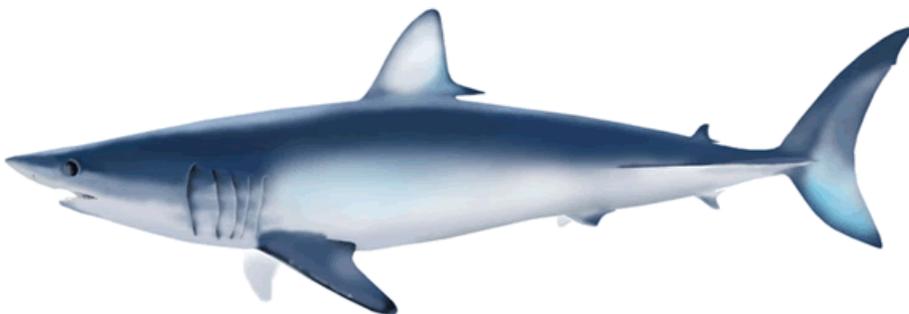


*Catch and size data of blue shark by Korean tuna longline  
fishery in the North Pacific Ocean*

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## **Abstract**

This paper introduces Korean historical catch of sharks caught by longline fisheries and size data of blue shark collected by scientific observers in the North Pacific Ocean. The catches of sharks of last 10 years caught by Korean tuna longline fishery in the NPO about 300 mt, but the catches were almost “0” during 2005-2009. The catches of blue shark from 2013 to 2015 were about 80 mt, 100 mt, and 50mt, respectively. Korean catches of blue shark were 0.2~0.3% of the reported total catches of blue shark to ISC. About 600 size data of blue shark for 6 years (2005-2008, 2013- 2014) were collected by 14 scientific observers. Average length was ranged from 152 cm to 225cm, and the biggest length was 267cm in 2005.

## **Introduction**

The north Pacific Ocean is an integral part of the fishing ground for Korean distant water fishery belonging to the WCPFC and the IATTC convention areas of south of 20°N. The number of longline vessels reduced from 220 in 1991 to 108 in 2008, and slightly increased and ranged from 111 to 126 thereafter. In 2015, it also decreased to 84, of which 1 vessel was 51-200 GRT class and 83 vessels of 201-500 GRT class. Korean tuna longline fishery efforts were normally higher in both the central and eastern Pacific Ocean. The efforts in 2014 concentrated in the WCPO, but those of 2015 were relatively higher in the EPO.

Tuna longline fishery is managed by the Distant Water Fisheries Development Act put into effect on 4 February 2008, and the Act was revised for improving the data collection on 5 December 2012 and the data reporting system on 7 July 2015.

Total catch of tuna and tuna like species caught by Korean distant water fisheries in the north Pacific was 64,324 t in 2015. Total catch of longline was 9,531 t, which is 48.1 % of the historical highest catch in 2004. Currently, over 80% of total catch of tuna and tuna-like species has occurred in the western and central Pacific Ocean area. Target species of Korean tuna longline fishery are tunas, especially bigeye and yellowfin tunas and sharks were one of incidental catches. This paper introduces Korean historical catch of sharks caught by longline fisheries and size data of blue shark collected by scientific observers in the North Pacific Ocean.

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## Catches of shark

Korean tuna catch statistics are obtained from two sources of data reporting. The Korea Overseas Fisheries Association (KOFA) collects monthly catch by gear and species from Korean tuna industries. The National Institute of Fisheries Science (NIFS) collects logsheet data from vessels filled out by captain onboard. In accordance with data reporting and submission requirement by RFMOs, necessary improvements have been continuously made in logbook coverage, accuracy and verification through cross-checking between NIFS and KOFA. To improve fisheries database management system and data cross-checking, in 2015 the NIFS and the Ministry developed an electronic logbook system capable of monitoring the state of data submission from fishing vessel in real time and to manage/cross-check the data.

The catches of sharks of last 10 years caught by Korean tuna longline fishery in the NPO about 300 mt, but the catches were almost “0” during 2005-2009 (Fig. 1). The catch of sharks by species in the NPO could be calculated from 2013, because the data by species have been collected since 2013 from logbook revised with adding bycatch form. The catches of blue shark from 2013 to 2015 were about 80 mt, 100 mt, and 50mt, respectively. Korean catches of blue shark were 0.2~0.3% of the reported total catches of blue shark to ISC.

