Albatross Task Force Instructors’ Workshop
Proceedings of the First Meeting of ATF Instructors

19th – 23rd January, 2009
Coquimbo, Chile

In-country partners and supporting organisations:
The first meeting of the BirdLife Albatross Task Force (ATF) (Coquimbo, Chile, January 19-23 2009) represented the beginning of a new phase of the programme. After the first stage of establishing and consolidating ATF teams (Argentina, Brazil, Chile, Namibia, South Africa, Uruguay, and Ecuador, in its initial phase of establishment), all teams recognised the need to increase focus on conducting experimental research on mitigation measures to reduce seabird mortality in longline and trawl fisheries. The findings of this research will potentially improve the suite of mitigation measures available to longline and trawl fisheries.

**BirdLife Albatross Task Force**

**Coquimbo Declaration**

All six established ATF teams have committed to undertake experimental mitigation research projects in their target longline and trawl fisheries in 2009. The results of these projects will be combined and tabled in a document to be presented at the Fifth Meeting of the Advisory Committee of the Agreement on the Conservation of Albatross and Petrels (Argentina, 2010)

South Africa

Chile

Namibia

Argentina

Uruguay

Brazil
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Workshop acknowledgements
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1.0 INTRODUCTION

1.1 Background
Since the 1990’s, considerable at-sea work has demonstrated that the principal threat to albatrosses and petrels is the incidental mortality associated with longline and trawl fishing vessels. Interactions are typically associated with the scavenging of baited hooks during setting operations on longline vessels and collisions with warp cables plus net entanglements in trawl fisheries.

To combat this threat, the RSPB and BirdLife International formed the world’s first team of dedicated instructors to demonstrate the correct use of mitigation measures and to develop and test new measures: the Albatross Task Force. As an international team of mitigation experts, the Task Force works at the frontline of seabird conservation in seabird bycatch ‘hotspots’ throughout southern Africa and South America. One of its great strengths is the local knowledge that underpins its international focus. Recruiting and training local mitigation experts provides a unique response to the urgent need to reduce seabird bycatch on a global scale.

The ATF has developed in a stepwise manner, largely based on a strategic plan developed at an ATF Planning Workshop held in October 2005 (Hobart, Tasmania). Teams were initially established in countries with the highest conservation priority in terms of seabird bycatch and those countries which had solid BirdLife links and support structures in place. Once these initial teams were in place (South Africa and Brazil) other teams were established based primarily on conservation priority.

Through the Albatross Task Force, simple but effective measures that prevent seabird mortality are demonstrated at-sea and onshore. The ATF works with industry and government to have mitigation measures adopted by fishing fleets and to have them incorporated into daily fishing operations. The Albatross Task Force began operationally in 2006, with South Africa hosting the first instructors; after just two years the results are very encouraging. New regulations have been passed that establish stringent bycatch thresholds, mitigation measures are onboard entire fleets and in 2007/08 seabird bycatch was reduced by around 85% in two target fisheries. Brazil and Chile were the next countries to join the Task Force and similar results are already emerging. The ATF is now active in seven countries and we plan to mirror this success across the southern hemisphere and beyond.

One of the initial objectives of the ATF was to run training workshops for the instructors, thus ensuring that the level of mitigation measure expertise remained at a high standard
throughout the teams and that every instructor was up to date with technological developments from around the world. This would help improve the instructors’ ability and capacity to demonstrate best practice mitigation.

The first meeting of the ATF was held at a strategically important time and represents a pivotal moment in the development of the Albatross Task Force. After two years of establishing and consolidating teams it was recognised that the time was right to move into a new phase of the programme, focused on increasing collaborative efforts across the programme to improve seabird bycatch mitigation.

2.0 WORKSHOP REPORT
The report structure is loosely based on the Workshop Agenda (see Annex 1).

2.1 Aims of the meeting
The workshop was the first meeting of the Albatross Task Force (hereafter referred to as the ATF instructors and in-country coordinators). The aims were to:

- Report and discuss advances in each ATF team (country);
- Strengthen relationships and communication between ATF teams;
- Streamline internal ATF processes (e.g. communication, contracting, reporting);
- Identify and confirm regional mitigation research requirements;
- Develop and agree on a detailed mitigation research plan for 2009.

A list of participants, their position and contact information is attached in Appendix I. To facilitate open information exchange and discussion between Spanish, Portuguese and English speaking participants, simultaneous translation was used throughout the workshop.

2.2 Workshop presentations

2.2.1 Workshop Opening
The official workshop welcome and opening comments were given by Dr. Carlos Moreno, Coordinator of the ATF Chile team and Head of the Department of Ecology and Evolution at the Universidad Austral de Chile. It was noted that there was excellent attendance with all instructors and coordinators present for the week. Apologies were given for Mr. Marcelo Garcia and Alejandro Dalsanto (Subsecretaria de Pesca, Chile). The workshop was started with an introductory overview of BirdLife International’s Global Seabird Programme and
the development of the ATF from Dr. Ben Sullivan (BirdLife Global Seabird Programme Coordinator).

2.2.2 ATF Team Presentations
An instructor for each of the seven ATF teams gave a short presentation highlighting the main achievements over the past 12 months and indicating key objectives for the future. For each team, a brief bullet point summary is provided below. More complete summaries are provided in detail in the ATF Annual Report 2008.

Presentations of ATF teams followed a suggested format, which included the following:
- Introduction of the ATF team;
- Specifications and structure of the main fisheries;
- Specifications of the fishing gear for each fishery;
- Species of seabirds present and those that interact with the fishery;
- Estimation of seabird bycatch associated with the fisheries;
- Achievements of the ATF in each country;
- Objectives for the future.

**ATF Argentina**
- Activities started in December 2007 with a single Instructor based with Aves Argentinas working on the demersal trawl fleet;
- The Argentinean demersal trawl fishery includes three strata: freezer trawlers, ice ‘freshy’ trawlers that haul up the aft ramp, and those that haul the cod-end over the port side, leaving 80% of the net floating in the water;
- The impact of offal discard on seabird interactions is of clear importance in this fishery;
- The necessary links with government departments and industry have been made, affording ATF Instructor access to vessels for sea-trips;
- The development and preliminary testing of a towed device to maintain tori line stability in high cross winds was highlighted.

**ATF Brazil**
- The ATF began in Brazil in 2007 with activities in three ports, Itajai, Santos and Itaipava. Three Instructors are employed through Projeto Albatroz;
- Seven distinct fisheries have been identified along the southern coast of Brazil including industrial longlines for tuna and swordfish;
- The fleet is highly migratory over the seasons and many vessels move between ports, which has made the voluntary use of seabird logbooks for captains an extremely useful tool for recording seabird mortality;
- In the ports of Santos and Itajai, 43% of vessels have voluntarily adopted tori lines;
• A 56% reduction in seabird bycatch in monitored vessels has been achieved compared to data for 2007 and a standard tori line design is planned for the coming year.

**ATF Chile**

• Began in March 2007 with three instructors working in the pelagic longline fishery for swordfish;
• Introduction of fishery legislation including mandatory line weighting and tori line use;
• Experimental research at-sea has provided accurate line sink rate characteristics;
• Mitigation and seabird identification workshop with Instituto de Fomento Pesquero (IFOP) to help increase the skill base of local scientific observers;
• Future work includes a pelagic tori line design and further cooperation with the observer body, IFOP, to strengthen data collection protocols and bycatch reduction initiatives.

**ATF Namibia**

• Work started in April 2008, with two Instructors employed through the Namibian Nature Foundation;
• The target fleets are the industrial demersal trawl fishery and the demersal longline fishery although several other important fisheries are also operating in the zone including a mid-water trawl fleet;
• Current seabird bycatch estimations indicate a rate of 0.07 birds per 1,000 hooks in the pelagic longline fishery versus 0.65 birds per 1,000 hooks in the demersal longline fishery;
• In the demersal trawl fisheries, almost 100% of interactions recorded by onboard observations were during offal discard;
• The application of trawl fisheries for MSC Certification highlights the requirement of local companies to adopt seabird friendly fishing practices.

