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KOREA'S REPORT ON THE CATCH OF PACIFIC BLUEFIN TUNA

Domestic measures undertaken for the Pacific Bluefin tuna fisheries in Korean waters

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INTRODUCTION

As requested by the CMM 2009-07, Korea's Ministry for Food, Agriculture, Forestry and Fisheries (MIFAFF) convened three workshops with relevant policy agencies and industries to promote stakeholder's awareness on international effort to manage Pacific bluefin tuna (PBF) stocks. The catch of PBF started in 1982 as non-target species, mostly by large-scale purse seiners (>50 G/T) which are targeting mackerels, and also by small-scale purse seiners, set-nets, small-scale compound gears and other gear types of artisanal fisheries.

No scientific research on PBF had been conducted until 1999 due to the lack of interest of the PBF catch among fishermen. However, recent increase in its catch and fisherman's interest in the PBF made policy makers to provide funding support to the biological and ecological research on PBF, in addition to strengthening data collection. Domestic statistics indicated that the PBF catch had started in 1982 and increased steadily since then, with a high fluctuation annually. The recent catch reached to a maximum of over 2,100mt in 2003, which provided a potential opportunity to Korean fishermen as a new fishery. As a fisheries monitoring and management body in Korea, MIFAFF requested the National Fisheries Research and Development Institute (NFRDI) to conduct a more systematic research on various aspects in relation to the Pacific bluefin tuna stock. The request of such research aimed at preparing a tuna fishery management plan, including the establishment of domestic management measures to be imposed on its fishermen. The research will continue over the coming five years from this year, and the outcomes will be reported to the ISC in due course.

CATCHES OF PACIFIC BLUEFIN TUNA IN KOREAN WATERS

Although the bycatch of PBF started in 1982, the absolute historical catches were in average about 70mt in 1980s, 300mt in 1990s, and 1,200mt in 2000s (Fig. 1), which were less than 2 percent both in catch and value of the total production by the large purse seiners (Fig. 2). The number of large purse seine fleets[1] has been gradually decreased since 1994, 48 fleets to 27 in 2009 (Table 1).

[1] The gear types of some of these fleets were not clearly identified.

The fishing ground of PBF located in offshore of Jeju Island, and spring is the main fishing season in recent years. The fork length (FL) of PBF caught ranged from 20 - 156 cm during 2000-2008 (Fig. 3). The length composition of PBF showed several modes between 30 and 80 cm in FL since 2000, and a weak but noticeable mode at > 100 cm in FL in 2008 and 2009. The monthly composition of FL was examined with the data from 2008 and 2009. It was likely to show that the mean FL of the catch in late winter and spring was slightly larger than that of other seasons (Fig. 4).

RANCHING PACIFIC BLUEFIN TUNA IN KOREA

Two fishing companies have been conducting fattening operation for juvenile bluefin tuna since 2007. The juveniles used in the operation were 1,170 individuals (2-50 kg/ind.) taken by set net during 2007-2009, and 2,200 taken by set net and imports (2-20 kg/ind.) during 2008-2009, by each company.

RESEARCH ACTIVITIES

NFRDI commenced research on fattening operations for bluefin tuna since 2007. Experimental research of fattening eighty individuals (2kg/ind.) taken in 2008 has been conducted in the cage at sea by the Southwest Sea Fisheries Research Institute of NFRDI. The Subtropical Fisheries Research Center of NFRDI has also conducted a fattening experiment with 370 individuals (2kg/ind.) taken by trolling since 2009. The data collection of PBF will be streamlined at the landing port, mainly in Busan, Korea in 2010. In the mean time, NFRDI commenced a 5-year research project on biology and ecology of bluefin tuna in Korean waters this year. The research includes monitoring catch and effort data, fishing conditions, and sampling eggs and larvae of PBF.

Table 1. Annual catch estimates of PBF by offshore purse seiners in Korea

Year	Gear type	Catch (mt)	Permitted number of fleets
1982	(ps)[2]	31	48
1983	(ps)	13	48
1984	(ps)	4	48
1985	(ps)	1	48
1986	(ps)	344	48
1987	(ps)	89	48
1988	(ps)	32	48
1989	(ps)	71	48
1990	(ps)	132	48
1991	(ps)	265	48
1992	(ps)	288	48
1993	(ps)	40	48
1994	(ps)	50	48
1995	(ps)	821	36
1996	(ps)	102	36
1997	(ps)	1,054	36
1998	(ps)	188	36
1999	(ps)	256	36
2000	ps	1,976	32
2001	ps	968	32
2002	ps	767	32
2003	ps	2,141	29
2004	ps	636	29
2005	ps	1,085	29
2006	ps	949	29
2007	ps	1054	29
2008	ps	1536	29
2009	ps	794	27

[2] Parenthesis represents that the gear types of some of these fleets were not clearly identified.

