



# MARINE MAMMAL COMMISSION

16 January 2015

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Dear Ms. Vincent:

The Marine Mammal Commission (the Commission), in consultation with its Committee of Scientific Advisors on Marine Mammals, has reviewed the Marine Stewardship Council (MSC)'s Default Assessment Tree in regards to Certification Requirements for the full assessment of the Northeastern Tropical Pacific purse seine tuna fishery. As you suggested, we are submitting our comments and recommendations via a letter rather than using the MSC form.

The Commission is an independent federal agency of the U.S. government created under the Marine Mammal Protection Act (MMPA) charged with overseeing implementation of the MMPA mandates in domestic and international fora. Foremost among these goals is ensuring the protection and conservation of marine mammals as significant functioning elements of healthy marine ecosystems, a goal generally met through science-based avoidance or mitigation and monitoring of anthropogenic impacts on marine mammal populations and their ecosystems. Given the direct link between the health and status of dolphin populations in the Eastern Tropical Pacific (ETP) and the tuna fishery under consideration for MSC certification, the Commission appreciates the opportunity to provide input into this process.

The Commission's comments focus primarily on three of the areas identified in Annex CB of the MSC documentation, notably:

- 1) impacts of chase and encirclement of dolphins in the ETP tuna fishery using sets on dolphins (CB 3.8, 3.9 and 3.10; Bycatch Species Outcome, Management Strategy, and Information; pp. C173-C177);
- 2) ETP species impacts of the tuna-dolphin fishery (CB 3.11-13; ETP Species Outcome, Management Strategy, and Information; pp. C178-C183);
- 3) ETP ecosystem impacts of the tuna-dolphin fishery (CB 3.17-3.19; Ecosystem Outcome, Management, and Information; pp. C188-C192).

In addition, the Commission offers general comments on monitoring, control, and surveillance as well as subsidy issues associated with the ETP tuna fishery.

## **Background and Rationale**

The tuna fishery under consideration for MSC certification is conducted by chasing and encircling dolphins in purse seine nets. In the early years of this fishery, which was developed in the 1950s by U.S. tuna purse seiners, hundreds of thousands of dolphins were killed annually. In response to concerns by the general public and various national governments over the impacts on dolphin stocks and the increase in dolphin mortality associated with fishing by non-U.S. fleets that was offsetting reductions made by the United States under the MMPA, international negotiations culminated in the Agreement on the International Dolphin Conservation Program (AIDCP). The AIDCP, which sets vessel-specific dolphin mortality limits, requires 100 percent observer coverage, and establishes an International Review Panel for addressing enforcement issues, has resulted in a dramatic decline in reported mortality to less than a thousand dolphins per year—one of the most successful multilateral programs addressing marine mammal bycatch in an international fishery.

However, directly observed dolphin mortality alone does not provide a complete picture of the effects of the fishery on dolphins. Studies have shown that even when dolphins are not killed in the nets, chasing and encircling dolphins has negative effects that are not observed or reported. Chasing and encircling dolphins can lead to separation of mothers and calves, resulting in unobserved mortality of separated or orphaned calves, and reduced reproduction, as indicated by lower rates of pregnancy, lower proportions of calves within the populations, and reduced lengths of time that calves associate with their mothers before becoming independent. Population-level effects of chase and encirclement are perhaps not surprising given how frequently the fishery interacts with dolphins—on average, each dolphin from the stock most frequently set on is chased more than 10 times per year. In addition, smaller purse-seine vessels, which do not carry observers, sometimes chase and set on dolphins, and these sets and associated dolphin mortality are not reported.

Fishery-independent surveys conducted in 2003 and 2006 suggest that the two dolphin stocks most depleted by previous bycatch, northeastern offshore spotted and eastern spinner dolphins, have begun to recover. If these populations are in fact growing, any negative effects of chase and encirclement appear to be, under recent conditions in the fishery, small enough that dolphin population growth and eventual recovery can occur. Population growth is less certain, however, for northeastern offshore spotted dolphins than for eastern spinner dolphins, and a further concern is that a related stock, the western-southern offshore spotted dolphin stock, appears to have declined. No research cruises have been conducted in the ETP since 2006 to assess the status of dolphin stocks. Extensive efforts to use dolphin sighting data collected by observers on fishing vessels as an index of dolphin abundance have proved problematic. Therefore, assessing the current status of dolphin stocks is difficult and it remains uncertain whether or not the tuna fishery is having adverse, population-level impacts on dolphin stocks in the ETP. Given the history of enormous dolphin bycatch and the cryptic, yet potentially significant effects of chase and encirclement, which cannot be detected by observers on fishing vessels, periodic fishery-independent surveys are needed to monitor and assess the status of the dolphin populations on which this fishery depends.