The CPUE (mt/1,000hooks) of sharks caught by Korean tuna longline fishery in the NPO have increased from 2010, was the highest in 2014 but catch of shark was not peak (Fig. 2).

## Size data of blue shark

Size data of blue shark have been collected by Korean scientific observer program. This program has developed in 2002 and, 613 size data of blue shark for 6 years (2005-2008, 2013-2014) were collected by 14 scientific observers (Fig. 3). Annual average length was ranged from 152 cm to 225cm, and the biggest length was 267cm in 2005. Measured length samples from 2005 to 2007 were concentrated in the WCPO, but those after 2008 were moved to the EPO (Fig. 4).

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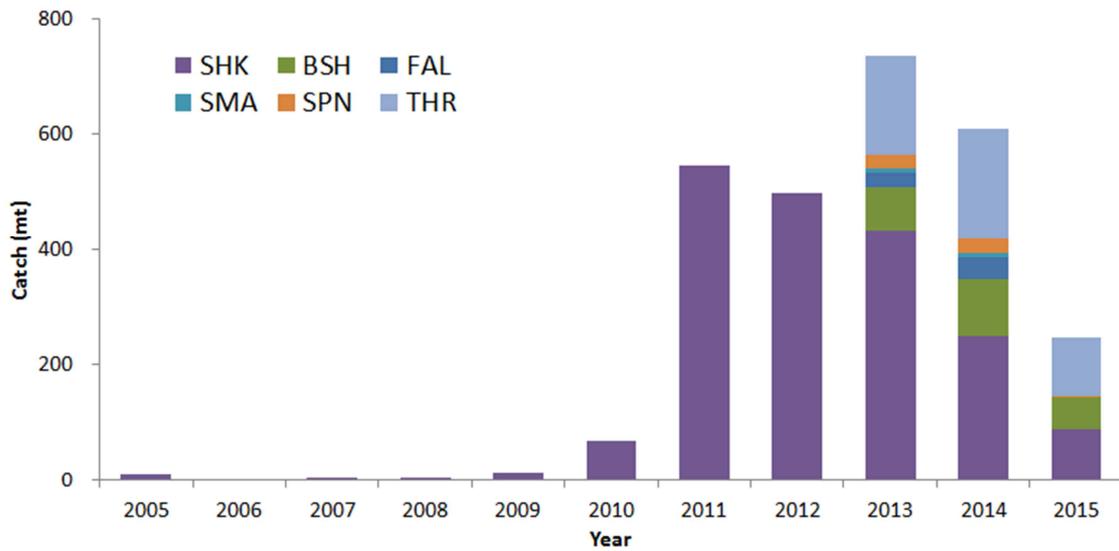


Fig. 1. Historical catch of sharks by Korean tuna longline fishery in the North Pacific Ocean from 2005 to 2015. SHK: other sharks, BSH: blue shark, FAL: silky shark, SMA: shortfin mako, SPN: hammerhead sharks, and THR: thresher sharks.

