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ALBATROSS TASK FORCE

Team Highlights, June 2017

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INTRODUCTION

Albatross are the most threatened group of seabirds in the world, with 15 of the 22 species threatened with extinction. The main driver of albatross population declines is conflict with fisheries. Seabirds are attracted to fishing vessels from miles away by the smell of fish and squid used as bait on longline hooks or discarded as waste from trawl factories. In search of an easy meal, for many it becomes their last as they become caught on a longline hook and drowned, or fatally struck by a trawl cable. It is estimated that an albatross dies in a fishery every five minutes: an unsustainable rate of mortality for a family of birds that do not breed for the first decade of life, and then only raise one chick a year, or even every two years.

Since this issue was identified in the late 1980's, scientists and fishery managers around the globe have been working to develop solutions to this problem, but there was a critical gap between the emerging science and the people working at sea. In 2005, The Royal Society for the Protection of Birds (RSPB) and BirdLife International launched the Albatross Task Force (ATF), an international team of seabird mitigation experts tasked with bridging the gap between the science and the fishing industry. The aim was to demonstrate and support the uptake of seabird bycatch mitigation measures in fisheries with a known impact on albatrosses and other vulnerable seabirds.

The main objective of the ATF is to reduce the bycatch of albatross and petrels in targeted fisheries, and ultimately to improve the conservation status of threatened seabirds.

We began work in South Africa in 2006 and have since expanded to eight countries¹ in southern Africa and South America. We focussed the ten most deadly fisheries for vulnerable albatrosses and petrels, and performed experimental trials to identify best practice measures for each fishery. We continue to work in these hot spot locations to implement those measures and reduce bycatch to negligible levels. The introduction of regulations to protect seabirds in these hotspot fisheries provides a platform to ensure the long term sustainability of bycatch reductions into the future.

None of the advances the ATF have made would be possible without the generous support of the RSPB membership, the David and Lucile Packard Foundation, The Tilia Fund, The National Fish and Wildlife Foundation, Páramo Directional Clothing, plus many private sponsors and donors.

¹ Argentina, Brazil, Chile, Ecuador, Namibia, Peru, South Africa and Uruguay
Cover photo: Buller's albatross, Steph Winnard

ARGENTINA

Aves Argentinas

Leo Tamini, Nahuel Chavez & Ruben Dellacasa



Target fisheries

In Argentina the ATF works with three target fleets: the industrial trawl fleet of 33 factory vessels that process and freeze their catch; the fresh-fish fleet of 60 trawl vessels; and the southern mid-water trawl fleet, composed of four vessels. Target fish species include hake *Merluccius hubsi*, kingclip *Genypterus blacodes*, hoki *Macruronus magallanicus* and southern blue whiting *Micromesistius australis*. Most vessels are based in the ports of Mar del Plata and Ushuaia.

Team progress

Industrial trawl fleet

Having identified and demonstrated the solutions in previous years, a vital next step has been government regulation. In 2016, our dedication and persistence paid off, with a conservation measure adopted by the Federal Fisheries Council that requires bird-scaring line use on all vessels by May 2018, preceded by a twelve month voluntary adoption period. Based on our research, we estimate this will save over 10,000 black-browed albatross *Thalassarche melanophris* each year

Fresh-fish fishery

Initial evaluation to ascertain the threat this fleet posed to seabirds identified net entanglements as the main source of bycatch. The fishery hauls nets over the side of the vessel, meaning nets are left in the water for long periods, attracting and then entangling birds as they come to scavenge. This type of bycatch differs in nature to bycatch in other fisheries, so we cannot use the same mitigation methods, but we are working to characterise how bycatch occurs so we can design potential solutions. Diving species like the great shearwater *Ardenna gravis* represent 95% of all birds caught, but albatrosses including the Southern royal *Diomedea epomophora* and black-browed are also affected. We started a campaign to educate the next generation of fishers, reaching 684 children.

Mid-water trawl fishery

Observations of 398 trawls this year have reiterated that most deaths occur due to collisions with the 'third wire', a cable attached to the net which sends an electronic signal to indicate when the net is full. We have used bird-scaring lines to successfully demonstrate how bycatch can be reduced in this fishery.