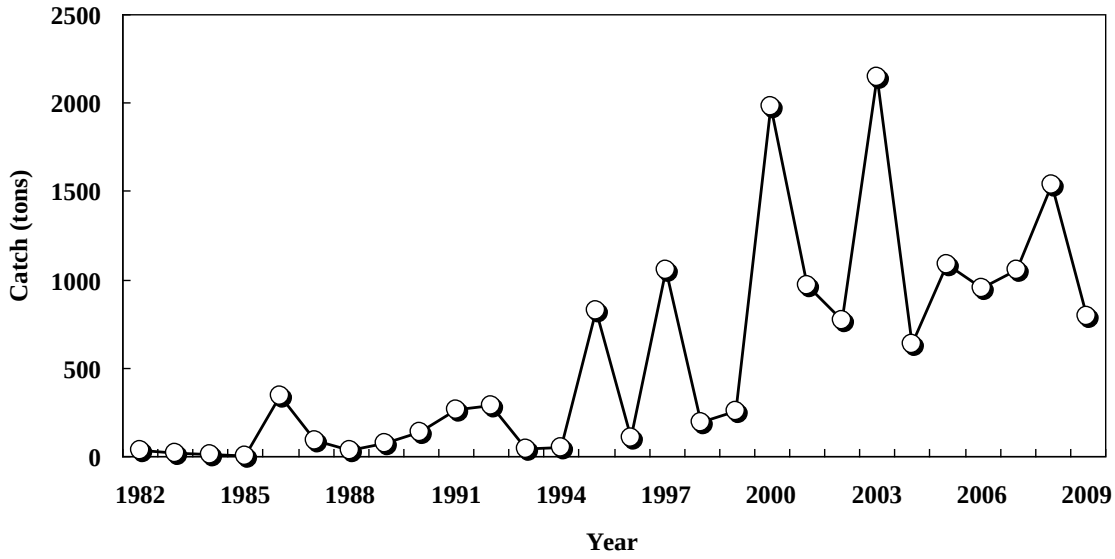

Figure 1. Time series of PBF catch by large purse seiners in Korea waters, 1982-2009

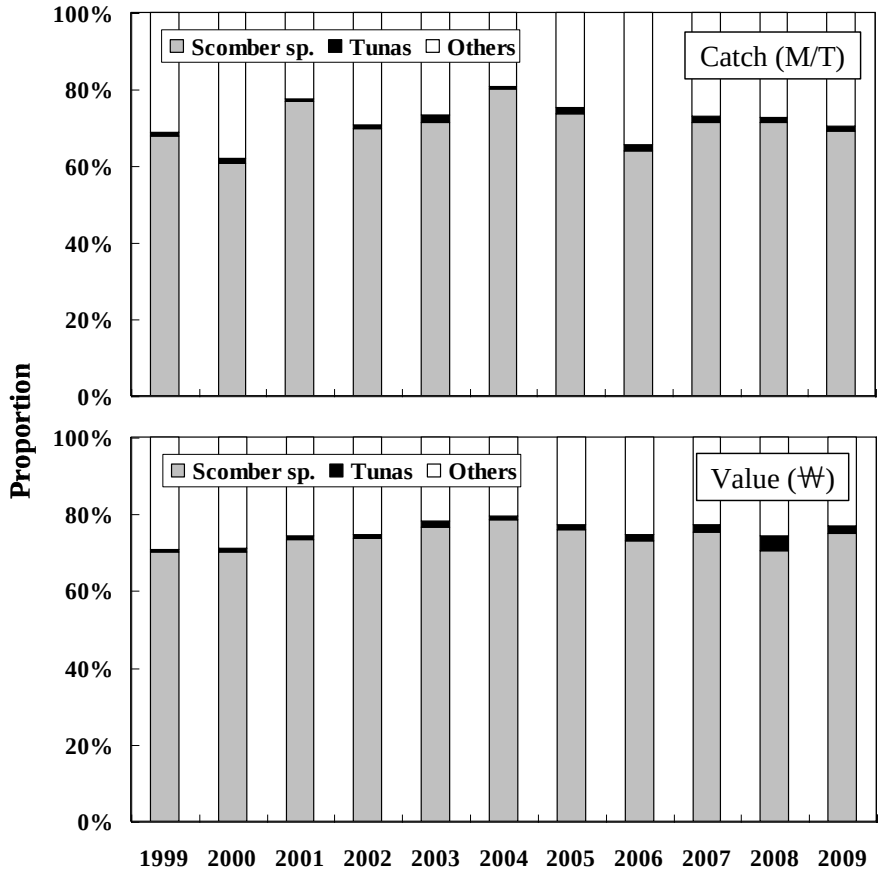

Figure 2. Proportion of catch (mt) and value (₩) of fish species caught by offshore purse seiners in Korean waters.