**ATF South Africa**

• Commenced activities in 2006 with three instructors working with BirdLife South Africa in the demersal trawl and pelagic longline fleets;
• Experimental research into a warp-scarer for the trawl fleet and safe lead trials and sink rate experiments for the domestic pelagic longline fleet
• Significant reduction in seabird bycatch in both the demersal trawl (0.56 to 0.08 birds / hour - 86% reduction between 2007-2008) and foreign pelagic longline fleets (0.32 to 0.052 birds / 1,000 hooks – 84% reduction between 2007-2008)
• The introduction of an annual bycatch limit of 25 birds per vessel for the foreign longline fleet in combination with improved mitigation measures was largely responsible for the dramatic reduction in bycatch in the foreign longline fleet
• Improved compliance with the use of tori lines is largely responsible for the reduction in the demersal trawl fleet
• Future work will concentrate on improving data collection across the fleets, mitigation measure refinement and increasing compliance with current regulations.

ATF Uruguay
• Activities began in Uruguay in January 2008 with Proyecto Albatros y Petreles employing two Instructors;
• The two ports of Paloma and Montevideo are the focus of swordfish and tuna pelagic longline fisheries with around 12 vessels fishing over recent years;
• 35 species of seabird have been recorded associating with these vessels, 15 of which have been incidentally captured with an estimated bycatch rate of 0.16 birds per 1,000 hooks;
• Initial experimentation with a light tori line led to issues with entanglements of the tori line with the fishing gear.

2.2.3 International perspective
The presentations of the ATF teams were followed by talks from Dr. Marco Favero, (Chair, Advisory Committee of the Agreement on the Conservation of Albatross and Petrels, ACAP) and Dr. Carlos Moreno (ATF Coordinator Chile). These talks provided background information on the Regional Fisheries Management Organisations (RFMOs) and international agreements on seabird conservation that are the focus of the Global Seabird Programme’s top-down approach to reducing seabird bycatch in fisheries. Although many of the ATF instructors do not have direct contact with this level of marine conservation advocacy, the work is directly linked to the responsibilities of ATF instructors. The talks provided an important and overarching perspective on how the ATF fits in to the global seabird conservation agenda and indicated the importance of the bottom-up approach that the ATF is employing to facilitate the efficient dissemination of mitigation measures across ATF fisheries in a coordinated manner.

In terms of the objectives and work programme of the ATF the key points highlighted by Drs Moreno and Favero were the importance of the ‘grass roots’ work of the ATF. The ATF was identified as developing into a key delivery mechanism of internationally coordinated mitigation development and research, which has been a rate limiting step in achieving widespread reduction in seabird bycatch in many fisheries, particularly in pelagic longline fisheries over the last decade. The collection of sound scientific evidence to support the
development of a suite of mitigation measures that will reduce seabird bycatch in the world’s tuna and swordfish fisheries will make a major contribution to the work of ACAP and also to RFMOs. One of the emerging benefits of the ATF is the links generated between the results from the ATF and the RFMO advocacy work of the GSP.

2.2.4 Experiences and advice from current mitigation research programmes
This session was designed to enable leading scientists in mitigation research to direct discussions and present case studies of their research programmes, highlighting the steps towards successful execution of at-sea research, and also the many pitfalls and challenges that must be addressed. Speakers also provided insights into the importance of collaborative work programmes and the critical role of sound science to drive change in fishing regulations and marine fisheries policy.

Developing solutions to seabird mortality: a case study of collaboration
Dr. Ed Melvin, Senior Scientist, Washington Sea Grants Program
In the northern hemisphere Sablefish and Pacific Cod demersal longline fisheries off Alaska, a collaborative model was developed following the identification of a seabird bycatch problem. The model focussed on the collaboration between stakeholders from industry, management, universities and NGOs to include a balanced, inclusive approach to identify potential solutions. This was developed into a research plan in the context of productive fishing operations. Through collaborator feedback supporting continued research, strong recommendations were made for fishery regulations to solve the identified problems. Results showed that with appropriate mitigation, in this case paired tori lines and line weighting, bycatch of surface foraging birds could be reduced by up to 100%. Implementation was supported through use of educational materials and the provision of a tori line of proven effectiveness.

By focussing on solutions and working collaboratively with the industry using scientifically robust methodologies, the process maintained transparency and recommendations were rapidly accepted. This lead to mitigation adoption and subsequent reductions in seabird mortality before regulations were passed.

The development of a design for tori lines in the demersal longline fishery was based on identifying the access window for seabirds through sink rate experiments and quantifying seabird attack rates along the access window during the set. The tori lines were configured to protect the area where over 90% of seabird attacks were recorded, providing a practical solution based on robust research. In light of pelagic longline fishery impacts, current work is focussed on adapting this successful design and identifying appropriate materials and
gear configurations to cover the access window on slower sinking fishing gear and faster setting line speeds, taking into consideration the entanglements of surface buoys in pelagic longline operations.

Policy directed science and dealing with entrenched human practices
Dr. Graham Robertson, Senior Scientist, Australian Antarctic Division
Marine fisheries policy is based on decisions that are often made in working groups and as such it is important to understand this process if we are to provide information that will lead to positive changes in fishery regulations. Rigorous experimental design based on specific research questions facilitates the progression of this process but there are several factors related to at-sea work that complicate this process.

The ATF is a non-governmental project and instructors require invitations to board vessels, which can lead to difficulties when taking a firm stand on the use of mitigation measures. Additionally, many stakeholders are sceptical of change and there are many concepts of what is ‘right’ and ‘wrong’. Despite strong convictions, members of industry are not always correct in their assumptions - gaining respect is crucial to showing the reality of the situation, and having conclusions accepted. It is therefore important to lead from the front foot, include the industry in the process and remain transparent during the formation of experimental research. Timely feedback is required to maintain the working relationship and deal with possibly unrealistic industry expectations.

If the intention of experimental research is to influence policy, then designed manipulations in the context of fishing operations or on specifically chartered vessels are the most effective approaches to research. Planning research to test a hypothesis, or answer a specific question should be adopted if results are expected to sway decisions in working groups. When these steps are followed, small changes in policy can have dramatic and positive impacts on seabird conservation.

2.3 At-sea training in mitigation use and investigation
Following on from the presentations of Ed Melvin and Graham Robertson, one day of the workshop was set aside for at-sea training on the methodological approaches required to conduct robust at-sea experimental research and to demonstrate the use of emerging mitigation measures (see Annex 2 for details of these at-sea trials).

2.4 Data collection and database development
Since the ATF commenced in 2006, we have aimed to develop a communal database to facilitate the collection of standard data, as feasible and within the bounds of compatibility
with the existing long-term data collection protocols of some ATF teams. A review of data collection protocols and a compilation of existing common data fields between teams was undertaken in the 12-months leading-up to the workshop. This process has lead to the development of a centralised ATF database. The database, which will first be used by the Namibian, South African and Argentinean teams, was explained in detail by Dr. Amos Barkai from OLRAC, South Africa.

2.4.1 Comparison of common data protocols across the teams

Oliver Yates, Coordinator, Albatross Task Force

In order to identify current data collection protocols and subsequently develop a unified set of data fields for the ATF, a request was circulated to current teams in early 2008 for their seabird bycatch and mitigation data collection protocols. This enabled us to identify common fields, which indicated a high degree of similarity between the ATF teams. However, it was also clear that each team would need to maintain their specific data collection protocols intact, i.e. not to modify them in the light of others, so as not to compromise their historical data comparisons across years. With this in mind, the task was to provide an ATF database that would facilitate the ease of data collection across the teams without jeopardising team-specific protocols. Additionally, various teams had extra data collection protocols that were not directly related to interactions with seabirds so the database needed to be flexible enough to allow the collection of additional data for some teams.

An analysis of the complete set of data fields collated from across the teams highlighted the need to provide additional mitigation-specific data collection protocols that would allow the comparison of the detail in both the structural profile and practical application of mitigation measures between countries. These were defined and included in the list of data collection requirements. After circulating the compiled list of data fields, a period was provided for comment before using the conclusions to construct an outline database structure that would be developed into the ATF central database.
2.4.2 ATF OL Fish Database Development

Amos Barkai, Director, OLRAC, South Africa

The Olfish Dynamic Data Logger (DDL) is a touch-screen ready data-capture front-end for the recording and reporting of all commercial fishing related data in “Real Time Mode” (RTM) or “Post-Event Mode” (PEM). It can also be used to enter “old” data from paper logsheets, skippers’ logbooks or observer notes. The DDL includes a data browser screen, a GIS-based Mapper and a variety of data entry tools which are used to enter data quickly and safely.

