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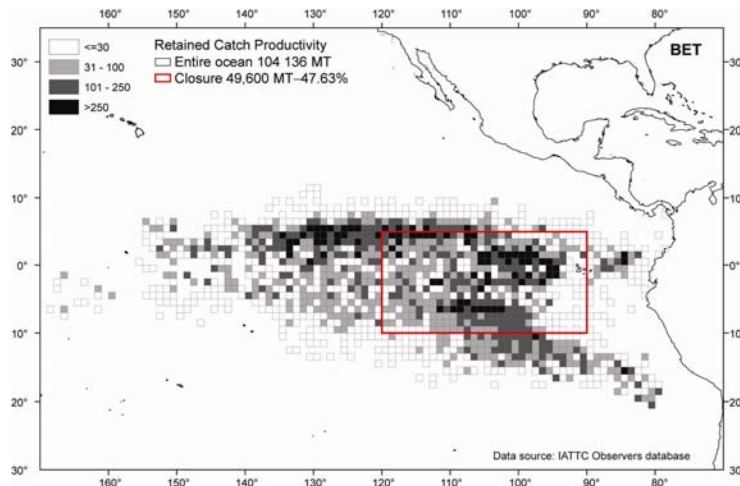
CLOSED AREA OPTION TO REDUCE BIGEYE CATCHES

In Document [IATTC-74-05](#), *Staff recommendations on Conservation*, option (d) for bigeye tuna is to close part of the eastern Pacific Ocean (EPO) to sets on floating objects. A soon-to-be-published analysis examined the effect of a closure for sets on floating objects and unassociated sets in the area between 5°N-10°S and 90°W-120°W during 1995-2002. The area was chosen because it was both practical and it had a high ratio of bigeye to skipjack catches. If this area had been closed during the second and third quarters of each year, the expected reduction in catches would have been 13.4% and 11.5%, respectively, for bigeye and 3.8% and 4.9%, respectively, for skipjack. Those estimates assume that fishing effort on floating objects and unassociated schools is displaced to other areas. Closing the area during both the second and third quarters would be expected to reduce the catches of bigeye by about 25%. If the areas were closed at a different time to the proposed general purse-seine closure of 69 days, the total expected reduction would be 33%. To achieve the 38% reduction recommended by the staff, the closure could be extended into the first quarter; this would lead to an additional reduction of about 9%.

The effect of this option is less sure than those of the other three options presented for bigeye in Document IATTC-74-05. The analysis depends on the assumption that vessels would make the same number of sets on floating objects and unassociated schools in other areas within the EPO, whereas some vessels may choose not to fish in the EPO during such a closure. Other uncertain consequences include the possibility of increased catches of yellowfin tuna or bycatch species, including sharks.

The proposed recommendation addressed only sets on floating objects, while the analysis included sets on both floating objects and unassociated schools. Sets on associated schools and on schools associated with dolphins take almost no bigeye (1399 t and 3 t in 2005, respectively). Allowing sets on unassociated schools and schools associated with dolphins during a closure would have little effect on bigeye catches, but would probably cause problems in identifying compliance.

The figure below shows catches of bigeye tuna during 2001-2005 and the proposed closure area. If vessels chose to fish in other areas within the EPO during the two-quarter closure, they would probably catch some bigeye tuna, so the overall reduction of bigeye catch resulting from such a closure would be expected to be about 25%.



The figures below summarize the predicted changes in bigeye and skipjack catch over the eight years for a closure in each quarter. The dark bar indicates the median change, the rectangle indicates the interquartile range (25th-75th percentiles), and the outer lines indicate the extremes.