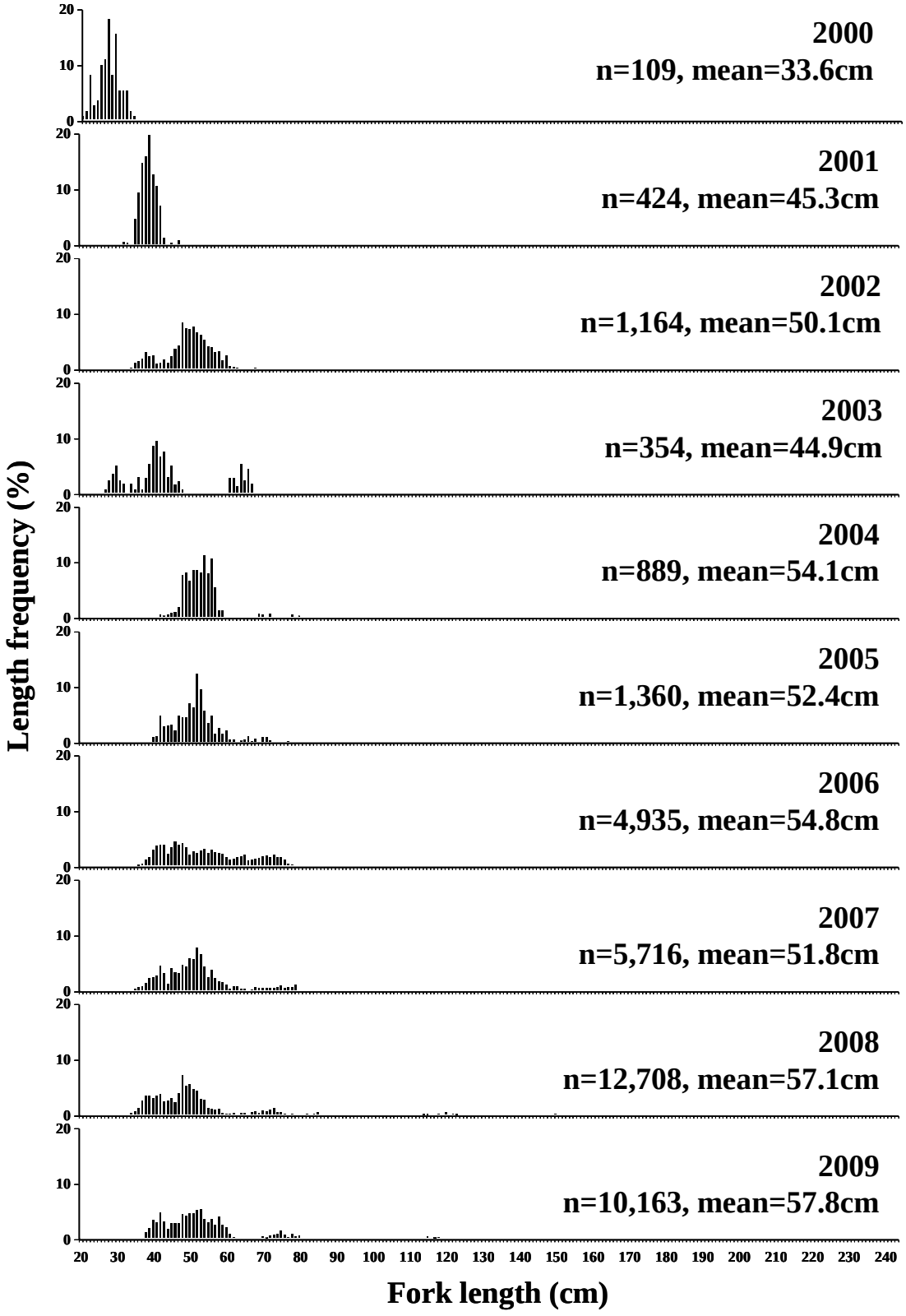

Figure 3. Length-frequency distribution of PBF landed by the Korean domestic purse seine fleet from 2000 to 2009

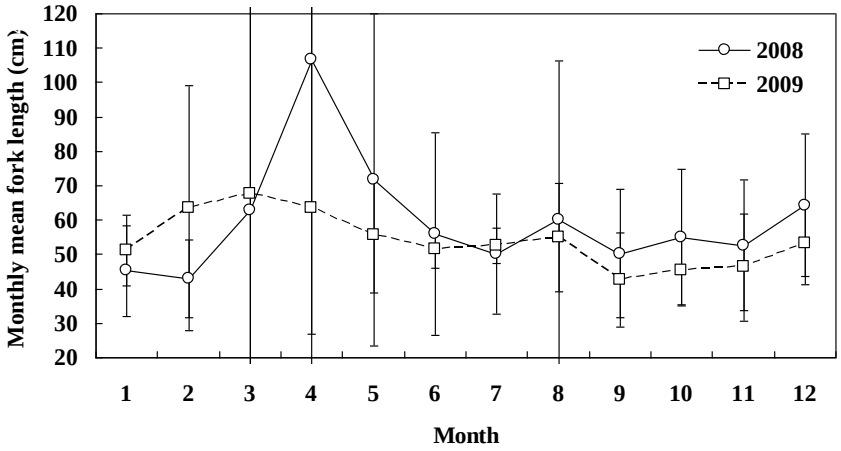

Figure 4. Monthly mean fork length (cm) of PBF caught by large purse seiners in Korean waters, 2008-2009