The DDL comes in two versions: a vessel version, to be used on a vessel during fishing operations, and a shore version, which allows data from many vessels to be stored and analysed.

While Olfish-DDL is a generic data logging and reporting software, its unique structure allows client-directed customisation and configuration. Olfish-DDL’s core design makes it extensively configurable. This provides its flexibility towards addressing the needs of clients with different data-gathering and reporting requirements.

The development of the ATF-DDL (Figure 1) was an interactive process where ATF personnel played an active role in the DDL customisation. During this process, the following developmental work took place:

1. Specifically customised dropdown lists relevant to the specific requirements of ATF onboard observers. These include: dropdown lists which cover a wide range of observations such as fishing methods, fishing gear used, lists of marine birds and other “non commercial” marine life and many predefined interactions between marine birds and fishing gear.
2. The incorporation of ‘Infograms’ (detailed figures) in the data entry forms as a way of explaining fishing gear terminology to the user.
3. A multi-notebook utility was developed to facilitate browsing through many notes and multimedia clips.
4. The ability to record data from multiple vessels (the standard DDL is vessel specific) to allow ATF observers to move from vessel to vessel using their laptop.
5. The ability to swap fishing methods from trip to trip with the same DDL installation.
6. Data entry lists where divided across a number of tabs (sections) in order to simplify the entry of the very large number of data needed by the ATF team.
7. Adding the ability to mark a number of observation points across the fishing line (or trawl path) during the setting and hauling of fishing gear.
The prototype ATF database has been made available to three ATF teams for stage one trials (South Africa, Namibia and Argentina)

![Figure 1: OLFISH ATF database example image showing the interface specially prepared for recording mitigation and fishing gear configuration data](image)

### 2.5 Stakeholder engagement

A critical aspect of Task Force work is the port-side relationships that are created with industry and government. Without good, long-term working relationships it is a gruelling process to obtain permissions to work at-sea, develop mutually beneficial processes and advocate best practice mitigation use at a company and government [regulation] level. Presentations were given by Tatiana Neves (Brazil) and Andrés Domingo (Uruguay) on the most effective approach to engaging industry and government respectively, followed by extensive discussion around the subject matter.

The main discussion points were as follows:

#### 2.5.1 Industry engagement

- In areas with no data for seabird bycatch, the first approach has been to raise awareness of the issue through the dissemination of seabird information for fishing
vessels and stakeholders – such as seabird identification guides, as are being provided in Ecuador currently.

- There is concern that in order to maintain a connection with fishing agents and fishing crews, the expectations of fishers must be met. These expectations are frequently the value-added cost on their products due to their seabird-friendly operations such as using a tori line. The concern comes from the perception that some fishers are disappointed that their efforts to help save the albatross may not have been rewarded.

- It was noted that following the introduction of regulatory measures, which provide heavy incentives to increase mitigation measure use, some industry members become less supportive of the ATF. This is related to the change of ‘voluntary mitigation use’ to ‘compulsory mitigation use’ as regulations are adopted. Although the ATF must strive for good relations with industry we must also be willing to work to have the voluntary use of mitigation measures converted into some form of regulation that requires their adoption. This is essential to obtain demonstrable and long-term bycatch reductions.

- It was indicated by non-ATF attendees that the ATF approach to conservation was well-regarded, dealing directly with the industry instead of challenging stakeholders from outside the process. It was widely recognised that in order to take the next steps the ATF must continue good communications with the industry while presenting a firm case for the introduction of regulations where they do not already exist and defending and strengthening them where they do.

### 2.5.2 Government engagement

- In each country different departments deal with distinct areas of expertise. One of the initial and critical elements of working closely and collaboratively with government is to identify the department that will support the campaign most effectively. More over, finding an enthused individual can provide clear advantages so establishing personal links with government personnel is time well spent.

- Well-timed advocacy in terms of political change, restructuring etc. is of utmost importance when dealing with conservation based issues, including the technical and political aspects of ATF undertakings.

- In order to benefit seabird populations through directed conservation efforts it should be noted that both social and academic aspects contribute to achieving governmental leverage.

- By taking small, but carefully constructed steps it is possible to obtain valuable support from government departments for conservation efforts. By taking large steps without due consideration, we may find that ground has been lost, not gained.
2.6 Bycatch of marine mammals and turtles

Fabian Rabuffetti (ATF Argentina) gave a presentation based on his work with the Forum for the Conservation of the Patagonian Sea and Areas of Influence\(^1\), (of which BirdLife is a member), that works to promote synergistic collaboration amongst organizations to achieve ecosystem integrity and effective management of the Patagonian Sea. Fabian has collated data on the incidental capture of non-target species across the fisheries within the ‘Patagonian Sea’. This summary highlighted that:

- Five species of turtle are caught, principally in longline fisheries, all five of which are threatened species. Up to 2.88 turtles per 1,000 hooks are caught in longline fisheries off Brazil and Uruguay, the highest bycatch rates are for loggerhead *Caretta caretta* and leatherback *Dermochelys coriacea* turtles;
- Seven species of marine mammal are caught, four of which are regarded as data deficient under IUCN criteria. Up to 0.65 dolphins / haul in Argentinean trawl fisheries have been registered as bycatch and there are also interactions between sea lions *Otaria flavescens* and fur seals *Arctocephalus tropicalis* in longline fisheries of Uruguay and trawl fisheries in Argentina;
- 20 species of seabird have been recorded as bycatch, 10 of which are threatened and 5 more are near threatened. The principal fisheries responsible for this are pelagic and demersal longline and trawl fisheries across the region.

Taking into consideration the lack of information available for many of these fisheries and species, it was suggested that the people present in the workshop discuss possible ways of cooperating to attempt to provide better details of all species affected by fisheries bycatch across the region.

2.7 Communications

Presentations were given on the internal and external communications for the ATF by Oliver Yates and Grahame Madge of the RSPB. A general discussion followed based on the RSPB perspective on the importance and approaches to external communications.

2.7.1 Internal communications

The Task Force has grown rapidly over the past 24-months, doubling in size and now including three languages and seven countries. Simple and effective communication is essential to the success of the project as it will facilitate the efficient exchange of experiences and knowledge.

\(^1\) [http://www.patagoniansea.org/projects.shtml](http://www.patagoniansea.org/projects.shtml)
To provide tools that facilitate the translation and dissemination of information to all instructors the following mechanisms have been developed:

- ATF Instructor’s Internet Forum [www.albatrossforum.net](http://www.albatrossforum.net)
  The forum provides a members-only virtual space on the internet so that instructors and GSP staff can discuss aspects of ATF work, leaving a record for other instructors to follow and allow on-line translation of threads where required;
- ATF-OLFISH database has been set-up to commence across-team data recording in a standardised format with specialised mitigation-specific data fields and touch of a button reporting features;
- An ATF dictionary is being developed to define common terminology for fisheries and seabird species.

### 2.7.2 External communications

There was considerable discussion about the importance of capturing the drama and excitement of life at sea involved in the front-line conservation work of the Task Force, and how to capture this in various media outlets. Several mediums exist that can be used to provide information on the work of the ATF:

- Radio and Television;
- National and regional newspapers;
- Magazines;
- Specialist publications;
- Media networks and agencies;
- Internet – including Web 2.0.

The importance of photography was stressed, indicating the preference given by magazines and newspaper articles to high quality/dramatic pictures. In addition, the speed that a story can be communicated to the RSPB/BirdLife has direct influence on the chance of that story being taken up by the press, as does exclusive coverage – old news is less attractive. News items that can be reported on include:

- Launches and anniversaries;
- Results, data and successes;
- Shock news items;
- Requests for information;
- Celebrities that support the campaign;
- Picture driven opportunities.

Significant discussion was generated by the external communications presentation and it was agreed that any further support that Grahame and the RSPB media team could provide
to the ATF Instructors would be of value. It was suggested that this can, in part, be tackled via the internet forum and RSPB media representatives becoming involved in the ATF forum during 2009.