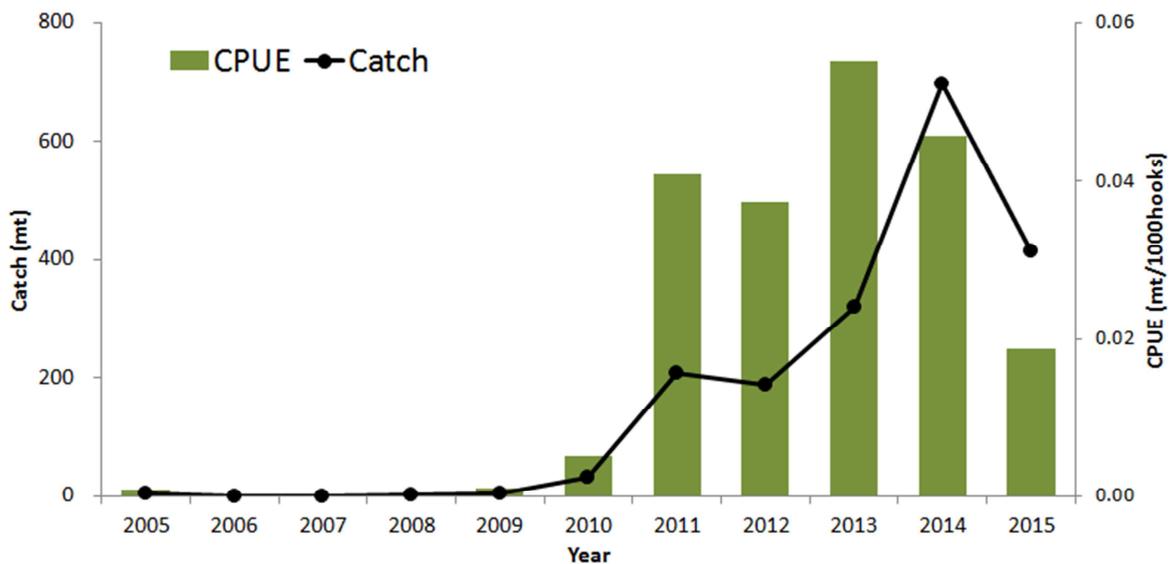


Fig. 2. Annual nominal CPUE (mt/1,000hooks) and catch of sharks by Korean longline fishery in North Pacific Ocean from 2005 to 2015.

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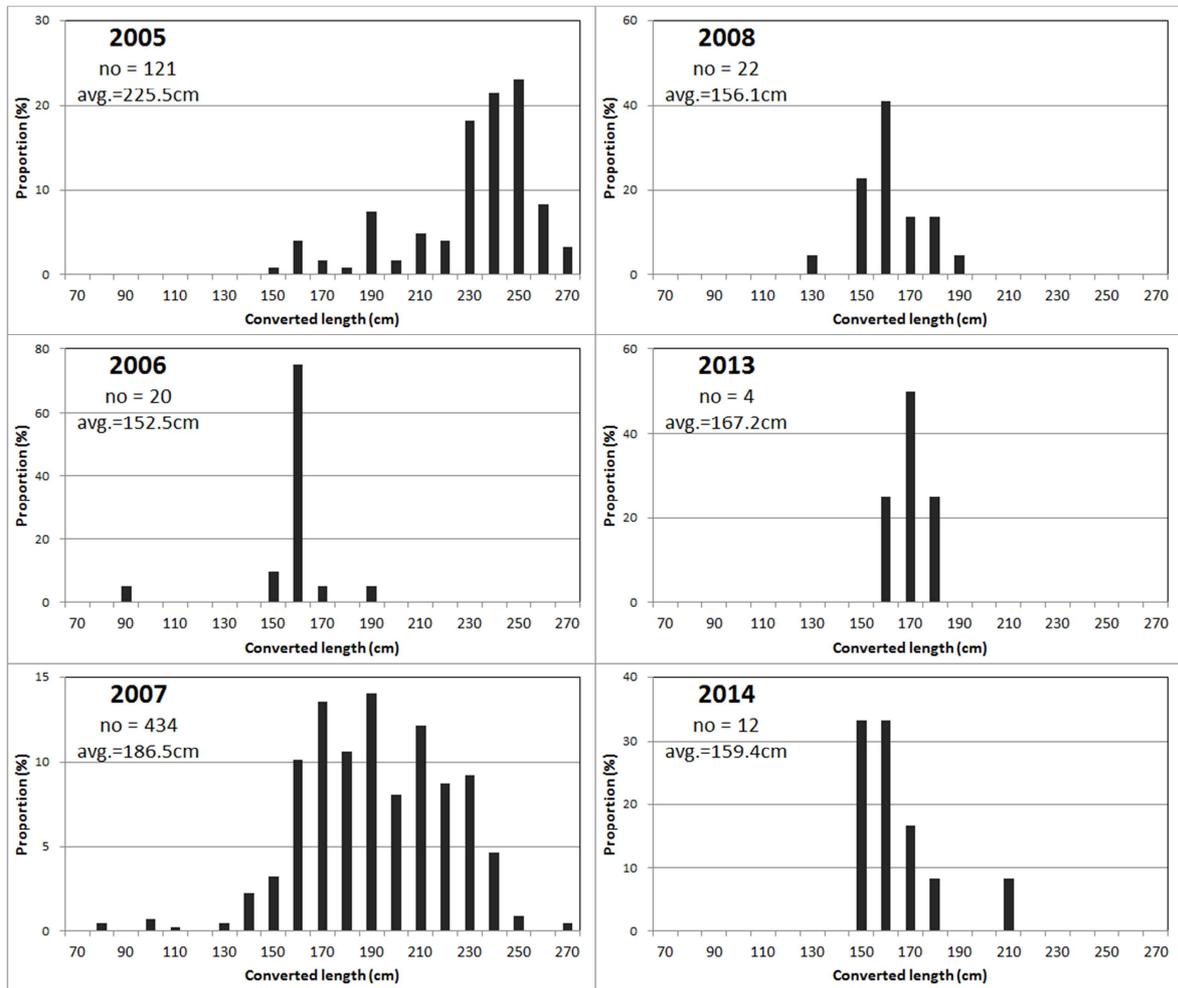


Fig. 3. Size frequency of blue shark caught by Korean longline fishery in North Pacific Ocean.

