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INSTITUTE FOR FISHERIES RESOURCES  
NATIONAL COALITION FOR MARINE CONSERVATION  
NATURAL RESOURCES DEFENSE COUNCIL  
OCEANA • PEW ENVIRONMENT GROUP  
SIERRA CLUB • WILDCOAST/ COSTASALVAJE**

February 11, 2008

**Re: MSC CERTIFICATION OF THE GULF OF CALIFORNIA, MEXICO SARDINE FISHERY**

Chet Chaffee  
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Dear Dr. Chaffee and Mr. Howes,

We, the undersigned organizations representing the interests of recreational and commercial fishermen, consumers, and environmentalists respectfully submit the following comments regarding Marine Stewardship Council (MSC) certification of the Gulf of California, Mexico sardine fishery.

Mr. Howes has stated that the organization's move to certify feed-grade fisheries is part of a larger initiative "to ensure the sustainability of these wild-capture fish used for feed stocks in aquaculture."<sup>1</sup> The sardine fishery is the first feed-grade fishery to undergo a full assessment for this purpose. However, we argue that the sustainability of the sardine fishery and other reduction fisheries cannot be meaningfully assessed using MSC's current evaluation system, which was created without consideration for the need to sustain the vital ecological role of the target species as forage - a need that is increasingly urgent due to the rapid development of aquaculture worldwide.

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<sup>1</sup> Howes, Rupert. "Sustainability is in everyone's interest," 15 June 2007, Fish Information and Services. URL: [http://fis.com/fis/people/?article\\_id=9&l=e](http://fis.com/fis/people/?article_id=9&l=e)

The aquaculture industry's reliance on feed comprised of fishmeal and oil jeopardizes wild fisheries, marine ecosystems and the sustainability of aquaculture itself.<sup>2</sup> Feed-grade fisheries target major prey species, which serve a critical and unique ecological role as forage for numerous marine predators including seabirds, mammals and other commercially and recreationally important fish. Most feed-grade fisheries are fully exploited, and fishing pressure is projected to intensify as demand for fishmeal and oil surpasses global supplies by the years 2020 and 2010 respectively.<sup>3</sup> To safeguard forage fish stocks used for reduction purposes and their associated biological communities, experts including the Marine Aquaculture Task Force convened by the Woods Hole Oceanographic Institution have recommended that wild fish-based aquafeed be sourced only from reduction fisheries managed with an ecosystem-based approach.<sup>4</sup> Yet this requirement is not articulated in MSC's certification criteria.

Scientific Certification Systems (SCS), as an independently contracted certifier, does have limited authority to revise performance indicators and scoring guideposts used to assess the sardine fishery. A number of the undersigned groups submitted recommendations to the SCS certification team for revising the assessment document. These recommendations outlined four basic ecosystem-based management practices for forage fisheries and were meant as a minimum acceptable standard:

1. Management objectives explicitly feature protecting and maintaining the species' ecological role, including preservation of an adequate supply as forage for predators, as the principal objective;
2. Links among associated species are fully described and depicted in a conceptual manner that allows the information to be incorporated into management actions;
3. Ecologically-relevant reference points are employed; for example, conservative single-species targets and thresholds such as fishing mortality =  $F_{75\%}$  and minimum stock size threshold =  $B_{MSY}$ ;
4. Precautionary management measures are employed to preserve forage that take into account quantity, density, size/age of prey and the temporal and spatial needs of predators. At minimum, this should include a precautionary total allowable catch (TAC) that explicitly provides a suitable buffer against ecosystem overfishing, which occurs when reducing one component of the food web adversely impacts others, or precipitates harmful changes in the environment.

Disappointingly, the final version of the performance indicators and guideposts allows a fishery to earn the sustainability label without applying any of these recommended criteria, which relate primarily to MSC's Principle 2.

The argument for denying certification based on the lack of an ecosystem-based approach to managing the sardine fishery now seems to be a moot point. From the testimony and evidence

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<sup>2</sup> Naylor, Rosamond, Rebecca J. Goldberg, Jurgenne H. Primavera, Nils Kautsky, Malcolm C. M. Beveridge, Jason Clay, Carl Folke, Jane Lubchenco, Harold Mooney, Max Troell. 2000. Effect of aquaculture on world fish supplies. *Nature* 405: 1017-1024.

<sup>3</sup> FAO. 2002. Use of fishmeal and fish oil in aquafeeds: further thoughts on the fishmeal trap, by M.B. New & U.N. Wijkström. FAO Fisheries Circular No. 975. Rome. 61 pp.

<sup>4</sup> Marine Aquaculture Task Force. 2007. Sustainable Marine Aquaculture: Fulfilling the Promise; Managing the Risks. The Woods Hole Oceanographic Institution.

presented at the stakeholder meeting held on January 15<sup>th</sup> in Ensenada, Mexico, it is clear that the fishery does not even meet minimum single-species management standards, which form the foundation on which to build ecosystem-based strategies. Because the fishery fails to demonstrate the most basic best management practices described within performance indicators under MSC's Principle 1 and Principle 3 (see list below.), **certification should not go forward, and we expect that the results of the work of the assessment team will reflect this.**