2.8 ACAP Perspective

Agreement on the Conservation of Albatrosses and Petrels: aims, progress and development

Marco Favero, Chair ACAP Advisory Committee, Argentina

ACAP is an international agreement which seeks to achieve a favourable conservation status for albatrosses and petrels by coordinating international activity to mitigate known threats. Thirteen States are Parties to the Agreement (Argentina, Australia, Brazil, Chile, Ecuador, France, New Zealand, Norway, Peru, South Africa, Spain, United Kingdom and Uruguay) and BirdLife International has actively participated in its agenda since the day the Agreement entered into force on the 1st of February 2004. The goals of the ATF are particularly relevant to ACAP. The text of the Agreement specifies the need to implement measures to prevent, remove, minimize or mitigate the adverse effects of activities that may influence the conservation status of albatrosses.

Issues recently recognized by ACAP concerning bycatch of albatrosses and petrels in fisheries includes: (1) the lack or scarcity of reliable bycatch data and independent observer coverage in many fisheries, (2) the need to develop risk assessments for all fisheries, (3) the need to improve seabird mitigation measures in pelagic longline fisheries, among others.

A comprehensive review of seabird bycatch mitigation measures in pelagic and demersal longline and trawl fisheries was recently conducted by the ACAP Seabird Bycatch Working Group. That advice, in the form of summary tables, is available for distribution among relevant fisheries managers from ACAP Parties and Regional Fisheries Management Organizations (RFMOs). Specifically tailored information fact sheets for each RFMO will be jointly developed between ACAP and BirdLife International.

The mitigation of at-sea threats is complex because, among other things, it requires action at different scales. Appropriate technological development of gear and devices that mitigate interactions is essential. At the smaller scale, the actions of the individual fisher or fleet are very important; in this regard the importance of the work of BirdLife International’s Albatross Task Force was recognised.
2.9 Mitigation research plan

In recent years significant steps have been taken in terms of policy development to reduce seabird bycatch in the world’s longline and trawl fisheries. These include the work conducted by ACAP to identify the key threatening processes facing albatrosses and petrels both on land and at-sea and to prioritise actions to ameliorate these threats. In addition, both BirdLife and ACAP have worked with the five tuna RFMOs and have successfully advocated for the adoption of seabird bycatch mitigation measures in four of these, with expectations that the fifth measure will be adopted soon. This marks significant progress. However, the rate limiting step to eliminating seabird bycatch remains the identification of an effective suite of measures for pelagic longline fisheries. A continued failure to conduct the at-sea research required to provide clear and unequivocal best practice mitigation advice for these fisheries will seriously impede progress towards halting the decline of many albatross and petrel populations. This area is where the ATF can make maximum impact, by providing the skilled capacity, fisheries access and support structures to conduct research. This will start to remove key obstacles to progress in pelagic longline and trawl fisheries.

One of the primary objectives of the first meeting of the ACAP Seabird Bycatch Working Group (SBWG, Valdivia, Chile, June 2007) was to develop a list of research priorities for pelagic longline fisheries. These priorities were converted into specific research questions with nominal associated funding requirements and were taken to the Second meeting of the SBWG (Hermanus, South Africa, 17-18 August 2008). Members of the SBWG then identified the key research priority for their countries’ pelagic longline fisheries. The Second meeting of the SBWG also discussed and identified priority mitigation research topics for trawl fisheries.

These priorities were discussed at the ATF workshop, remembering that there is a high degree of overlap between the ATF countries and Southern Hemisphere ACAP Parties. ATF teams used the document of ACAP priorities to either confirm that these were the top priority for pelagic longline research from an ATF perspective or to modify/revise the priority. In addition, ATF teams working in trawl fisheries used the ACAP list of priority research topics to identify their number one research priority and each team then agreed a research question/project that would become their primary focus for 2009.

The resulting draft mitigation research plans were presented and discussed in plenary and teams were requested to refine and finalise the details when they returned home after the workshop. The following hypotheses and research questions were developed during the workshop.

It was agreed that delivering the commitment contained in the ATF Coquimbo Declaration (see page 3) to conduct these research projects and deliver them to the Fifth meeting of the
ACAP Advisory Committee was the most significant contribution that the ATF could make to reducing seabird bycatch in the coming years.

**South Africa**

*Research question identified – demersal trawl fishery*

Does the addition of an offsetting towed device for tori lines prevent entanglement with warp cables in the South African trawl fishery?

\( H_0 = \text{Offsetting (with towed device) does not affect trawl warp entanglement and seabird interactions.} \)

*Research question identified – pelagic longline fishery*

1) Is there a significant difference in the number/tonnage of target species caught when a using a heavier swivel (sic. Safe Lead)?

\( H_0 = \text{Using a 60g and 150g Safe Lead has no effect on catch rates of target species} \)

2) Is there a significant effect on catch size of non-target fish species (e.g. sharks) when using a heavier swivel (sic. Safe Lead)?

\( H_0 = \text{Using a 60g and 150g Safe Lead has no effect on catch size of non-target fish species.} \)

3) Is there a significant age difference in the catch of sharks when using a heavier swivel (sic. Safe Lead)?

\( H_0 = \text{Using a 60g and 150g Safe Lead has no effect on the age of sharks caught on the hooks.} \)

**Namibia**

*Research question identified – demersal longline fishery*

What effect on seabird bycatch does the use and number of tori lines have in the demersal longline fishery?

\( H_0 = \text{The number and position of tori lines on demersal longline vessels have no effect on reducing seabird bycatch.} \)

*Research question identified – demersal trawl fishery*

1) Are tori lines effective in reducing seabird bycatch in the demersal trawl fishery?

\( H_0 = \text{Current tori line designs are not effective in reducing seabird interactions with the warp cables during trawl operations.} \)

2) What effect does the timing of offal discharge have on seabird interactions with warp cables in the demersal trawl fishery?

\( H_0 = \text{The timing of offal discard has no effect on seabird collisions with trawl warp cables.} \)
**Uruguay and Brazil**

Which towed device prevents entanglements of tori lines with fishing gear in pelagic longline fisheries?

\textbf{H_0} = There is no significant difference in entanglement rates between two towed devices when used with tori lines during setting operations in pelagic longline fisheries.

**Chile**

What is the difference in seabird attack rate on baited hooks in the Chilean pelagic longline fishery when using the ‘domestic’ tori line designs and the Alaskan tori line design?

\textbf{H_0} = There is no significant difference in seabird attack rates on baited hooks between use of the domestic tori line and the Alaskan tori line design in the Chilean pelagic longline fishery.

**Argentina**

What is the affect of a modified tori line (surf board device) on the entanglement rate with warp cables?

\textbf{H_0} = Use of the improved tori line design (surf board) does not reduce the risk of entanglements with the warp cables.

**2.10 Indicators of success**

There was discussion in plenary to reflect on the indicators of success identified by the Albatross Task Force planning meeting (Hobart, 2005). There was general agreement that the indicators were suitable and each one was discussed, taking into consideration the progress that has been made across the teams. Table 1 reflects the main points that were brought up for each indicator.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-shore workshops</td>
<td>Workshops have been held by all seven ATF in-country teams with additional port visits that have proven to be essential for irregular fleets and complex geographical regions.</td>
</tr>
<tr>
<td>Instructor coverage at-sea</td>
<td>Instructor coverage at-sea across a range of fisheries and fleets has been achieved and the necessary permissions for boarding have been approved in all ATF countries.</td>
</tr>
<tr>
<td>Development and dissemination of training materials</td>
<td>Regional ATF materials have been developed and disseminated in southern Africa and South America plus country-specific educational materials have been provided on a fleet by fleet basis.</td>
</tr>
<tr>
<td>Dissemination of mitigation measures</td>
<td>In each fleet where seabird bycatch estimates have been reported, mitigation measures have been provided for the majority of vessels. Where bycatch estimates have not been identified, preparation for the introduction of mitigation is at an advanced stage.</td>
</tr>
<tr>
<td>Establishment of a centralised database</td>
<td>A central ATF database has been developed and is now being provided for three of the seven teams to trial.</td>
</tr>
<tr>
<td>Voluntary uptake of mitigation measures</td>
<td>In fleets where mitigation measures have not yet been introduced under mandatory regulations, voluntary use has been adopted by up to 43% of vessels in some instances.</td>
</tr>
<tr>
<td>Industry incentive structures in place [reflected in fisheries regulations]</td>
<td>In the countries of two of the first three ATF teams, governments have established mandatory mitigation regulations in longline fisheries and the third country is in the process of establishing mitigation regulations.</td>
</tr>
</tbody>
</table>

Additionally, it was discussed and agreed that the voluntary involvement of mitigation experts and recognised seabird conservationists around the world in the work of the Albatross Task Force demonstrates the high levels of confidence that the international seabird community have in the ATF. Although difficult to measure and capture as a specific indicator of success, this support and recognition is critical to the success of the programme.