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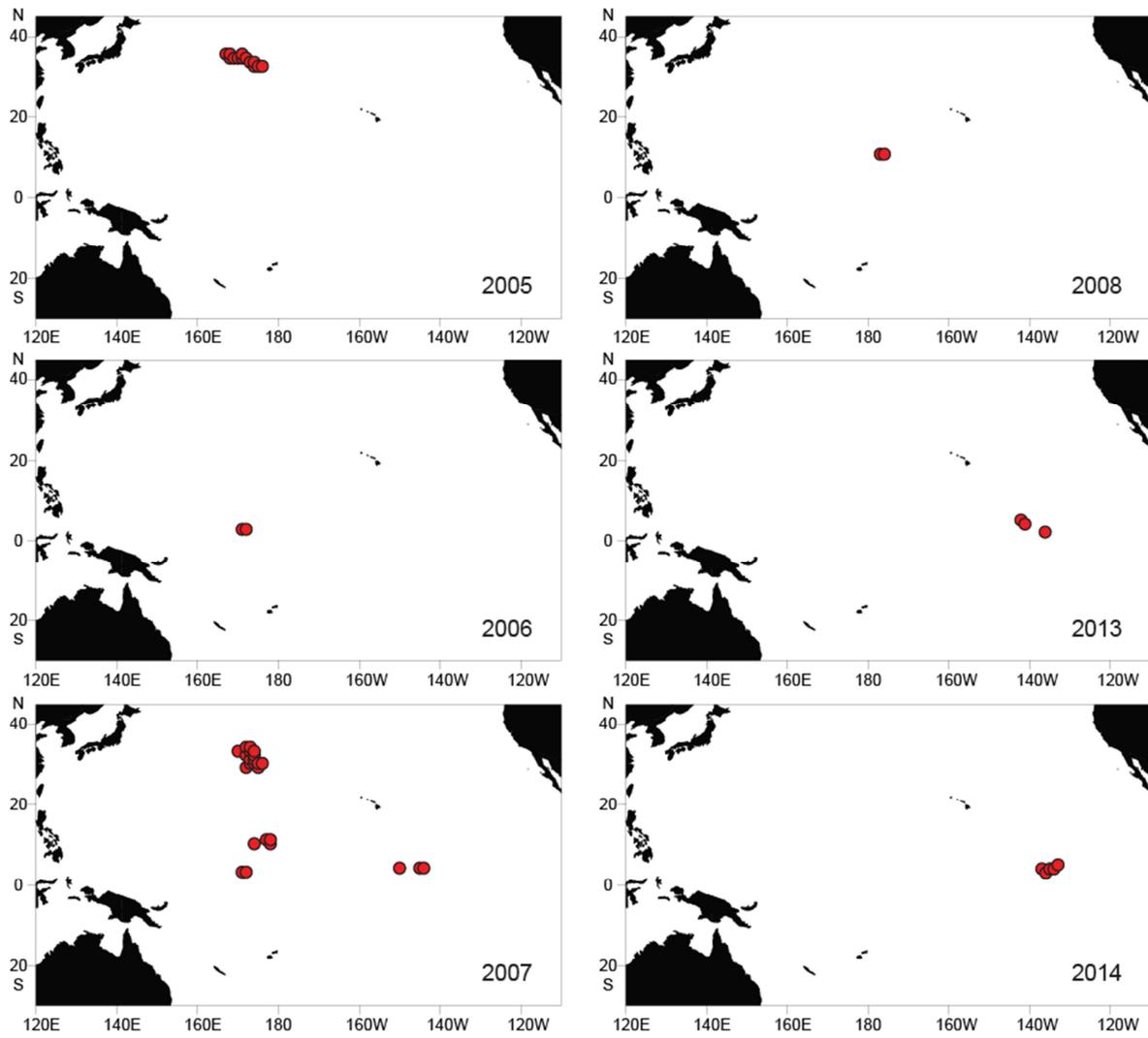


Fig. 4. Distribution of collected size samples for blue shark by Korean scientific observers.

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