

Provisional plan on tuna tagging experiments in the eastern Indian Ocean by Japan

June, 2003

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Abstract

This document describes the outline of the feasibility tuna tagging experiments to be conducted by the Japanese research vessel for about one month in February- March, 2003 and also explains the future budget plan.

Submitted to the fifth Working Party on the Tagging (WPT) (June 12-13, 2003), Victoria, Seychelles

1. Introduction

The IOTC tagging project was initiated in 2001. To now, small-scale pilot and feasibility tagging experiments have been conducted in the western Indian Ocean. The full-scale tagging experiments in the western Indian Ocean are expected to be started this year after enough budgets from the European Union are confirmed. For the eastern part of the Indian Ocean, Japan has been asked to initiate the tagging experiment. Upon this request, the Japanese Government recently approved the budget for the feasibility tagging experiments by the conventional dart tags in FY^(*)2003. Furthermore, the Japanese government considers additional budgets to be used for the tagging experiments in the eastern Indian Ocean. In this document, the provisional plan of the feasibility tagging experiments in FY 2003 and the future budget plan are briefly outlined.

2. Feasibility tagging in FY2003

(1) Period and survey area

The feasibility tuna tagging experiment is planned to be carried out in the eastern Indian Ocean for about one month during February-March, 2004 (in the end of FY2003). Two two-weeks trips are planned to be made based in the Benoa port (Bali Island, Indonesia) where the live bait fishes can be supplied, which details are explained in Section (3). The tagging areas in the eastern Indian Ocean will be determined after the tagging period is confirmed in order to identify the adequate waters.

(2) Vessel & fishing methods

Daini (No. 2) Taikei maru (196 GRT or 312.93 international tonnage) is planned to be chartered, whose home port is Ishinomaki-City, Sanriku region, northern part of Japan. This boat is the stick-held dip net commercial fishing vessel to catch Pacific saury off the Sanriku coast. This vessel has been also chartered for experimental tuna longline fishing surveys in the past. For the tuna tagging experiments, pole & line and troll line fishing methods plan to be applied to catch, tag and release tunas. The conventional dart tags will be used. For the pole and line, both live and dead baits will be used. In addition, the water tank to hold the live bait plans to be equipped to *Daini Taikei maru* and the experienced pole & line fishers will be hired for this work. Scientists from the National Research Institute of Far Seas Fisheries will lead this feasibility tagging experiment.

(*) FY: Fiscal year. FY in Japan is from April to March (following year)

(3) Live baits

Availability of live bait is the key issue to achieve the successful tagging experiments using the pole & line and the troll line fishing methods. Milkfish (*Chanos chanos*) is considered to be the most effective live bait because it is known that milkfish can live even in the extreme environmental conditions, i.e., waters under euryhalin (0 – 158 ‰), high temperature (20 to 33 °C) and low dissolved oxygen concentration (1mg/L as the minimum level). According to the live bait company in Japan, live milkfish (around 5 cm for the tuna tagging experiments) can be supplied at Makurasaki-city, Kyushu, southern part of Japan, Benoa (Bali) or Makassar (Celebes) in Indonesia. The cost of the live milkfish for four weeks (2x two weeks) cruises in FY2003 is estimated to be around \$10,000 (150,000 fishes) if one live fish cost were around Japanese 8 yen (or US 6-7 cents).

(4) Number of fish to be tagged

The total number of fish to be tagged and released is expected to be about 2,000 in the FY 2003 cruises. Expected species compositions (or number of fish to be tagged) are 60-70% (1,200-1,400 fish) for skipjack, 30-40% (600-800 fish) for yellowfin and less than 10% (200 fish) for bigeye. During the feasibility tagging experiments in FY2003, effective methods to increase number of bigeye to be tagged plan to be explored and developed.

3. Budgets (FY2003-FY2006)

To now, Japan's financial contribution to the IOTC tagging project was \$86,000 per year for two years from FY2002-FY2003. Japan plans to increase this amount for FY2004-FY2006 to be used primarily for the tagging experiments in the eastern Indian Ocean by Japan. The budget for FY2004 has been proposed to the Ministry of Finance and the budgets for FY2005-FY2006 will be proposed annual basis. For the feasibility tagging in the eastern Indian Ocean in FY2003, the extra budget has been approved by the Japanese Government as mentioned before.