

## **Review workshop on Seabird Bycatch Mitigation in Korean Tuna Longline Fisheries**

for component 3.2.1 of the

### **Sustainable Management of Tuna Fisheries and Biodiversity Conservation in the ABNJ**

24 October 2014  
National Fisheries Research and Management Institute  
Busan  
Korea

Prepared by BirdLife South Africa

---

## **Workshop Report**

**Project:** FAO-GEF Project *Sustainable Management of Tuna Fisheries and Biodiversity Conservation in the ABNJ* (GCP/GLO/365/GFF)

**Reporting organisation:** BirdLife South Africa

**Report prepared by:** Ross Wanless and Yuna Kim

### **Review workshop on seabird bycatch mitigation in Korean tuna longline fisheries**

**National Fisheries Research and Management Institute, Busan, Korea, 24 October 2014**

## **BirdLife report**

### **Objectives**

- To review the seabird bycatch mitigation measures being adopted in Korean longline fisheries
- To introduce the FAO's GEF-funded Common Oceans project
- To discuss concerns around implementation of IOTC Resolution 12/06
- To consider the need to conduct at-sea trials in 2015 and to progress plans should a need be agreed upon
- To provide observer training

### **Background**

The IOTC seabird conservation measure (Resolution 12/06) became mandatory on 1 July 2014 for all longline effort below 25°S. National fleets were encouraged to test options prior to implementing 12/06, and BirdLife International and the Republic of Korea (in collaboration with Sajo Industries) conducted at-sea trials to test line weighting options in 2013. The result was presented at an IOTC workshop on seabird bycatch mitigation, held in Korea in 2013. Subsequently, Korean longline fisheries agreed to adopt line weighting in compliance with IOTC Resolution 12/06. A BirdLife International managed project supported by the David and Lucille Packard Foundation provided funds not only in support of the at-sea trials and the workshop, but also co-funded the setup costs for Korean vessels to use Lumo Leads® (a sliding lead weighting system). However the results of the at-sea trials had not been presented widely within Korea's tuna longline fishery and international obligations in relation to IOTC Resolution 12/06 remained. Korean officials decided that a technical workshop would be a key step towards assisting fleets with implementation of Res 12/06. This workshop fulfilled that objective.

## Participants

There were 32 participants that include researchers and officials from National Fisheries Research and Development Institute (NFRDI), representatives of Sajo Industries, Dongwon Industries and Dongwon Fisheries, fishing captains and crews, observers and officers from Korea Overseas Fisheries Association. Dr Ross Wanless and Ms Yuna Kim represented BirdLife and the Common Oceans project.

## Outcomes

### Debrief from Korean 2013 at-sea trial

Dr Ross Wanless commended the Government of the Republic of Korea and Sajo Industries for undertaking the 2013 collaborative research, and the subsequent uptake of line weighting across the Korean IOTC longline fleet. He noted, however, that further work is required to assess more robustly the concern that target catch rates might be negatively affected. Ross noted that funding is available through the GEF Common Oceans project to continue the collaborative work. Yuna Kim introduced the article published in BirdLife South Africa website that promoted the Korean trial and emphasised that BirdLife's approach to seabird bycatch included assistance and cooperation, and that should include working with Korean longliners to meet their international obligations. This as well as Ross' emphasis on confidentiality was important to build trust between Korea and BirdLife.

### Debrief Korean 2014 progress

Dr Zang Geun Kim from NFRDI reminded participants of IOTC Resolution 12/06 and gave an update on Korea's progress in implementing this Resolution. In 2014, Korea has conducted two at-sea trials to test Lumo Leads®. The details of the two trials are found in Table 1. Observer 1 participated in the workshop and reported that there were no crew safety issues and that the catch rate seemed not to be affected. However, the representative of Dongwon Industries delivered a message from the captain of the vessel where the observer had been placed. The captain indicated that the catch rate seemed less than usual, and suggested that this could be because the movement of bait in the water was not 'natural' due to using heavier weights. However it is noted that this is anecdotal, and information about exactly what was done, and whether the data can be accessed and analysed appropriately to determine if there is a difference or not, remains to be determined. Once the observers report and provide data (by 21 November 2014), statistical analysis will be undertaken if possible, in collaboration with BirdLife South Africa. The increase in the sample size of experimental sets is an encouraging outcome.

**Table 1** The details of the vessels conducting Lumo lead test by two Korean observers.

	Observer 1	Observer 2
Name	Gi Chul Choi	Jae Gu Chung

Vessel	KOVA 6, Dongwon Industries	Dongwon 638, Dongwon Fisheries
Starting date	16 July 2014	28 July 2014
Starting port	Mauritius	Cape Town, SA
Number of experimental sets	59	22
Fishing days	65	24
Area observed	37~39°S, 100~103°E (South West off Australia)	South of 38°S, East of 100°E (South West off Australia)
Note	This observer was involved in the trial in 2013.	Meeting with the observer at Cape Town was unsuccessful.

