

Overview of Council Activities Related to False Killer Whales

Asuka Ishizaki & Paul Dalzell
Western Pacific Fishery Management Council

Presentation to False Killer Whale Take Reduction Team
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FKW Subcommittee of the Scientific and Statistical Committee (SSC)

- Established at the 111th SSC Meeting & endorsed at the 155th Council Meeting
- Task: review current guidelines and approaches for calculating PBR and M&SI to identify any issues or concerns, and recommend alternative approaches, solutions, and necessary research
- Recommendations reviewed and endorsed by SSC and Council

Key Issues

1. Spatial genetic structure of the FKW stocks, which forms the basis for SAR, is a contentious issue and warrants careful consideration.
2. FKW population abundance accounting for temporal and spatial variation. Population estimates in SAR are contentious and warrant more careful consideration.
3. Key demographic parameters such as survival and recruitment probabilities are essential for diagnosing population abundance trends. These can be best derived from a photo-ID based capture-mark-recapture modelling approach.

Summary of Recommendations:

Improving PBR Estimates

- 1. NMFS to undertake comprehensive photo ID capture-mark-recapture analysis to estimate key demographic parameters**
- 2. Comprehensive analysis of spatial genetic structure**
- 3. Use hierarchical or state-spaced distance sampling approach in future stock assessment surveys**

Summary of Recommendations:

Improving M&SI Estimates

- 4. Team-based serious injury determination, esp. data-poor cases, and expand membership of determination working group**
- 5. NMFS to enhance quality of observer data by improving training**
- 6. NMFS to review key outcomes/recommendations of the 2007 Serious Injury Technical Workshop to assess state of implementation, and implement those where progress is lacking**
- 7. Develop a fourth, modified model for prorating unidentified blackfish takes**
- 8. Subcommittee to further examine process used to assign FKW takes to either insular or pelagic stock**

Age-Structured Model of FKWs

- Age-structured model of FKWs in development by Ray Hilborn
- Preliminary model reviewed during a two-day expert workshop on March 26-27, 2013, with input provided by Don Bowen, Milani Chaloupka, Andrew Cooper, Sean Cox, Richard Deriso, Pierre Kleiber, Mark Maunder and Ryan Steen.
- Model also in review by PIFSC
- Preliminary results:
 - Pelagic stock of false killer whales is almost certainly growing, and the growth rate is near 2% annually even with the mortality and serious injury in the Hawaii longline fishery.
 - However, results are highly sensitive to the prior distribution.



Questions?