Next steps

The adoption of regulations has been a significant step forward, and our work will need to focus on supporting the implementation of bird-scaring lines across the fleet and training national observers to conduct long term compliance monitoring in the fishery. Meanwhile, we will complete bycatch estimates for the fresh fish and Southern mid-water trawl fleets, and continue to work to develop and test solutions.

ALBATROSS TASK FORCE: ARGENTINA

Legislation set to save over **10,000** black-browed albatross per year

398 trawls monitored

684 students educated

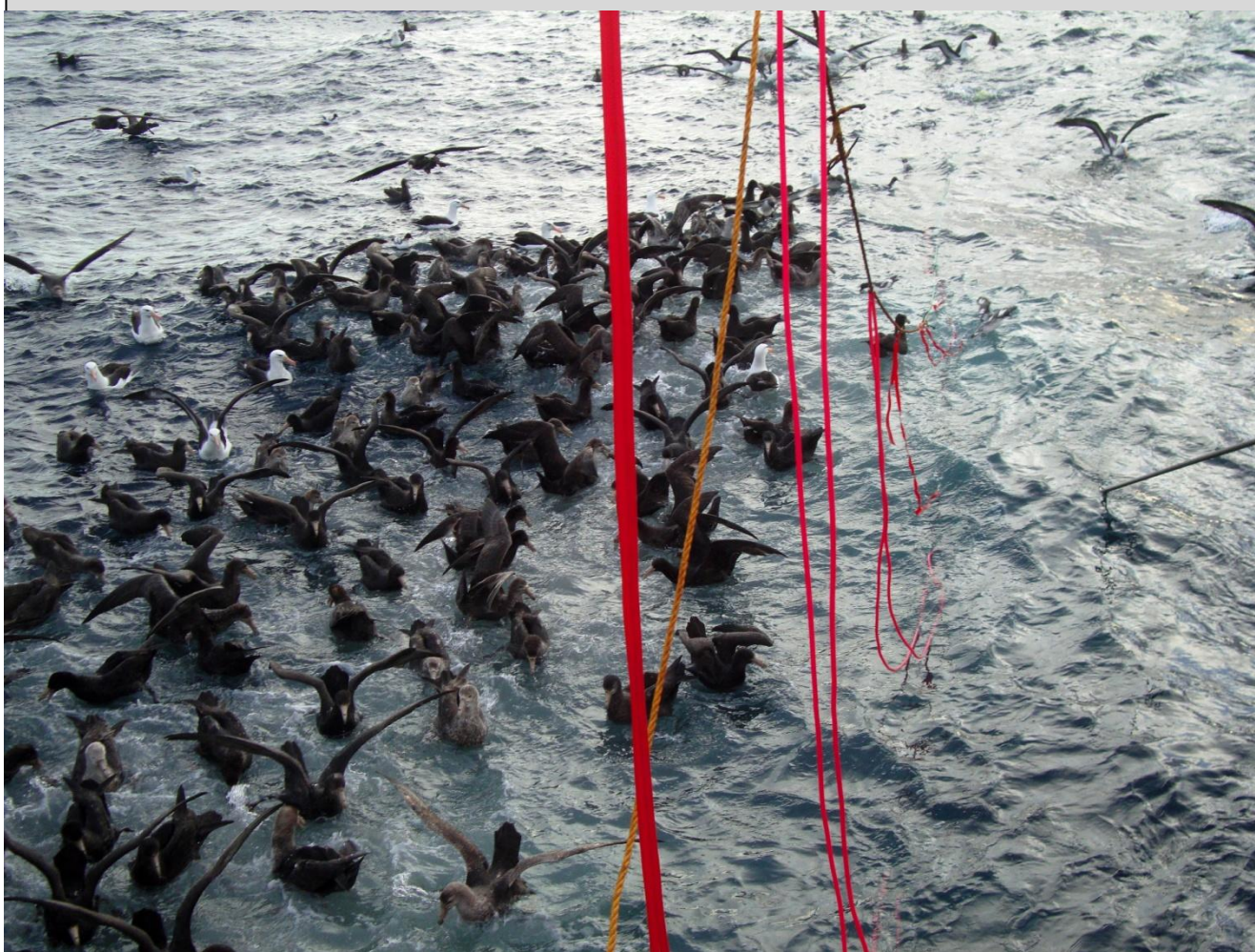


Image: Bird-scaring line effectively keeping seabirds away from dangerous trawl cables

Ruben Dellacasa, Aves Argentinas

BRAZIL

Projeto Albatroz & SAVE Brasil

Tatiana Neves, Caio Marques, Augusto Silva-Costa & Rodrigo Claudino



Target Fishery

The target fishery in Brazil is the pelagic longline fleet, comprised of 58 active vessels, based in the ports of Itajaí, Rio Grande and Santos. The fleet targets tunas, swordfish *Xiphius gladius* and sharks.

