (Assistant Project Officer)
Helga Hoareau (Assistant Project Officer)

ALDABRA STAFF

Joel Souyave (Island Manager)
Dr Janske van de Crommenacker (Aldabra Scientific Coordinator)
Catherina Onezia (Senior Ranger)
Andy Gouffe (Ranger)
Stan Denis (Senior Ranger: Jan–Apr 2012)
Shanni Etienne (Trainee Ranger: Oct-Dec 2012)
Michel Malbrook (Trainee Ranger: June-Dec 2012)
Curtis Baker (Trainee Ranger: April-Dec 2012)
Jude Brice (Senior Skipper)
Murvin Green (Relief Skipper/Logistics Assistant)
Samuel Bassett (Logistics Assistant: Jul-Dec 2012)
Barney Marengo (Logistics Assistant)
Ian Mellie (Cook and Logistics Assistant)
Alain Banane (Mechanic)
Ralph Ernesta (Relief Manager: Oct-Nov 2012)
Project Officers/consultants: Michal Sur, Martijn van Dinther, Richard Baxter, Christina Quanz, Pete Haverson, Darryl Birch
Volunteers: Calum Ferguson, Arjan De Groene, Lotte Reiter

VALLÉE DE MAI STAFF

Marc Jean-Baptiste (Site Manager)
Marcus Pierre (Operation Manager)
Evadney Lafortune (Visitor Management Coordinator)
Dylis Cedras (Visitor Sales & Service Manager: from Oct 2012)
Maria Brioche (Education and Outreach Officer)
Elna Stravens (Sales Clerk Supervisor)
Marie-Paul Bistoe, Raissa Tirant, Nathalie Ernesta, Fannia Suzette, Peggy Marie, Elza Louise, Stella Grimace (Sales Clerks)
Andrea Radegonde, Andy Nourrice (Security Officers)
Hendrick Quatre (Maintenance Assistant)
Nathachia Pierre (Field Research Assistant)
Terence Payet (Ranger)
Dainise Quatre (Trainee Ranger)
Marie-Andree Radegonde, Thessa Athanase, Jerry Rose, Nadia Vidot (Fieldworkers)
Jorge Renteria (Praslin IAS Project Officer)
Anna Reuleaux (Black Parrot Project Team Leader)
Heather Richards (Black Parrot Project Researcher)
Rebeckah Fox (IAS volunteer)
Jim Labisko (Sooglossid Frog PhD student)

ASSUMPTION STAFF

Prof Chris Feare (Lead Consultant)
Dr Jannie Linnebjerg (Assistant Consultant)
Paul Benoit (Team Leader)
Terence Mahoune (Team Leader)
Julio Agricole (Trainee Invasive Species Technical Officer)
Pete Haverson (Avian Control Specialist)
Israel Labrosse (Invasive Species Technical Officer)
Roland Duval (Invasive Species Technical Officer)
Lotte Reiter (Volunteer)

WITH THANKS TO.....

...OUR SUPPORTERS

European Union
Global Environmental Facility
UNESCO
International Sustainable Seafood Foundation
Mauritius Commercial Bank
Finnish Fund for Local Cooperation, Finnish Embassy, Nairobi
University of Zurich
Lydia Lablache, Britannia Hotel, Praslin
Mr Ernst Pichler
Ms Ines Katerl
AGM supporters
Philippe Morin
Coco de Mer hotel, Praslin
BDO Associates
Mr Robert Gaines-Cooper, Group Chairman of Chelle Seychelles
UNDP – Project Coordination Unit
Raffles Hotel, Praslin
JJ Spirit Foundation

...OUR PARTNERS AND ASSOCIATES

Ministry of Environment and Energy, Ministry of Education, Seychelles National Parks Authority, Island Development Company, Island Conservation Society, Praslin Development Fund, Seychelles National Meteorological Service, IBC Solar

...THE FOLLOWING PEOPLE FOR THEIR HELP AND ADVICE ON SPECIFIC PROJECTS

Katy Beaver (Plant Conservation Action Group)
Lindsay Chongseng (Plant Conservation Action Group)
Adrian Skerrett (Seychelles Bird Records Committee)
The EU Project Steering Committee (Pierre-Andre Adam, Ronley Fanchette, Dennis Matatiken, Pat Matyot, James Mougal, Ronny Renaud, Adrian Skerrett, Sidney Suma)
Selvan Pillay, Hencel Hollanda, Patrick Alcindor, Vincent Amelie and Jean-Paul Dodin (Seychelles National Meteorological Service)

...OUR ASSOCIATED RESEARCHERS

Darryl Birch (Conservation Logistics, UK)
Professor Peter Edwards (ETH Zurich, Switzerland)
Professor Richard Griffiths (Durrell Institute of Conservation and Ecology, University of Kent, Canterbury, UK)
Dr Jim Groombridge (Durrell Institute of Conservation and Ecology, University of Kent, Canterbury, UK)
Dr Dennis Hansen (University of Zurich, Switzerland)
Dr James Harris, Dr Sara Rocha and Dr Ana Perera (CIBIO, University of Porto)
Dr Christopher Kaiser-Bunbury (Aarhus University, Denmark)
Dr Chris Kettle (ETH, Zurich)
Dr Jannie Linnebjerg (University of Copenhagen, Denmark)
Dr Jeanne Mortimer (University of Florida, US)
Dr Eric Postma (University of Zurich, Switzerland)
Dr Chris Raxworthy (American Museum of Natural History, US)
Dr Gabriela Schaepman-Strub (University of Zurich, Switzerland)
Dr Lindsay Turnbull (University of Zurich, Switzerland)
Dr John Turner and Dr Rebecca Klaus (University of Bangor, UK)
Dr Rainer von Brandis (D'Arros Research Centre)
Dr Matthias Waltert (Georg-August-Universität Göttingen, Germany)
Dr Jerome Fort (University of Aarhus)

SIF IN A NUTSHELL AND HOW TO HELP

Seychelles Islands Foundation (SIF) is a non-profit charitable organization which was established as a Public Trust in 1979 to manage, protect, research and promote sustainable ecotourism in the Seychelles' two UNESCO World Heritage sites of Aldabra Atoll and the Vallée de Mai on Praslin. A major focus is on scientific research to support and improve conservation management of the unique biodiversity and ecosystems of these two very different sites.

To successfully operate and protect two World Heritage sites which are more than 1000km apart and each with their specific set of challenges, SIF relies on income generated primarily by entrance fees and sales from the Vallée de Mai. This is supplemented by project funding, grants and donations. Aldabra used to provide direct income through visitor impact fees but piracy has almost entirely cut off this source of revenue in recent years. SIF's work with and management of these sites will continue to be dependent on visitor numbers and the generosity of our supporters for the foreseeable future.

There are a number of ways in which you can help us with this work:

• Visit the Vallée de Mai any day of the year and experience the magic of this unique site for yourself

• Purchase SIF products and souvenirs directly from the Vallée de Mai shop or the SIF Head Office in Mont Fleuri, Victoria

• Stop at the Vallée de Mai cafeteria and support local Praslinois producers and suppliers

• Tell other people about SIF and our work

• Volunteer for SIF – depending on active projects, there may be limited volunteer opportunities at both sites for suitably qualified international volunteers to help with research, conservation work or specific projects for 4-6 month periods.

If you would like to contribute, receive more information or are interested in receiving further news about SIF via monthly newsletters please contact us by email: info@sif.sc, check our website: www.sif.sc, or join our Facebook page: 'Seychelles Islands Foundation – SIF'.