### 3.0 DISCUSSION

#### 3.1 Structure and function

In a response to pressure on albatross and petrel populations through overwhelming levels of incidental mortality caused by fishery interactions, the Albatross Task Force was developed as the world’s first international team of mitigation instructors. The Task Force functions through in-country BirdLife partners and local seabird orientated non-governmental organisations. This structure provides a focus which ensures locally trained professionals take on the role of ATF Instructors in each locality. The project is directly managed through BirdLife International’s Global Seabird Programme, liaising with the Global Seabird Programme Steering Committee. An ATF Coordinator (Oli Yates), based in Chile, handles the day to day logistics of the teams.

The working structure of the ATF is split into two main areas: 1) at-sea monitoring of bycatch levels, investigation and implementation of mitigation measures; 2) on-shore awareness building, technical mitigation measure support and local advocacy (Figure 2). Through this combination of at-sea practical assistance and on-shore dissemination of information, the ATF is directly engaging fishers in the best practice use of mitigation measures.
Over the past two years of ATF development, on-shore activities have proven to be essential in the provisioning of educational materials, conducting training workshops and port visits for the fishing community. By doing so, the awareness of seabird conservation issues is growing, often in communities that would otherwise have little or no exposure to the issue and its global importance. Port-side presence has been highlighted as a key necessity, with frequent reinforcement of best practice ideals helping to establish awareness of the issue throughout the fleet. Often, it is not possible to congregate all fishing masters at once to attend workshops, so the port-side approach has paid dividends when working in highly dispersed and un-structured fleets. Additionally, through regular contact with fishing masters and crews, a high level of feedback is generated on the use of mitigation aboard, providing indications of areas that can be focused on to provide further training as fleets start to adopt mitigation measures.

At-sea these theories are put into practice, demonstrating and training fishing masters and crews in the correct use of mitigation measures, whilst recording their effect and efficiency in differing environmental and operational conditions. Subtle, but significant differences between vessels and fishing methods create the necessity to carefully adapt mitigation measures to suit each vessel, treating every fishery, vessel and captain as unique. Only by working onboard, side by side with fishers, can this be achieved. During at-sea trips, additional feedback is also generated, frequently including aspects that can be overlooked or miss-communicated through solely shore-based activities. Guidance at this level has proven crucial in the adoption of best practice fishery operations.
During at-sea-trips, current and emerging mitigation has been trialled by ATF instructors building an important network of qualified mitigation practitioners that are able to support and facilitate mitigation measure development. This increases the experience and skill base of the ATF and provides important in-country capacity to support international efforts and collaborations to undertake mitigation research.

A feature of the ATF that has become essential, as mitigation measures are refined and fleets start to adopt best practice methods, is the local advocacy that is required to work towards the ‘hard-wiring’ of mitigation measures into fishery regulations. From a BirdLife perspective the Global Seabird Programme leads on seabird conservation advocacy at an international and regional scale and the ATF has shown that instructors can provide excellent local support when dealing with the small scale development in this process.

### 3.2 Indication of success

The development and progress of the ATF is staggered across the teams due to the different start dates, fishery structures, level of historical seabird conservation work and regional support in place in each country. These factors may complicate measuring ATF success but the indications of effort are the same across the teams.

In the longer established in-country teams, seabird conservation fishery regulations have already been passed or are in the process of being adopted and mitigation measures have been incorporated into routine fishery operations across the majority of the target fleets. Additional fleets have been, or are in the process of being investigated for seabird bycatch, and awareness campaigns are at an advanced stage.

ATF in-country teams that were initiated more recently are at the first stage of determining fishery based mortality figures and prescribing suitable mitigation measures to be trialled. In some cases mitigation is already being adopted on a voluntary basis and seabird conservation awareness is either well established or growing rapidly. New additions to the ATF are starting with awareness campaigns and beginning at-sea monitoring and data collection to identify reliable seabird mortality levels associated with fisheries (Figure 3).
### Figure 3: Progress to date in ATF teams by country

#### Longline

<table>
<thead>
<tr>
<th>Country</th>
<th>Initial mortality estimation</th>
<th>Management prescribed</th>
<th>First trials</th>
<th>Voluntary adoption</th>
<th>Regulation allowance</th>
<th>Regularisation gained</th>
<th>Area closed trials</th>
<th>100% adoption</th>
<th>Sustained bycatch reduction</th>
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<tbody>
<tr>
<td>Brazil</td>
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#### Trawl

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<th>First trials</th>
<th>Voluntary adoption</th>
<th>Regulation allowance</th>
<th>Regularisation gained</th>
<th>Area closed trials</th>
<th>100% adoption</th>
<th>Sustained bycatch reduction</th>
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### 3.3 Workshop outcomes

The first ATF Instructors Workshop provided the opportunity to unite the seven teams that currently constitute the Task Force and together consolidate an international effort and forge aims and objectives for the coming months and years. By holding a team workshop and gathering all instructors together, the flow of ideas and interaction galvanised the unified international approach that the Task Force represents.

A key product of the workshop was the at-sea practical demonstrations where the instructors were able to work onboard three commercial longline vessels. This provided the opportunity to compare and contrast currently used mitigation devices, familiarise
themselves with emerging mitigation prototypes and possibly most importantly, increase their knowledge of the skills required to conduct experimental research at-sea.

The formation and agreement on future work plans based on the identification of tangible research priorities for each country was delivered, thereby ensuring that the ATF will be working in the most efficient and productive manner possible to swiftly tackle the remaining unanswered questions related to the incidental capture of seabirds in fisheries. More over, thanks to the generous agreement of attending scientists, an ATF Mitigation Advisory Group (Table 2) was formed to guide the direction of mitigation research within the ATF. The direction of research questions and submissions to the advisory group will be via the ATF Coordinator.

Table 2: Mitigation advisory group members

<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
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</thead>
<tbody>
<tr>
<td>Ed Melvin</td>
<td>Senior Scientist, Washington Sea Grants Program</td>
</tr>
<tr>
<td>Graham Robertson</td>
<td>Senior Scientist, Australian Antarctic Division</td>
</tr>
<tr>
<td>Marco Favero</td>
<td>Chair, Advisory Committee, ACAP</td>
</tr>
<tr>
<td>Ben Sullivan</td>
<td>Coordinator, BirdLife Global Seabird Programme, BirdLife International</td>
</tr>
<tr>
<td>Esteban Frere</td>
<td>South American Coordinator, Global Seabird Programme, BirdLife International</td>
</tr>
<tr>
<td>Amos Barkai</td>
<td>Director, Olfish</td>
</tr>
<tr>
<td>Oli Yates</td>
<td>Coordinator, BirdLife Internationals’ Albatross Task Force</td>
</tr>
<tr>
<td>Pete Kibel</td>
<td>Marine engineer, FISHTEK</td>
</tr>
</tbody>
</table>

As a mark of commitment from each of the teams to ensuring the timely delivery of the confirmed mitigation research objectives, all countries worked together to draw up the Coquimbo Declaration (page 3) – stating the joint commitment to undertake research that will be presented to the ACAP Advisory Committee in 2010.

3.4 Future Objectives

1. The successful elaboration and production of detailed mitigation research plans which were decided on during the workshop is the first step. The practical at-sea part of these plans will take place throughout 2009 and results will be presented in a joint paper to the ACAP Advisory Committee in 2010.