Team progress

The team completed 104 days at sea over six trips, monitoring seabird bycatch and compliance with the regulations that came into place in 2014. Vessels are required to use a combination of bird-scaring lines, night setting and line weighting. However, there is no government observer agency to monitor compliance, which makes the work of the ATF essential to improving uptake of measures.

Regulation compliance

Bird-scaring lines were used on 31% of monitored sets, night setting on 78% of monitored sets, and approved line weighting on 80%. Seabird bycatch occurred on a single trip and included one black-browed albatross, two white-chinned petrels *Procellaria aquinoctialis* and one wandering albatross *Diomedea exulans*. The vessel responsible for the bycatch was not using appropriate line weighting and did not set lines at night, highlighting the need for consistent mitigation use.

Lumo lead

The results of our trials of Lumo leads¹ were incorporated into the review of the Agreement on the Conservation of Albatrosses and Petrels (ACAP) Best Practice advice for reducing the impact of pelagic longline fisheries on seabirds.

Electronic monitoring

In an effort to improve official monitoring, we attempted a pilot study into electronic monitoring, using cameras to record compliance. After a promising start, support from industry was withdrawn in protest against legislation to protect vulnerable shark species. Finding a balance between supporting, and applying pressure on industry in Brazil remains one of our biggest challenges.

Next steps

To improve compliance with mitigation measures, we are going to try a different approach. Testing of the Hookpod, a one stop mitigation measure, will take place to determine effectiveness at reducing bycatch. The Hookpod could be a simpler measure to encourage fishers to use mitigation.

¹ Weights that slide on the branchline to reduce injury to fishers in the case of a shark bite-off event

ALBATROSS TASK FORCE: BRAZIL

104 days at sea

58 active pelagic longline vessels in the fleet

80% compliance with light weighting regulations in 2016



Image: sub-adult black-browed albatross soaring past a longline vessel

Dimas Gianuca, Projeto Albatroz

CHILE

CODEFF

Luis Cabezas & Cristián Suazo



Target Fisheries

In 2016 we focused on two fisheries in Chile; the small-scale purse seine fishery that catches sardine *Strangomera bentincki* and anchovy *Engraulis ringens* and the southern mid-water trawl fleet that targets hoki and southern blue whiting.

Team progress

Small-scale purse seine fishery

Historically, thousands of birds have been repeatedly found beached along the Chilean coast and the cause has been attributed anecdotally to the purse seine fleet, although no evidence existed on how this could be happening. The ATF has worked over the past two years to identify the cause of the problem and find a solution. Through collaboration with a net construction company, we have changed the design of the net to remove excessive floating mesh, to prevent birds being trapped underneath and drowned. This year, we conducted experiments during 93 days at sea and found modified nets reduced seabird bycatch by over 98% compared with standard fishing gear. This huge reduction in bycatch represents the first seabird bycatch mitigation solution for purse seine fisheries and is a major success for the team.

Southern mid-water trawl

Recent reports from the national observer agency highlighted potentially high bycatch rates in this fishery. The ATF stepped up to assess the fishery and through 82 days at sea, we discovered that black-browed albatross are the most affected species, along with cape petrels *Daption capense*, white-chinned petrel and Salvin's albatross *Thalassarche salvini*. Not all vessels use a third wire as in Argentina, so mortality was caused by collisions with trawl cables and net entanglements. Over the next year we will continue monitoring and testing mitigation measures in this fishery.

Observer training

In order to secure the long term sustainability of bycatch reductions in Chile, national observers require technical support and training to monitor seabird bycatch levels and compliance with mitigation measures. During the year we provided seabird identification training for 32 of the national fisheries observers.

Next steps

We plan to commence a widespread campaign for the purse seine fishery to implement the improved net design across the 450-strong fleet, which will be a hugely challenging for our small team. Monitoring and testing of mitigation measures will continue in the Southern mid-water trawl fishery over the next year to define an annual bycatch estimate for the fleet.