***MSC Principle 1: A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery.***

- **Stock assessments are unable to distinguish the health of the populations of the target species being considered for MSC certification (Pacific sardine and Pacific thread herring) from species sharing the same trophic level.** Small pelagic forage fish (e.g., herring, sardines, anchovies) in the Gulf of California are assessed as a single unit. Peer-reviewed assessment models for the target species do not exist.
- **The sardine resource is subject to unregulated and unreported fishing.** Researchers are in the process of evaluating the sustainability of using sardines as feed for the growing number of tuna farms off the Mexican coast. While some sardines are purchased from the sardine fishery and also the United States, others are collected by the tuna farmers themselves, and the catch is not regulated.<sup>5</sup> Research is still underway, and as of yet there are no published data on the quantity of locally-caught Pacific sardines consumed in the farms. This information is crucial for determining the total impact of fishing on the target stocks and associated ecosystem.
- **The sardine resource may be transboundary with the United States,** and there is no agreement between the two countries to manage the resource cooperatively. Though it has been proposed that the *Sardinops sagax* in the Gulf of California is a separate subpopulation from the sardine species that supports an important fishery off the U.S. West Coast, genetic studies refute this assumption.<sup>6</sup> Scientists supporting the subpopulation theory note that because Pacific sardine are highly migratory, mixing among subpopulations is likely, particularly when climate conditions are less favorable.<sup>7</sup> Most troubling is that the Mexican sardine industry appears unwilling to share data with the U.S. for the purpose of assessing the health of the sardine stock. The 2007 U.S stock assessment reports that “access to recent Mexican catches and biological data remains a concern. Ensenada catches after 2005 are unknown.”<sup>8</sup>

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<sup>5</sup> Sosa-Nishizaki, Oscar. 2008 Jan 18. [personal email].

<sup>6</sup> Hedgecock, D., E. S. Hutchinson, G. Li, F. L. Sly, and K. Nelson. 1989. Genetic and morphometric variation in the Pacific sardine, *Sardinops sagax caerulea*: comparisons and contrasts with historical data and with variability in the northern anchovy, *Engraulis mordax*. Fish. Bull. 87: 653-671.

<sup>7</sup> Felix-Uraga et al. 2005. Pacific sardine (*Sardinops sagax*) stock discrimination off the west coast of Baja California and southern California using otolith morphometry. CalCOFI Rep., vol. 46.

<sup>8</sup> Hill, Kevin T., Emmanis Dorvall, Nancy C. H. Lo, Beverly J. Macewicz, Christina Show, and Roberto Felix-Uraga. 2007. Assessment of the Pacific Sardine Resource in 2007 for U.S. Management in 2008.

*MSC Principle 3: The fishery is subject to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable.*

- **A national law, Ley General de Pesca y Acuicultura Sustentables, which became effective on October 22, 2007 requires a fishery management plan for the sardine fishery, yet certification is proceeding before this management plan is finalized and tested.** This new requirement offers an opportunity for the fishery to develop a plan through a transparent process that incorporates information from outside technical sources and addresses many of the concerns shared by stakeholders. The certification process should be discontinued until the plan is complete and has been implemented for a sufficient period of time as to allow for a comprehensive evaluation of the plan's effectiveness.
- **The management system does not allow for stakeholder involvement on a regular, integral and explicit basis.** The certification team said that it has a copy of a draft fishery management plan for the sardine fishery, but none of the scientists or stakeholders at the meeting knew of the plan or had the opportunity to contribute to or review its contents. Stakeholders attested to poor communication with the fishery. The fishery does not readily share information and is reluctant to incorporate recommendations from outside sources.
- **There are no catch level regulations, such as a total allowable catch (TAC), to maintain high productivity of the target population and ecosystem.**
- **Reported socio-economic impacts to other area fishermen have not been addressed by the fishery or taken into account through the development of management plans.** Local fishermen claim that the sardine fishery's purse seines illegally capture - as bycatch and through directed fishing - species targeted by their small-scale operations. This unregulated catch results in significant loss of income to these fishermen and adversely impacts their communities. They also claim that the distribution of their target species (e.g., snappers, sea bass, and groupers) has changed due to lower sardine abundance in the areas where the sardine fishery operates.<sup>9</sup>
- **Destructive fishing practices have been observed.** Local residents have witnessed dumping of the nets at sea in order for the vessel to capture larger schools or a more valuable species. The dumping results in mass accumulations of dead fish on beaches.
- **The enforcement and compliance system is inadequate for monitoring catches and enforcing regulations.** There are only 3-4 inspectors for a fleet of over 50 vessels, so catches are largely unsampled. Scientists have been able to document a limited amount of bycatch, including the bycatch of endangered California brown pelicans and common dolphins. The data indicate that bycatch is potentially significant and warrants further investigation by inspectors.<sup>10</sup> Stakeholders reported regulation abuses that included fishing in designated no-take zones, exceeding the percentage of catch to be used for reduction instead of direct consumption, and landed catches that contained a significant portion of undersized fish that surpasses the limits established by the regulation in Mexican Official Standards (NOM).

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<sup>9</sup> Sr. Melesio Corral, Commercial Fisherman, Letter to Scientific Certification Systems, 28 November 2007.

<sup>10</sup> Testimony to Scientific Certification Systems presented by Dr. Enriqueta Velarde, January 15<sup>th</sup>, 2008.

- **The research program to support the fishery is unknown to stakeholders.** The fishery does not readily share data with scientists other than government scientists to further studies involving the target species and their predators. Scientists that have been given data say that the quality is poor because data collection is not standardized and consistent.

Certification of a fishery that is lacking in such basic management practices would lower the standard of the MSC label at a time when the organization needs to raise its standards. MSC criteria must evolve to address emerging threats to the sustainability of wild fisheries and the food webs of which they are a part. The general public will be disappointed to learn that the MSC approach is not considering such issues. **We strongly urge MSC to forgo certifications of feed-grade fisheries unless and until the organization has incorporated into its performance standards explicit ecosystem-based management criteria designed to protect the ecological role of forage fish from demand generated by the rapidly expanding aquaculture industry.** We would welcome the opportunity to work with MSC in this capacity.

Sincerely,

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