2. Subsequent to the first round of mitigation research, results will need to be interpreted and converted into practical conservation action that can be adopted into fishing operations on a fleet-wide scale. In doing so, new [updated] mortality figures will need to be produced to assess the relative efficiency and establish recommended mitigation.
3. Following the completion of the first round of research questions, the next priorities will be discussed and elaborated, taking into consideration any advances that were accomplished during current lines of investigation. The formation of new plans will be drawn up, this way answering pending mitigation questions in a step by step process.

4. As emerging mitigation measures are brought to the commercial trial stage of development, the ATF will increasingly be in a position to provide an international platform to support/undertake this research.

4.0 CONCLUSIONS

The first ATF Instructors’ Workshop marked the passage of the ATF from its first stages of development and consolidation to a structured and unified international team of emerging mitigation instructors. The benefit of meeting together to discuss and debate ATF activities and progress cannot be underestimated, with the successes and experiences of each team benefiting the whole.

The presence and involvement of leading mitigation experts provided experience and insight that will pay dividends as their guidance is put into practice across the ATF. By forming a mitigation advisory group, this scientific guidance will be maintained for subsequent research questions as the ATF addresses current research priorities.

The workshop closed on a positive note through the signing of the Coquimbo Declaration, showing the commitment and dedication that the ATF has mustered across seabird conservation organisations; working together to save the albatross.

Get onboard!
5.0 APPENDIX: List of Attendees

Table 1 shows the workshop attendees, listed alphabetically by representing organisation and name.

<table>
<thead>
<tr>
<th>Name</th>
<th>Representing</th>
<th>Position</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marco Favero</td>
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</tr>
<tr>
<td>Kaspar Shimooshili</td>
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</tr>
<tr>
<td>Bronwyn O’Connell</td>
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</tr>
<tr>
<td>Meidad Goren</td>
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</tr>
<tr>
<td>Andrés Domingo</td>
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</tr>
<tr>
<td>Martin Abreu</td>
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</tr>
<tr>
<td>Sebastián Jiménez</td>
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<tr>
<td>Graham Robertson</td>
<td>Australian Antarctic Division</td>
<td>Senior Scientist</td>
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</tr>
<tr>
<td>Oliver Yates</td>
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<td>Coordinator</td>
<td><a href="mailto:Oli.yates@gmail.com">Oli.yates@gmail.com</a></td>
</tr>
<tr>
<td>Ben Sullivan</td>
<td>BirdLife’s Global Seabird Programme</td>
<td>Global Coordinator</td>
<td><a href="mailto:Ben.Sullivan@rspb.org.uk">Ben.Sullivan@rspb.org.uk</a></td>
</tr>
<tr>
<td>Esteban Frere</td>
<td>BirdLife’s Global Seabird Programme</td>
<td>S. American Coordinator</td>
<td><a href="mailto:estebanfrere@yahoo.com.ar">estebanfrere@yahoo.com.ar</a></td>
</tr>
<tr>
<td>Jorge Samaniego</td>
<td>BirdLife’s Global Seabird Programme</td>
<td>Ecuador Coordinator</td>
<td><a href="mailto:jsamaniegoec@yahoo.com">jsamaniegoec@yahoo.com</a></td>
</tr>
<tr>
<td>Ross Wanless</td>
<td>BirdLife’s Global Seabird Programme</td>
<td>Southern Africa Coordinator</td>
<td><a href="mailto:gsp@birdlife.org.za">gsp@birdlife.org.za</a></td>
</tr>
<tr>
<td>Amos Barkai</td>
<td>OLFISH</td>
<td>Director</td>
<td><a href="mailto:amos@olrac.com">amos@olrac.com</a></td>
</tr>
<tr>
<td>Grahame Madge</td>
<td>RSPB</td>
<td>Press Officer</td>
<td><a href="mailto:Grahame.Madge@rspb.org.uk">Grahame.Madge@rspb.org.uk</a></td>
</tr>
<tr>
<td>Ed Melvin</td>
<td>Washington Sea Grant</td>
<td>Senior Scientist</td>
<td><a href="mailto:emelvin@u.washington.edu">emelvin@u.washington.edu</a></td>
</tr>
<tr>
<td>Troy Guy</td>
<td>Washington Sea Grant</td>
<td>Scientist</td>
<td><a href="mailto:troyguy@u.washington.edu">troyguy@u.washington.edu</a></td>
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ANNEX 1: Albatross Task Force Instructors’ Workshop Agenda

**Day 1: Monday, 19th January 2009**

**Agenda Item 1: Introductions and overviews**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Speaker(s)</th>
<th>Room</th>
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<tbody>
<tr>
<td>08:30</td>
<td>Official Opening</td>
<td>Welcome and comments by Chilean representative</td>
<td>CM</td>
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<tr>
<td>08:45</td>
<td>1 Welcome ATF</td>
<td>Welcome and description of events</td>
<td>Ben Sullivan and Oli Yates</td>
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**09:30**

**Agenda Item 2: ATF Team Presentations**

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<tbody>
<tr>
<td>09:30</td>
<td>2 Argentina</td>
<td>Up-date, introductions and explanation</td>
<td>Representative from ATF Argentina</td>
<td>EF</td>
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<tr>
<td>10:00</td>
<td>3 Brazil</td>
<td>Up-date, introductions and explanation</td>
<td>Representative from ATF Brazil</td>
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<tr>
<td>10:30</td>
<td>4 Chile</td>
<td>Up-date, introductions and explanation</td>
<td>Representative from ATF Chile</td>
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**10:30 – 11:00 Coffee**

<table>
<thead>
<tr>
<th>Time</th>
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<th>Session Title</th>
<th>Speaker(s)</th>
<th>Room</th>
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<tr>
<td>11:00</td>
<td>5 Namibia</td>
<td>Up-date, introductions and explanation</td>
<td>Representative from ATF Namibia</td>
<td>EF</td>
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<tr>
<td>Time</td>
<td>Country/Region</td>
<td>Topic</td>
<td>Speaker</td>
<td>Location</td>
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<tr>
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<td>Up-date, introductions and explanation</td>
<td>Representative from ATF</td>
<td>South Africa</td>
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<tr>
<td>12:00</td>
<td>Uruguay</td>
<td>Up-date, introductions and explanation</td>
<td>Representative from ATF</td>
<td>Uruguay</td>
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<tr>
<td>13:00 – 14:00 Lunch</td>
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</tr>
<tr>
<td>14:00</td>
<td>International Perspective</td>
<td>Overview - International seabird conservation environment: RFMOs, International Agreements and advocacy</td>
<td>Carlos Moreno</td>
<td>EF</td>
</tr>
<tr>
<td>14:30</td>
<td>ACAP</td>
<td>ACAP progress, aims and development</td>
<td>Marco Favero</td>
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<tr>
<td>15:00 – 15:10 Coffee</td>
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<tr>
<td>15:10</td>
<td>Theory - mitigation Research</td>
<td>Experiences of collaborative research with the fishing industry</td>
<td>Graham Robertson</td>
<td>BS</td>
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<tr>
<td></td>
<td></td>
<td>• Policy directed science</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>• Managing expectations (industry and government)</td>
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<tr>
<td></td>
<td></td>
<td>• Experimental design and management</td>
<td></td>
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</tr>
<tr>
<td>16:30</td>
<td></td>
<td>Steamer lines for pelagic fisheries</td>
<td>Ed Melvin</td>
<td></td>
</tr>
<tr>
<td>17:00</td>
<td>TDRs in mitigation research</td>
<td>The theory and practice</td>
<td>Graham Robertson</td>
<td></td>
</tr>
</tbody>
</table>
**17:30 End**

*Evening: Free – teams to finalise sea-trip arrangements*

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**Day 2: Tuesday, 20\(^{th}\) January 2009**

### Fishing

- **07:00** Dock-side  
  Boarding supplies and equipment

- **09:00** Coordinators meeting  
  Project Structure and Coordination
  - Albatross Task Force in the Global Seabird Programme
  - Esteban Frere & Oli Yates

- **09:30**
  - Team focus

- **10:00**
  - Trouble shooting

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**10:30 – 11:00 Coffee**

- **11:30** Pre-industry arrangements  
  Preparation for afternoon activities with industry representatives and local media

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**13:00 – 14:00 Lunch**

- **14:00** Public session  
  Press and local stakeholder engagement
  - Invited stakeholders