ALBATROSS TASK FORCE: CHILE

98% reduction in seabird bycatch in the purse seine fleet

175 days at sea

32 observers trained in seabird conservation



Image: Seabirds attracted to a purse seine vessel fishing for sardine

Patricio Ortiz, CODEFF

NAMIBIA

Namibian Nature Foundation

Clemens Naomab & Samantha Matjila



Target Fisheries

The Benguela current is one of the most important areas of marine production in the world. It carries nutrient rich waters that provide resources for large and diverse fish stocks, which form the basis for the Namibian marine fisheries sector. Hake is the main species targeted and in 2016 this was fished by 70 industrial trawl vessels and 14 demersal longline vessels.

Team progress

Following the introduction of seabird bycatch mitigation regulations in both fisheries in November 2015 we have been assessing compliance with mitigation measures, and monitoring the effect of mitigation use on the seabird bycatch rates. In May, a new member of staff, Samantha Matjila, joined the team to work on the trawl vessels.

Mitigation measure compliance

Since regulations were adopted, one of our main objectives has been to ensure that all vessels in the target fleets adopt Best Practice mitigation measures. In 2016, the ATF team made 26 visits to fishing companies to train fishers on the importance and use of bird-scaring lines. Bird-scaring lines are now installed on 100% of demersal trawlers (up from 74% last year) and 100 % of demersal long line vessels (up from 79% last year). We provided 350 5kg weights to two longline fishing companies, meaning that 13/14 demersal longliners are now using appropriate line weighting.

At sea compliance monitoring

In total, 82 days were spent at sea observing 176 trawls and over 230,000 hooks. Bird-scaring lines were deployed 100% of the time in both fleets, and bycatch was only recorded on one trawl trip during bad weather, when seven albatrosses were killed. In this case the bird-scaring lines were blown away from the cable, and high offal discards attracted birds, causing collisions. In 2017 we will continue to collect data on seabird bycatch, and by the end of the year should be able to provide a new estimated bycatch rate for both fleets, which will show us how successful the new legislation has been.

Outreach and engagement

In March we held an observer training workshop where we trained 19 observers on how bycatch mitigation measures should be used, and how to monitor compliance with the regulations. We plan to hold more workshops in 2017 to increase the number of trained observers, and aim for them to take on monitoring of mitigation compliance and seabird bycatch.

Next steps

With everything in place in Namibia, we hope that 2017 will be the year we can show that major reductions in seabird bycatch have been achieved in these two fisheries following regulations.

ALBATROSS TASK FORCE: NAMIBIA

82 days at sea

100% vessels with bird-scaring lines

19 fisheries observers trained



Image: Fishers preparing a bird-scaring line for deployment
Clemens Naomab, Namibia Nature Foundation

PERU

ProDelphinus

Jeff Mangel & Joanna Alfaro



Target Fisheries

Our efforts are focused on the surface gillnet fishery in Ancon in the Lima region, whose target catch includes sharks, rays, dolphinfish *Coryphaena hippurus*, swordfish, and various billfish. We have also developed outreach in the purse seine fishery.

Team highlights

Mitigation measures for gillnet fisheries are poorly developed, but around 400,000 seabirds worldwide die every year in this fishing gear. Seabirds are not the only animals killed by gillnets, and a wide range of other animals are also susceptible, including marine mammals, sea turtles and even seahorses. Our main objective in Peru has been to find a solution, and we have been testing net illumination, hanging lights on the nets to make them more visible to vulnerable species.

Results of net illumination trials

We completed 25 trips on two vessels, monitoring a total of 289 sets, half with lights and half without, to compare fish catch and vulnerable species bycatch. Incredibly, when the lights were used we found no bycatch of seabirds, marine mammals or sea turtles. Meanwhile, when lights weren't used, bycatch of multiple species was observed, including two waved albatrosses *Phoebastria irrorata* caught alive and released, a pink-footed shearwater *Ardenna creatopus*, a black petrel *Procellaria parkinsoni*, and seven white-chinned petrels. We also observed bycatch of 22 green turtles *Chelonia mydas*, two leatherback turtles *Dermochelys coriacea*, an olive ridley turtle *Lepidochelys olivacea*, 18 common dolphins *Delphinus delphis*, two bottlenose dolphins *Tursipos truncatus*, a Burmeister's porpoise *Phocoena spinipinnis*, and a South American fur seal *Arctocephalus australis*.