With respect to ecosystem effects, the Commission notes that studies claiming that setting on dolphins has smaller ecosystem impacts than setting on floating objects (e.g., Fish Aggregating Devices or FADs) or unassociated schools of tuna do not fully measure ecosystem effects. First, such studies ignore the targeted catch of the fishery and consider discards only, which constitute less

than 5 percent of the total biomass removed by the fishery from the ecosystem. Second, such studies are based on comparing the *number* of animals discarded by different kinds of purse-seine fishing, and ignore all ecological aspects (such as size, trophic level, and productivity) of the animals discarded. To assess the ecosystem effects of a fishery properly, studies should consider size, trophic level, and productivity of the organisms being removed as well as ecological characteristics of the total biomass that is removed by the fishery.

## **Burden of Proof**

A crucial question for the Commission is where the burden of proof lies in the MSC certification process. As described in MSC's process requirements and guidance document,<sup>1</sup> to meet the certification standard a fishery must satisfy three core principles, including an environmental impact requirement that—

Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends.

Presumably, it is the responsibility of the applicant to demonstrate that this standard has been met. Given the (1) uncertainty of whether or not ETP dolphin stocks have recovered or are showing signs of a robust recovery and (2) evidence that repeated chase and encirclement of dolphins causes cryptic mortality, stress, and reduced productivity, but uncertainty as to how significant the population-level impacts of these factors might be, the Commission questions whether the required findings can be made without additional research.

## **Recommendations**

As noted above, the MSC fisheries principles require that the “fishing operations must be managed to maintain the structure, productivity, function and diversity of the ecosystem.” In order to meet this principle with a high degree of certainty, the Marine Mammal Commission recommends that the MSC consider certification only under the following conditions:

- 1) a new fishery-independent survey has been completed and an associated stock assessment has demonstrated that all affected dolphin stocks in the ETP are growing with a probability greater than 0.9 or, if not growing, the stocks are already at and being maintained at their optimum sustainable population levels<sup>2</sup> (e.g., above their maximum net productivity levels);
- 2) reliable information from observers on fishing vessels continues to show that dolphin mortality due to chase and encirclement remains at the low levels specified in the AIDCP;
- 3) fishery-independent dolphin surveys are conducted on a reasonable schedule (e.g., every 3-5 years) to allow updated dolphin stock assessments and to ensure that unobserved effects due to chase and encirclement are not impeding recovery or causing dolphin populations to decline; and

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<sup>1</sup> <http://www.msc.org/documents/scheme-documents/fisheries-certification-scheme-documents/fisheries-certification-process-requirements-version-2.0>

<sup>2</sup> If dolphins stocks are being maintained at their optimum sustainable population levels this would be a strong indication that they likely are fulfilling their roles as healthy, functioning elements in the ETP ecosystem.

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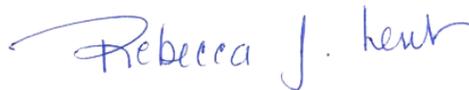
- 4) the determination as to whether the fishery maintains the “structure, function, productivity, and diversity of the ecosystem” also reflect the ecological impact of total removal of biomass from the ecosystem by the fishery.

In addition, the Marine Mammal Commission recommends that the MSC consider the effectiveness of monitoring, control, and surveillance in the ETP tuna fishery and the reliability of the information reported by observers. Of relevance in assessing the reliability of observer programs are studies comparing data from national observers with those collected by Inter-American Tropical Tuna Commission (IATTC) observers.

Finally, the Marine Mammal Commission recommends that the MSC review and carefully consider the extent of fuel subsidies in the ETP fisheries as well as other subsidies that may be provided. While the IATTC has established limits on fishing capacity, this capacity can be transferred between flag states. To the extent that subsidies can serve as an incentive for capacity transfers, the effects on fishing pressure could be relevant to the standards for MSC certification, including impacts on target and bycatch species.

Thank you for the opportunity to participate in the MSC review process. We look forward to meeting with you and your team on Thursday, 29 January in San Diego, California. Please feel free to contact me if you have additional questions.

Sincerely,



Rebecca J. Lent, Ph.D.  
Executive Director