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**17:30 End**
### Day 3: Wednesday 21st January, 2009

**Agenda Item 5: Data Collection**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Description</th>
<th>Presenter</th>
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<tr>
<td>07:00</td>
<td>Dock-side</td>
<td>Boarding supplies and equipment</td>
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<tr>
<td>09:00</td>
<td>1 Debriefing</td>
<td>Discussion of previous days findings</td>
<td>Ben Sullivan</td>
<td>EF</td>
</tr>
<tr>
<td></td>
<td>[Rapp: OY]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09:30</td>
<td>2 Data collection</td>
<td>ATF protocols and coordinated data collection</td>
<td>Oli Yates</td>
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**10:00 – 10:30 Coffee**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Description</th>
<th>Presenter</th>
<th>Room</th>
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</thead>
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<tr>
<td>10:30</td>
<td>Discussion</td>
<td>Data</td>
<td>Open discussion</td>
<td>EF</td>
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<tr>
<td>11:30</td>
<td>3 Database development</td>
<td>Demonstration and discussion of the OLFISH ATF database</td>
<td>Amos Barkai</td>
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**13:00 – 14:00 Lunch**

**Agenda Item 6: Stakeholder Engagement**

<table>
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<th>Description</th>
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<tbody>
<tr>
<td>14:00</td>
<td>4 Industry engagement</td>
<td>What works where and how</td>
<td>Tatiana Neves</td>
<td>BS</td>
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<td>[Rapp: EF]</td>
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<tr>
<td>14:45</td>
<td>5 Government engagement</td>
<td>Licences and compliance</td>
<td>Andrés Domingo</td>
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<tr>
<td></td>
<td></td>
<td>• Methods of engagement</td>
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<tr>
<td></td>
<td></td>
<td>• Importance of timing</td>
<td></td>
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<td></td>
<td></td>
<td>• Government perspective</td>
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<td>Time</td>
<td>Item</td>
<td>Description</td>
<td>Presenter</td>
<td>Type</td>
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<tr>
<td>15:30 – 16:00</td>
<td>Coffee</td>
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<tr>
<td>16:00</td>
<td>Agenda Item 7: Non-seabird by-catch</td>
<td>Review of by-catch in Southern American Fisheries</td>
<td>Fabian Rabuffetti</td>
<td>EF</td>
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<td>16:30</td>
<td></td>
<td>Overview of non-seabird by-catch in ATF focussed fisheries</td>
<td>Rapp: OY</td>
<td></td>
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<td>17:00</td>
<td>End</td>
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<td></td>
<td>Evening: BBQ meal, Hotel Bucanero</td>
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<td>Day 4: Thursday 22nd January, 2009</td>
<td>Agenda Item 8: Communications</td>
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<tr>
<td>09:00</td>
<td>1 Internal communication</td>
<td>• Internet forum, diaries and photos</td>
<td>Oli Yates</td>
<td>EF</td>
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<tr>
<td></td>
<td></td>
<td>• Reporting structure</td>
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<td>09:45</td>
<td>2 External communication</td>
<td>PR, fundraising, brochures</td>
<td>Grahame Madge</td>
<td>Rapp: OY</td>
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<tr>
<td>10:30 – 10:30</td>
<td>Coffee</td>
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<tr>
<td>11:00</td>
<td>Agenda Item 9: Mitigation Research Plan</td>
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<tr>
<td>11:00</td>
<td>3 Mitigation Research</td>
<td>Introduction – ATF Mitigation Research Plan</td>
<td>Ben Sullivan</td>
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<tr>
<td></td>
<td></td>
<td>Pelagic longline fishery (based on ACAP SBWG)</td>
<td>Graham Robertson</td>
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<tr>
<td>Time</td>
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<td>Presenter</td>
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<td>13:00 – 14:00 Lunch</td>
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<tr>
<td>14:00</td>
<td>Mitigation Research</td>
<td>Demersal longline fishery (based on ACAP SBWG)</td>
<td>Ed Melvin</td>
<td>EF</td>
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<tr>
<td>15:00</td>
<td>Mitigation Research</td>
<td>Trawl fisheries (based on ACAP SBWG)</td>
<td>Ben Sullivan</td>
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<td>16:00 – 16:30 Coffee</td>
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<tr>
<td>16:30</td>
<td>ACAP Perspective</td>
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<td>Marco Favero</td>
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<td>17:00</td>
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*Evening: Workshop dinner, Club de Yates*

**Day 5: Friday 23rd January, 2009**

**Agenda Item 10: Proceedings and 2009 aims and goals**

<table>
<thead>
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<th>Time</th>
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<th>Content Description</th>
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<tr>
<td>09:00</td>
<td>Review</td>
<td>Wrap up of mitigation research plan</td>
<td>Ben Sullivan</td>
<td>EF</td>
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*Rapp: OY*

**Agenda Item 11: ATF Success Indicators**

<table>
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<tr>
<td>09:30</td>
<td>Indicators</td>
<td>Identification of success indicators for the ATF</td>
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<tr>
<td>10:00</td>
<td></td>
<td>Formation of a set of indicators</td>
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**10:30 – 11:00 Coffee**

**Agenda Item 12: Workshop Report**
<table>
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<th>Topics</th>
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<tr>
<td>11:00</td>
<td>Discussion</td>
<td>Topics for inclusion in the proceedings</td>
<td>Open discussion</td>
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<tr>
<td></td>
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<td>BS &amp; EF</td>
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<td></td>
<td></td>
<td>Rapp: OY</td>
</tr>
<tr>
<td>12:00</td>
<td>Editing and reporting</td>
<td>Final inclusion of proceedings:</td>
<td>Oli Yates</td>
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<tr>
<td></td>
<td></td>
<td>Collection of abstracts / summaries</td>
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</tr>
<tr>
<td>13:00</td>
<td>Close</td>
<td>Wrap up &amp; report</td>
<td>Ben Sullivan &amp; Esteban Frere</td>
</tr>
<tr>
<td>14:00</td>
<td>END</td>
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</table>
ANNEX 2: Albatross Task Force Instructors’ Workshop at-sea practical excursions

Bird-scaring lines and towed object use: F/V Elena
Ed Melvin, Senior Marine Fisheries Scientist, Washington Sea Grant, USA

The objective of this at-sea training was to deploy a range of tori line designs for pelagic longlines and to compare their relative effectiveness according to a specific data collection protocol. In addition, a towed device designed by Washington Sea Grant (WSG) was demonstrated. These exercises were designed to train Task Force members on tori line design, deployment, and data collection and to seed mitigation research planning for individual ATF teams later in the training program. ATF trainees included Caio Marques, Bronwyn O’Connell, and Martin Abreu.

Four tori lines were deployed and compared visually at a vessel speed of 8 knots. They were attached to the vessel on one of two booms at a height of ~ 10 m from the water. The four tori line designs were:

WSG’s Experimental Tori line: this tori line was 180 m long with a backbone made of a light (3mm) high tensile strength line. Twelve bright orange streamers were spaced at 5 m intervals out to 100 m. Each streamer extended to the water. A road cone minus its base was attached to the end to creat drag and aerial extent. Maximum aerial extent was 90 m. This line was attached to the starboard boom with a swivel and a bungee line to absorb shock in the line.

Brazil Tori Line: this tori line was 90 m long with a backbone made of monofilament twist. A cluster of 1m-long brightly and multi colored ribbons were spaced every 1 m throughout its length. The ribbon material was similar to gift wrapping ribbon. This line was deployed without a towed device yielding a maximum aerial extent of ~65 m.

ATF South Africa Tori Line: this was a ~100 m line with a backbone made of a heavy red braided sinking line with thin white streamers of various lengths spaced at regular intervals. This line was also deployed with a cone minus its base as a towed device. Aerial extent was ~ 60 m.

Ellena “Chilean Tori Line”: this tori line was approximately 70 m long, made from monofilament with four ~ 1 m long streamers made from orange leather. Aerial extent was approximately 40 m.

No albatrosses or petrels were encountered in 8 hours at sea; therefore, activities focused on a visual comparison of the lines and deployment issues.