These exciting results show net lighting to be a highly effective measure in saving not only seabirds, but also other vulnerable species. This has potential implications for thousands of small scale vessels throughout the Humboldt Current and beyond.

Project outreach

The ATF team have continued improving links with TASA (the largest industrial purse seine company in Peru). As a result of the training provided by the ATF, TASA has developed the programme CUIDAMAR (Take care of the sea). This programme trains a fisherman on every TASA vessel to handle incidental captures and release animals safely. Each fisher is responsible for collecting data on seabird observations and bycatch. During 2016, we organized two workshops, and trained 70 fishermen.

Next steps

Following these successful trials our main challenge is in identifying ways to implement the uptake of these measures across a large fleet of small vessels.

ALBATROSS TASK FORCE: PERU

289 experimental sets

0 bycatch in illuminated net panels

70 fishermen trained in bycatch recording and animal handling



Image: Net lights on a surface gillnet in Peru

ProDelphinus

SOUTH AFRICA

BirdLife South Africa

Andrea Angel, Bronwyn Maree, Bokamoso Lebepe

& Reason Nyengera



Target Fisheries

We work with three fisheries in South Africa: the pelagic longline fishery for tunas and swordfish, which includes the domestic and foreign/joint-venture fleets, and the demersal longline and trawl fishery which targets Cape hake. The majority of vessels are based in ports in and around Cape Town, Saldanha and Mossel Bay.

Team progress

The ATF in South Africa was set up in 2006 to support the implementation of bycatch mitigation regulations and spearhead efforts to introduce mitigation measures across the South African fleets, demonstrating that reductions in seabird bycatch were possible. By 2013 we were able to report an astounding 99% reduction in albatross bycatch in the hake trawl fishery, and this has been an inspiration to our teams in other countries.

Compliance with mitigation

From our at sea monitoring in 2016, 100% of vessels that carried an observer were fully compliant with mitigation measures in South Africa. As a result, no bycatch was recorded during ATF monitoring trips in the pelagic longline fleet, and just one albatross was killed in the trawl fishery.

This year, the South African regulations have been updated to reflect the more stringent line weighting commensurate with new ACAP Best Practice advice. We have also been pursuing pilot testing of electronic compliance monitoring. Good progress was made earlier in the year, but we now lack support from the industry to move the project forward.

Bird mitigation plans

The key concept of Bird Mitigation Plans is to ensure sustainable reductions in seabird interactions in the demersal hake trawl fleet, taking into account that although each vessel class is different it must comply with fishing permit conditions. To date 32 out of 52 vessels are either up to date or in the process of developing a plan. Once all vessels have been assessed, follow-up port assessments will be all that is required.

Next steps

We will continue to train and support CapMarine, the national observer agency, to take on the responsibility of monitoring seabird bycatch and compliance with mitigation. This is key in ensuring that the legacy of the ATF continues and allows bycatch reductions to remain sustainable. We will also support the uptake of new best practice mitigation measures in the pelagic longline fishery, such as Lumo leads, and will adapt the bird scaring line design used by the domestic pelagic and demersal longline fleets to suit smaller vessels.

ALBATROSS TASK FORCE: SOUTH AFRICA

100% compliance with mitigation measures

1000 lumo-leads provided for a longline vessel

105 days at sea

Improved line weighting regulations in law



Image: Albatross eating offal discharge
Reason Nyengera, BirdLife South Africa

CONCLUSIONS

The Albatross Task Force is an international team of seabird bycatch mitigation measure practitioners, hosted in each country by the BirdLife International partner or local conservation organisations. Our teams were placed to tackle ten target fisheries with known high overlap with vulnerable seabirds: the demersal longline fishery in Namibia, the pelagic longline fisheries in Brazil, Chile, South Africa and Uruguay, demersal trawl fleets in Argentina, Chile, Namibia and South Africa, and the artisanal demersal longline fleet in Ecuador.

We have made great strides toward reducing seabird bycatch in our ten original target fleets, with seabird conservation regulations now adopted in eight of the ten fisheries. We are now concentrating on supporting the practical uptake and compliance with those regulations. At the same time we have been able to begin to engage with new fisheries that urgently require attention. These fisheries include gillnet and purse seine fleets, which present new challenges in terms of discovering practical solutions, and in terms of the diverse dynamics of small scale fisheries.

