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INFORMATION ON FISHERIES, RESEARCH, AND STATISTICS

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CANADA

2007 Annual Report to the Western and Central Pacific Fisheries Commission

Canada

PART I. INFORMATION ON FISHERIES, RESEARCH, AND STATISTICS
(For 2006)

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PART I. INFORMATION ON FISHERIES, RESEARCH, AND STATISTICS (For 2006)

The Canadian fishery for albacore tuna (*Thunnus alalunga*) in the north and south Pacific is a troll fishery using tuna jigs. Canadian fishermen have been fishing albacore since the mid-1930s. The fishery targets albacore over an expanded range broadly classified into four fishing areas: (1) British Columbia coastal, (2) British Columbia/United States coastal, (3) highseas north Pacific Ocean, and (4) highseas south Pacific Ocean. The coastal fleets contain the majority of the vessels, but in recent years, some of the fleet, like U.S.-based troll vessels, follow albacore concentrations into offshore waters.

Canada is committed to providing detailed catch and effort statistics, logbook data, and fishing vessel information, as is required under the Highly Migratory Species Convention. This report presents summaries of catch, effort and catch per unit of effort (CPUE) data for the Canadian albacore troll fishery in the WCPFC Convention Area. Stocker (2007)

1.1 Annual Fisheries Information

All Canadian vessels must carry logbooks while fishing for highly migratory species in any waters. Daily catch and effort data are obtained from completed copies of the *Canadian Albacore Logbook* submitted by fishermen. A full description of the type of information recorded in the logbooks is presented in Stocker et al. (2007). Logbooks, sales slips and at-sea trans-shipment slips, completed at the time fish are landed and sold, must be returned to Fisheries and Oceans Canada (DFO) for entry into the albacore catch database.

1.1.1 Annual Catch in the WCPFC Convention Area

The total Pacific albacore tuna catch from 2002 to 2006 by the Canadian north and south Pacific albacore troll fishery in the WCPFC convention area ranged from 83 t in 2005 to 453 t in 2003 (Table 1, Figure 1). The preliminary catch estimate for 2006 is 135 t, an increase of 63% over the 2005 catch of 83 t. The average catch for the 5-year period was 252 t.

Table 1. Fisheries statistics for the Canadian fleet operating in the WCPFC convention area, 2002-06.

Year	Catch (t)	Effort (v-d)	Vessels (#)	CPUE (kg/v-d)
2002	403	408	11	988
2003	453	393	16	1,153
2004	186	214	6	869
2005	83	168	3	494
2006[1]	135	105	2	1,286