#### Discussion with industry representatives

##### *Tori line*

The chairman of Korea Deep-Sea Fishing Master's Association (KDSFMA), Jae-ok Lee, requested that BirdLife assist vessels to install tori lines designed according to the best practice so that Korean vessels can implement tori lines effectively. Ross responded that tori line design and use is a key component of the Common Oceans programme, and this request will be supported through workshops, in-port demonstrations with captains and crew, etc., as soon as the project is fully operational and vessels are available. The chairman added that there is also a need to assist Korean vessels operating in the Pacific Ocean. BLI responded that if the request for assistance is specified, BLI would gladly accept the request and try its best to assist them.

### *Catch rate and safety concerns*

A vessel of Sajo Industries fished using Lumo Leads in March 2014 (not presented in Table 1) and no safety issues occurred, and the vessel met the target catch rate. Another vessel with Lumo Leads is fishing currently and no safety issues have been reported so far. This positive report from Sajo vessels was significant in convincing Dongwon Industries and Dongwon Fisheries to use the line weighting option. However, both companies reiterated their concerns about possible impacts on catch rates of target species, highlighting the need for analysis of the data collected by observers in 2014. In addition, the companies expressed concern about additional fuel costs caused by additional weight of Lumo Leads (150~200 kg in total). Ross explained that adding ~200 kg of weight to the vessel was likely to be trivial when compared with the tons of tunas added to the vessel, and the weight of the vessel itself (~150 tonnes). He suggested that a cost-benefit analysis be undertaken should concerns still remain, but that vessels would be required to provide information on fuel consumption.

### Observer training

Yuna Kim provided observer training to the 12 Korean observers who attended the workshop, and NFRDI staff also attended the training session. It was emphasised that seabird bycatch is a global issue and scientific observers play important roles in seabird bycatch mitigation. Participants were given instruction in seabird identification, data reporting and how to conduct experimental, paired tests to compare catch rates and bycatch rates between weighted and unweighted branchlines.

### **Main Conclusions**

1. Korean officials and industry representatives agreed that further at-sea trials are required to assess more fully the implications of adapting Korean fishing operations to meet the requirements of the IOTC (and other RFMO) conservation measures
2. Korean officials undertook to formalise another round of at-sea trials. They will lead on discussions with industry
3. Further outreach to industry and fishing crew is highly desirable, so as to provide the Korean fleet with a good understanding of how, why, when and where seabird bycatch should be avoided, and to further support their technical competence to use appropriate mitigation measures without impacting fishing operations or efficiency negatively

### **Follow-up actions**

1. Further at-sea trials are being planned for 2015, lead by NFRDI officials
2. Once the Common Oceans programme has been fully initiated, and BirdLife International and BirdLife South Africa are implementing the seabird bycatch mitigation component of this project, BirdLife will provide training to crew and observers in Best Practice options, including Bird Scaring lines designed according to the Best Practice. BirdLife will continue the collaboration work with Korea to collect sufficient data to test statistically the impacts of weighting branchlines
3. Liaison and outreach activities will be undertaken in Korea by the consultant

## **Acknowledgements**

Funding for the workshop (participation by BirdLife staff, venue, catering, etc.) was provided by BirdLife International (Packard and Common Oceans and the NFRDI). Dr Zang Geun Kim and Sung Il Lee organised the workshop venue, participant logistics and catering. concerns still remain, but that vessels would be required to provide information on fuel consumption.

## Workshop agenda

AGENDA	
Morning	BirdLife/ NFRDI/MOF/Representatives of tuna fisheries/Captains and Crews/observers
Time	Session (Presenters)
08:30-09:00	Arrival, tea and coffee available, all presentations copied to Presentation Laptop
09:00-09:05	Welcome from Director of Fundamental Research Department (Dr Jong Keun Shin)
09:05~09:15	Convenor's remarks (Dr Zang Geun Kim)
09:15-09:25	Introductions (All)
09:25-09:35	BirdLife / GEF funding introduction/ assuring confidentiality (Dr Ross Wanless)
09:35-09:50	Feedback on implementing 12/06 including research to date (NFRDI)
09:50-10:30	Discussion on seabird conservation measures
10:30-11:00	Morning tea break
11:00-11:15	Benefits of collaboration work (Yuna Kim)
11:15-11:45	Research proposal (Dr Ross Wanless)
11:45-12:15	Discussion on future work
12:15-12:30	Post-workshop Questionnaire
12:30-14:00	Lunch
After lunch	OBSERVER Training (Attendance of representatives is optional only)
14:00-14:20	Introductions (All) - Sharing experiences onboard
14:20-14:40	Seabird ID (Yuna Kim)
14:40-15:00	Data collection (Yuna Kim)
15:00-15:30	Afternoon tea
15:30-16:00	Experimental protocols - paired studies for true comparison expt vs control, randomisation (Dr Ross Wanless)
16:00-16:30	Discussion on constraints, options and concerns