Adoption of regulations

Of our ten priority fisheries, seven had seabird bycatch regulations at the start of the year. For some time we had been struggling to make progress in achieving regulations in Argentina, but open dialogue throughout 2016, and stronger links with other organisations in the country, has led to an important breakthrough. With the support from the National Fisheries Secretariat, the Ministry of Environment and Sustainable Development, the National Institute for Research and Fisheries Development (INIDEP), the University of Mar del Plata (IIMyC-CONICET) and Fundación Vida Silvestre, we presented a draft resolution for the use of bird-scaring lines on Argentinean trawlers. The regulation was approved unanimously by the members of the Federal Fisheries Council in early 2017. This huge success is a result of years of work and persistence. The benefit for seabirds is worth the wait, as the main trawl fleet is responsible for the death of some 13,500 black-browed albatross per year, an impact we expect to reduce by over 85% based on our experimental results.

From regulation to implementation

Securing regulations in a fishery is a big step towards reducing the number of seabirds killed. However the work of the ATF has always recognised that bycatch reductions depend on uptake by the fishermen themselves, in parallel with compliance monitoring and enforcement. In the Namibian demersal longline and trawl fisheries, we are in the middle of supporting that process, and have been monitoring the use of seabird bycatch mitigation measures since regulations came into force in 2015. The difference is remarkable compared to bycatch rates pre-regulation, with minimal seabird bycatch recorded in both the trawl and demersal longline fleet. We will continue to collect data throughout 2017 in order to calculate a complete post regulation bycatch estimate. Our expectation is that Namibia will become one of the leaders in bycatch reductions alongside their neighbour, South Africa.

Small-scale fisheries

When the ATF was formed the initial focus was on large scale industrial fleets, as these have huge impacts on seabirds per vessel and relatively few vessels, so engagement is much simpler.

However, as the project has progressed we have begun working with small-scale purse seine and gillnet fleets in Peru, Ecuador and Chile, which can number in the thousands of boats. Each boat may only kill a few birds per year, but when scaled up for the whole fleet, these fisheries are having a considerable impact on seabirds.

In Chile and Peru we have had fantastic results from our trials of new mitigation. By modifying purse seine nets in Chile we have shown the potential for enormous reductions in shearwater bycatch. These birds dive beneath the water to catch the sardines that these boats target, and become trapped under the mesh floating at the surface. By changing the net design we have discovered that floating mesh can be minimised without affecting fishing efficiency. In Peru, the use of net lights on gillnets appears to practically eliminate the bycatch of seabirds, sea turtles and marine mammals without reducing fish catch. Our work in these fleets maintains the ATF at the forefront of developing and testing measures, not just in industrial fleets but also in small scale fisheries and the results have strong implications for the development of mitigation measures for these gear types in other regions.

Sharing knowledge

Over the last 11 years we have gained huge experience in how to tackle the issue of seabird bycatch, putting us in a position where we can share our experience to help resolve seabird bycatch problems in other fisheries around the world. Since 2014 we have been working to support the launch of BirdLife's European Seabird Task Force, currently working on demersal longline and gillnet fisheries and we continue to use the results from our work to inform Best Practice advice for distant water fleets which operate on the High Seas.

The next steps for the ATF

In 2017 – 2020, we will continue to secure seabird bycatch reductions in our original ten target fisheries. We are also pursuing albatross bycatch reductions in the mid-water trawl fleets of Chile, Argentina and Namibia, including the very first assessments of the scale of seabird bycatch in these fisheries, and trialling solutions.

The long term legacy of the ATF will be secured through building lasting capacity in each country to deliver the technical and political input to government and industry that will ensure they maintain sustainable bycatch reductions. In order to meet this challenge, the role of our ATF instructors is evolving from working mainly on vessels at a grassroots level, to undertaking a greater advocacy role. Many of our instructors have already gained considerable skills from their experiences lobbying government to adopt bycatch regulations. They will also focus on building in-country capacity for the fisheries observer agencies to take the lead in monitoring seabird bycatch and ensuring compliance with regulations.

Back cover photo- Spectacled petrel, Dimas Gianuca



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