[1]Preliminary data

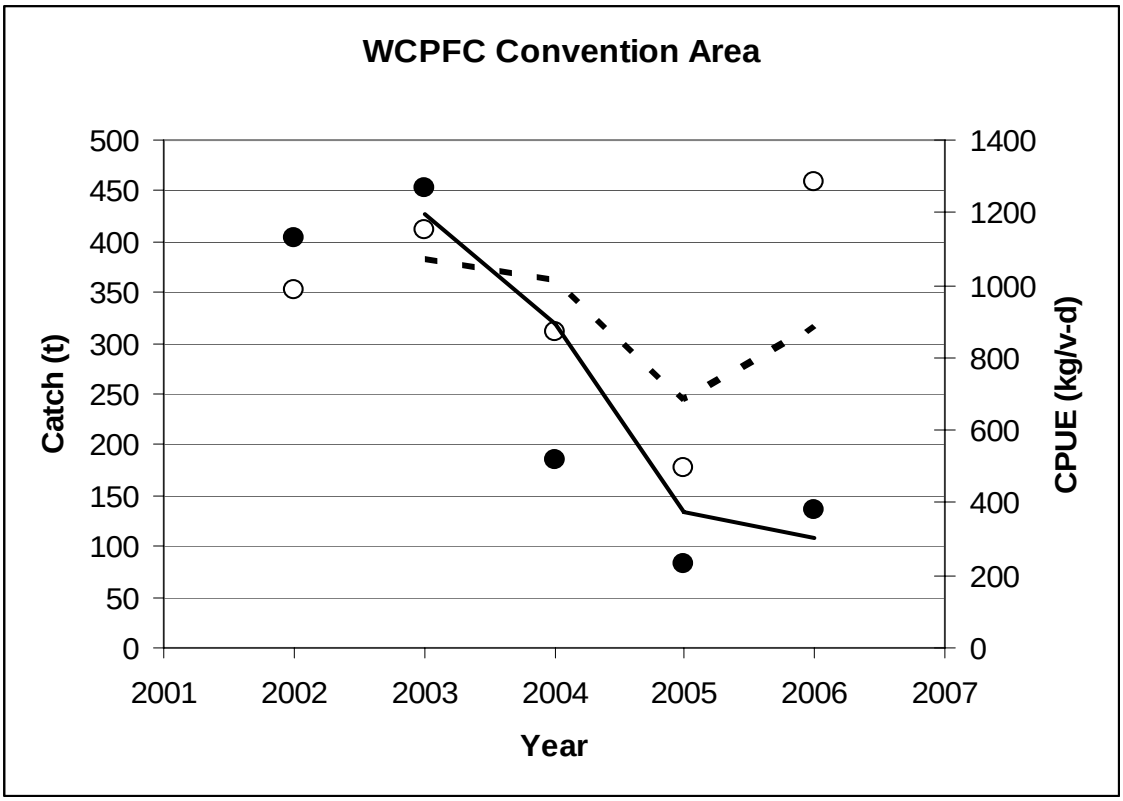

Figure 1. Canadian Pacific albacore catch (•) and CPUE (o) in the WCPFC convention area, 2002-2006.

1.1.2 Annual Effort in the WCPFC Convention Area

Fishing effort in the Canadian albacore troll fishery is measured in number of vessel fishing days (v-d). Fishing vessel days ranged from 105 v-d in 2006 to 408 in 2002 (Table 1). The average for the period from 2002 to 2006 was 258 v-d.

In 2006, only two Canadian vessels were operating in the convention area (Table 1). The number of vessels operating in the convention area ranged from two in 2006 to 16 in

2003. The average number of vessels operating in the convention area over the 5-year period ending in 2006 was 7.6 vessels.

1.1.3 Annual CPUE in the WCPFC Convention Area

The CPUE ranged from a low of 494 kg/v-d in 2005 to a high of 1,286 kg/v-d in 2006 (Table 1). The average CPUE for the period 2002-2006 was 958 kg/v-d. Catch follows a decreasing trend from 2003-2006. Similarly, CPUE follows a decreasing trend from 2003-2005 then trends up in 2006 (Figure 1).

1.2 Research and Statistics

1.2.1 Statistical data collection system

The *Canadian Albacore Tuna Catch and Effort Relational Database Management System* was developed by Fisheries and Oceans Canada to address the issues of tracking albacore catch and effort data from fishing logbooks and sales slips landings from the Canadian troll fleet operating in the Pacific Ocean. A project to document the existing relational database for the Canadian Pacific albacore catch and effort data has been completed. A technical report describing the design of the entire database (including triplog, saleslip and hail components) based on a venn diagram concept has been published (Stocker et al. 2007). The report includes the relationship diagram that documents the structure of the relationships between data components. The description includes a *conceptual data model*, which outlines the logical relationship of fields and tables, and a *physical data model*, which describes the hardware/software implementation of the conceptual model, and includes an outline of the data compilation, formulation, and summary procedures used to convert raw fishery data into an expanded catch and effort estimate at geospatial coordinates. The documentation will allow new users to efficiently familiarize themselves with the database contents and extract data for reporting under various domestic and international obligations.

1.2.2 Stock assessment studies

Canada participated and chaired the ISC Albacore Working Group (ISC-ALBWG) stock assessment workshop held a the National Research Institute of Far Seas Fisheries (NRIFS) in Shimizu, Japan from November 28-December 5, 2006. Participants from Japan, United States, and Canada conducted a full assessment of the north Pacific albacore stock with data up to 2005. Results of the workshop, including scientific advice, are contained in Annex 5 of the "Report of the Seventh Meeting of the International Committee for Tuna and Tuna-like Species in the North Pacific Ocean".

References

Stocker, M. 2007 MS. The 2006 Canadian north Pacific albacore troll fishery Document submitted by DFO to the Seventh Meeting of the Scientific Committee on Tuna and Tuna-like Species in the North Pacific Ocean (ISC), 19-31 July 2007, Busan, South Korea. ISC/07/PLENARY/04: 5 p.

Stocker, M., Stiff, H., Shaw, W., and Argue, A.W. 2007. The Canadian albacore tuna catch and effort relational database. Can. Tech. Rep. Fish. Aquat. Sci. 2701: vi+76 p. http://www.dfo-mpo.gc.ca/Library/327827.pdf