SCIENTIFIC COMMITTEE
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DISCUSSION PAPER FOR THE INCLUSION OF NORTHERN STRIPED MARLIN INTO THE NORTHERN COMMITTEE SEPCIES LIST

WCPFC-SC3/GN WP-3

Paper prepared by the Secretariat

Background

1. Paragraph 5, Annex I of the Commission's Rules of Procedure states:

> *5. "Northern stocks" are understood to be northern Pacific bluefin, northern albacore and the northern stock of swordfish. The Commission, based on the advice of the Scientific Committee, shall periodically review and determine whether this list should be revised.*

2. At the second regular session of the Scientific Committee at Manila, Philippines, 7-18 August 2006, the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) reported that no increase in fishing mortality was recommended for the northern striped marlin stock as an interim measure, until the results are available from the final stock assessment in 2007 (paragraph 25, SC2 Executive Summary). The second regular session of the Northern Committee (NC2) at Tokyo, Japan, 11-13 September 2006 recommended that the Secretariat, in consultation with the Chair of the Commission and the Chair of the Scientific Committee develop a proposal for the inclusion of striped marlin in the species to be covered by the work of the Northern Committee (paragraph 20, NC2 Report).

3. At the third regular session of the Commission (WCPFC3) at Apia, Samoa, 11-15 December 2006, (paragraph 63 of the Summary Report), the Commission requested that the Scientific Committee provide a recommendation on the addition of northern striped marlin to the species list of northern stocks:

> *63. The Commission agreed that further studies needed to be conducted by the SC before any decision was made on the inclusion of striped marlin as a "northern stock" in accordance with the rules of procedure for the NC. The SC was requested to provide a recommendation on this matter to the Commission for its consideration at WCPFC4.*

4. The purpose of this paper is to provide the Scientific Committee with the current information available for its further consideration of this matter.

Justification on the addition of northern striped marlin into the species list of Northern Committee (information provided by the SPC-OFP)

1) Geographical separation on the distribution of striped marlin

Figure 1 is a map of the history of striped marlin catches in the Pacific by longline (1952-2004). There is a clear separation of the North and South Pacific catches in the WCPFC-CA, although there is more continuity across the equator in the EPO. Striped marlin appear to have a preference for cooler waters and are normally caught at shallow depths. This combination of preferences would explain the catch distribution, with cooler water being much closer to the surface in the equatorial EPO compared to the WCPO. It is considered that this would constitute a reasonable and pragmatic basis for assessing and managing striped marlin separately in the North and South Pacific in the WCPFC-CA. The situation with striped marlin is quite similar to swordfish in this respect.

2) Additional biological information

There is some additional biological data that would support the North-South separation. This includes substantial conventional tag-recapture data, which in contrast to black and blue marlin tag-recapture data, shows no evidence of trans-equatorial movement in the WCPFC-CA. Satellite/archival tagging studies on more than 60 striped marlin released off Australia and New Zealand also show no movements outside the southwest Pacific. Similar studies off Hawaii in the North Pacific show no trans-equatorial movement. In addition, genetic studies have indicated some degree of genetic differentiation between marlin from the northern and southern hemispheres[1].

3) Further information will be available at http://affashop.gov.au/product.asp?prodid=12917

[1] Graves, J. E. and J. R. McDowell. 1994. Genetic analysis of striped marlin *Tetrapturus audax* population structure in the Pacific Ocean. Can. J. Fish. Aquat. Sci. 51: 1762–1768.

John E. Graves, J. E. and Jan R. McDowell. 2006. Genetic Analysis of White Marlin (*Tetrapturus albidus*) Stock Structure. Bull. Mar. Sci. 79(3): 469–482, 2006

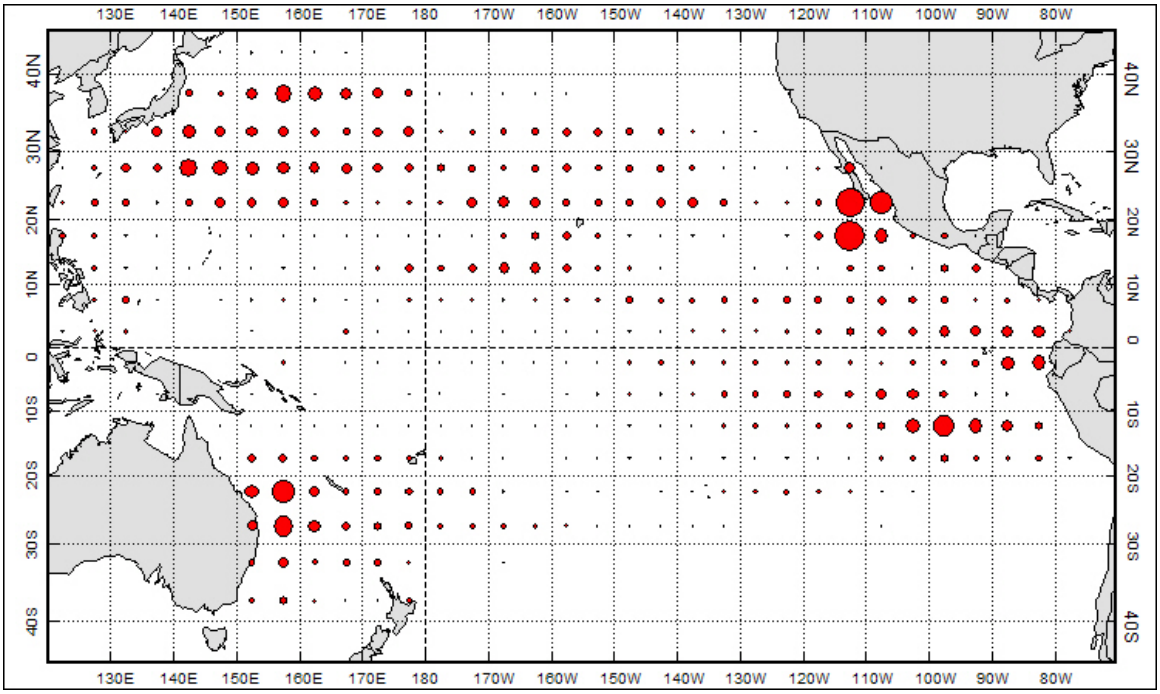

Figure 1. Catch distribution of striped marlin in the Pacific by longline (1952-2004)