In general terms Task Force members agreed that the WSG and Brazilian lines were most likely to effectively reduce seabird mortality. The streamers of the ATF South African line and the backbone and streamers of the “Chilean line” were near invisible to the human eye.
There was no opportunity to compare the effectiveness of the Brazilian line with the WSG line – essentially short streamers vs. long streamers. These observations suggested that a combination of the attributes of Brazilian line and the WSG Experimental line might yield a highly effective tori line. The “AFT South Africa” and “Chilean” were clearly inferior designs and their use should not be encouraged.

In one exercise Task Force trainees added approximately 30 to 40 strips (80 cm) of plastic packing tape to a 5 m length of 3 ply twist sisal line. When this line was added to the end of the Brazilian tori line and redeployed, the aerial extent was increased from 65 to 90 m – the entire line was in the air out to the added section of line with the packing tape. This exercise dramatically demonstrated how adding material to the in-water section of line can add drag and aerial extent while causing a disturbance in the water with the packing tape section.

Approximately 200 hooks were deployed with streamer lines in place; however, given no albatrosses or petrels attended, the vessel gear deployment was terminated.

The WSG towed device consisted of a 70 cm long 6 inch diameter PVC tube with a flat screw on top and eye bolts along opposite sides of the tube near either end. The concept was to have the “tube” function like a trawl door offsetting the tori line to port to minimize the likelihood of floats fouling on tori lines and to increase aerial extent. The tube was ballasted with scrap metal to keep it from skipping at the surface. It was deployed on the WSG Experimental tori line and extended the aerial extent to approximately 120 m and displaced the end of the tori line approximately 3 m to port.

In the course of the day, valuable concepts on tori line deployment and design were demonstrated, as was the experimental towed device. It was clear that the day’s work left an impression on the Captain and the crew. The captain was provided with two coils of plastic tubing and a bungee so that he could innovate and design a new tori line for his vessel – a fitting testimony to working with fishermen at sea.

Effect of bait landing position and propeller turbulence on the sink rate of baited hooks in pelagic longline fisheries: F/V Estefanía Carolina
Graham Robertson, Senior Scientist, Australian Antarctic Division, Tasmania

Research in the Australian tuna and billfish fishery has shown that propeller turbulence has a major effect on the sink rate of baited hooks. It therefore follows that the proximity to propeller wash that baited hooks land in the water during line setting varies the degree to which seabirds are likely to be incidentally caught. At the Coquimbo workshop we decided to extend this line of research by conducting a designed experiment on a chartered fishing vessel to examine the effect of five bait landing positions on hook sink rates. The five positions tested were typically used in pelagic longline fisheries operating in the southern
hemisphere, meaning that the results of the experiment should have widespread utility. Two of the five positions were on the upswing side of the propeller, two were on the downswing side and one position was in the centre line of the propeller. The landing positions on both upswing and downswing sides were the same: one on the edge of the ships wake and one 3-4 m beyond the ships wake in water not visibly affected by turbulence. Deployment in the centre line of the propeller is typically used in the Uruguayan pelagic longline fishery and deployment on the edge of the ships wake (on both upswing and downswing sides) is the typical deployment method in coastal fisheries operating in Chile, Australia and New Zealand. Deployment into clear water well beyond the ships wake resembles the method adopted by the Japanese high seas tuna fishery (branch lines in this fishery are up to twice as long as those used by coastal vessels, hence the capacity to deploy baited hooks well outside the area affected by propeller turbulence).

The experiment was conducted on the F/V *Estefania Carolina* 5 km west of Coquimbo in one 16-hour day at sea. ATF attendees on the vessel were Rodrigo Vega (Chile), Meidad Goren (South Africa), John Paterson (Namibia), Sebastian Jimenez (Uruguay) and Fabiano Peppes (Brazil). All branch lines were purpose built for the experiment and the weather and sea state conditions were perfect for this kind of research. Sink rates were measured by miniature time-depth recorders attached to branch lines 30 cm from the hooks. The first set and haul was a practice run to inform the crew of the procedures to be adopted and to ensure they could consistently deploy baits into target areas. We then followed up with four experimental sets and hauls, which yielded 20 sink rate replicates (of very good quality) for each of the five landing positions. This number of replicates should provide enough statistical power to test the hypothesis of no difference in sink rates between the five landing positions.

Our intention is to produce a summary of the findings by late March 2009. We also intend submitting in 2009 a short paper for publication in the scientific literature. This paper will also be available (as a report or draft manuscript) for assessment by the Seabird Bycatch Working Group meeting of ACAP in 2010.

**Emerging mitigation measures: F/V *Christina S.***

*Ben Sullivan, Coordinator, Global Seabird Programme, BirdLife International*

The objective of the at-sea training onboard *FV Christine S* was to conduct trials to test the operational suitability and effectiveness of two emerging mitigation measures that have
been developed in collaboration between the GSP and Fishtek (UK), and to work with Leo Tamini (ATF Argentina), Kaspar Shimooshili (ATF Namibia), and Leo Sales (ATF Brazil) to introduce the instructors to the planning and various processes involved with trialling mitigation measures at-sea.

Safe Leads

While there are a wide-range of operational and environmental variables that affect the sink rate of pelagic longlines it is widely recognized that possibly the single most effective proven means of reducing seabird bycatch is to rapidly sink the longline to prevent seabirds from accessing baited hooks. The Safe Lead came about in response to the safety issues surrounding the use of ledged swivels to increase the sink rate of longlines. Ledged swivels ranging from 45g up to 100g are used to increase the sink rate of the branch lines.

The problem with conventional ledged swivels (also referred to by fishermen as ‘lead bullets’) is that during a bite-off (e.g. when sharks are hauled to the surface and swim hard away from the vessel, which stretches the branchline to breaking point) causing a line breakage at or near the hook, the swivel slingshots towards the boat at dangerous speed. A 2.0mm diameter branch line will accelerate a 60g ledged swivel to speeds of 500km/h. Over the past few years there have been serious injuries and even deaths, leading to reluctance among fishers to use weights on branch lines. Many fishermen are understandably reluctant to use weighted swivels as they represent a significant safety concern.

The Safe Lead resolves the problem, acting as a fuse and releasing the weight whenever the line snaps under tension, thus protecting the fishermen from injury.

By addressing the fishermen’s safety concerns with this device, more boats could be encouraged to use line weighting which would have a significant impact on sea bird mortality.

Prototypes are currently being tested and proving to be very reliable.

Bait Pod

The ‘bait pod’ is designed to prevent seabirds from accessing baits in pelagic longline fisheries. The bait pod encapsulates the point and barb of baited hooks and is attached to the branchline. It has a pressure sensitive valve, and when it reaches a predetermined depth, the pod releases and the hook falls free of the pod and sinks a few metres to reach the desired fishing depth. Over the last 12-months Fishtek have worked to develop and test the pressure

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1 Fishtek are a UK based engineering company with several years experience working with the recreational and commercial fishing sectors. The GSP have had a collaborative relationship with them developing mitigation measures for 4 years.
release mechanism that forms the basis of the pod. Several prototypes have been developed and tested under laboratory conditions and the final prototype has a success rate of over 99.5% of opening at between 1 and 2 bar, which translates to an opening (pressure release) depth of between 10-20m. This depth is beyond the diving depth of most seabirds that are vulnerable to longline bycatch, with the exception of shearwaters. The pressure release mechanism is adaptable to open at any target depth meaning it could potentially be used in deep-set fisheries to open below the danger zone for turtles and some sharks.

Although the Safe Leads have been trialled at-sea for 12-months in New Zealand, Hawaii, Australia and South Africa, the ATF instructors onboard had not worked with them at-sea. The bait pods had only undergone 2 previous days of at-sea trials in Australia in December 2008, so, one of the primary objectives was to test how well the pressure release mechanism of the pod worked under operational conditions and how compatible they were with deck practices during setting and hauling operations.

As expected the trials did highlight some refinements and modifications that are required to improve the attachment of the pod to the branchline, and also the closing mechanism needs adjustment for large sized hooks. However, the performance of the pressure release mechanism was very encouraging. During the course of the day we set a line with 30 safe leads and 30 bait pods. All 30 pods successfully opened, and although we were not targeting fish we caught three sharks on hooks that had been released from a pod. The fishermen were very interested in the Safe Leads and also thought that with some refinement the bait pods had potential for commercial longline operations.