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COMPARISON OF MANAGEMENT REGULATIONS FOR BLUEFIN TUNA IN THE EASTERN AND WESTERN PACIFIC OCEAN

This report summarizes the management advice and recommendations for bluefin tuna in the Pacific Ocean, with a focus on management advice for the eastern Pacific Ocean (EPO). Except for some minor catches by other countries, the fleets of Mexico and the United States take all the catch of bluefin tuna from the EPO. The average catches of bluefin tuna by these two fleets, by all gears, for the periods considered by Maunder et al. (2010)¹ for the EPO (1994-2007) and by the Western and Central Pacific Fisheries Commission's (WCPFC) Conservation and Management Measure 2010-04 (2002-2004), and total catches in the western and central Pacific Ocean (WCPO), are as follows:

	Mexico	USA	EPO	WCPO
1994-2007	3,063	1,144	4,207	18,993
2002-2004	4,619	403	5,023	16,633

Maunder *et al.* (2010), which focuses on management advice for fisheries in the EPO, developed a management "indicator" for bluefin tuna that is based on calculating the impact of fisheries on the stock of fish by integrating multiple years of fishing mortality, while taking the age structure of the fishing mortality into consideration. The indicator provides only relative information about the impact of the fishery, and is not sensitive to the value of natural mortality.

The fisheries in the WCPO have had a greater impact than the EPO fisheries, and their rate of increase in recent years is higher. In the EPO, the impact of the fisheries was substantially lower during 1994-2007, with an average catch of 4,221 metric tons, than it was during 1970-1993, when the stocks were depleted to a much lower relative size. However, the impact has been increasing recently. Maunder *et al.* (2010) recommended that catch levels should be set based on those years when the impact was low until the uncertainty in the assessment is reduced.

WCPFC Conservation and Management Measure 2010-04 limits total fishing effort and catches of juveniles (age 0-3) during 2011-2012 by vessels fishing for Pacific bluefin tuna north of 20°N to below the 2002-2004 levels, except for artisanal fisheries.

The WCPFC measure is restricted to juveniles (age 0-3), which is not the case in Maunder *et al.* (2010). Also, the period recommended by the WCPFC for averaging historical catch for developing catch limits (2002-2004) is much shorter than that of Maunder *et al.* (2010) (1994-2007). Furthermore, during 2002-2004 the average catch in the EPO was higher than during 1994-2007, whereas in the WCPO it was lower. Therefore, using the same years for determining catch limits in the EPO and WCPO may not be appropriate.

¹ Maunder, M.N., Aires-da-Silva, A., Deriso, R. 2010. A fishery-impact-based management reference level for Pacific bluefin tuna in the eastern Pacific Ocean. Inter-Amer. Trop. Tuna Comm., Stock Assessment Report, 11: 262-270.