Monterey Bay Aquarium Seafood Watch®

Seafood Watch® Standard for Salmon Fisheries

Public comment period – 3: Comment Form

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Organization/Author	Alaska Fisheries Development Foundation, Pacific Seafood Processors Associ
Name of point person	**David Gaudet**
Email	**Dgfisheriesservices@gci.net**

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Public Comment Guidance:

Salmonid fisheries are significantly different to typical wild-capture fisheries and have some unique
characteristics. In order to ensure that Seafood Watch assessments consider these unique
characteristics and the conservation concerns associated with these fisheries we have developed a
modified set of criteria for assessing salmon fisheries. One of the major considerations within this
set of criteria is the impacts of supplementation from artificial production which is widely used
throughout salmonid fisheries across the globe.

This document is the comment form for the second draft of the Seafood Watch Criteria for Salmon
Fisheries which can be found here. Please use this document to comment on the salmon specific
guidance and scoring identified in blue text.

Criterion 1 – Impacts on the Species Under Assessment

Comments:
Maximum Sustained Yield Based Reference Points vs Minimum Viable Populations

Maximum Sustained Yield (MSY) based Reference Points (Escapement Goals) or other scientific or biologically based escapement goals are the appropriate standard for determining a sustainable salmon population. Minimum Viable Population (MVP) assessments are sometimes used to establish a recovery goal for a salmon population that has been listed or is being considered for listing under the United States Endangered Species Act. A salmon population that is at the MVP would likely not support a sustainable harvest.

Productivity and Susceptibility Analysis

It does not appear that the implementation of the *Productivity and Susceptibility Analysis* as outlined in the tables[1] on page 12 will be useful between the five North American Pacific Salmon species (salmon species).

With respect to the *Productivity attributes and rankings from Marine Stewardship Council 2014* table, all salmon species will have the same value that will not change between fisheries (Table 1). Therefore it does not appear that this would provide any useful intra species information. It may provide reference information if the common salmon species value were compared with other fish species. If that is considered useful, Monterey Bay Aquarium (MBA) staff should provide an analysis for several different fish species.

Table 1. Attribute responses for salmon species.

Attribute	Response for Salmon species	Score
Average age at maturity	The "average" age for all salmon species will be less than 5	1
Average maximum age	All are less than 10	1
Fecundity	All species are between 100-20,000 per **individual**	2
Average maximum size	All are less than 100 cm	1
Average size at maturity	The same as average maximum size	1
Reproductive strategy	*Demersal?*	*2*
Trophic level	All are greater than 3.5	3
Density Dependence	Not used	

With respect to the *Susceptibility attributes and rankings from Marine Stewardship Council 2014* table, it also does not appear to be relevant for salmon species. The susceptibility analysis seeks to specify how much of the population is vulnerable to various fishery attributes. Comments on each of the attributes are found in Table 2.

Table 2. Responses to susceptibility attributes for salmon species.

Attribute	Response for salmon species	Score
Areal overlap	Salmon are migratory and follow a common path during their spawning migration deviating only when they are close to the home freshwater stream. All salmon fisheries are designed to geographically intercept 100% of the migration whether in marine or freshwater environments. There are some exceptions such as the northern or southern diversion of Fraser River sockeye and the harvest of immature, but	3

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[1] The document will benefit from providing Table numbers for reference.

	legal size Chinook salmon in sport and commercial fisheries. The only salmon gears that may not be considered to have 100% geographical overlap are fishwheels and set-nets with restricted lengths. However, even these would likely have a score of 3. Time is the primary management tool for salmon.	
Vertical overlap	Salmon gear is designed to have a high degree of vertical overlap. Time is the primary management tool	3
Selectivity of fishery	Salmon species are all targeted. The exception is Chinook which at certain times may not be targeted. In gillnet fisheries, mesh size is restricted. In commercial troll fisheries, area is restricted.	3 default
Post capture mortality	Of all the salmon, only chinook salmon are released. The Pacific Salmon Commission has documented > 66% survival http://www.psc.org/pubs/TCCHINOOK97-1.pdf	1
Quality of habitat	This should not be in this section and a default of 2 for Alaska cannot be justified.	

The inclusion of *Quality of habitat* is inappropriate. The other four criterion all relate to availability of fish to the fishing fleet while the critical salmon habitat, freshwater spawning and rearing, is not at all affected by the fishing fleet. In addition, even if the habitat is degraded, the sustainability needs to be evaluated against the management system for the stock not the habitat.

Criterion 2 – Impacts on Other Capture Species

Criterion 2 will be assessed according to guidance set forth in the Criteria for Fisheries.

Criterion 3 – Effectiveness of Fishery Management

Criterion 3 will be assessed according to guidance set forth in the Criteria for Fisheries.

Criterion 4 – Impacts on the Habitat and Ecosystem

Criterion 4 will be assessed according to guidance set forth in the Criteria for Fisheries.

Criterion 5   X – Impact of Artificial Production

Comments:

Please see section specific comments.

Factor 5.1 Impact of Artificial Production on Wild Populations

Comments:

Criterion 5X Impact of Artificial Production

Factor 5.1 Impact of Artificial Production on Wild Populations

Page 41 is difficult to understand. It appears to define two categories; data rich and data poor, and establish two types of hatchery programs; integrated and segregated, within each category.

The table on page 41 (no title or reference number but apparently for data rich) would benefit by clearly stating in the description for each impact what relates to integrated and segregated programs (the tables in this section would also benefit by having reference numbers and titles).

The pHOS levels of 1% and 5% used in the description are very low values and apparently are for all species. Note that the document, *MSC Fisheries Standard and Guidance (Extracted from the Fisheries Certification Requirements, Annexes SA-SD)* states:

These guidelines are based primarily on studies of riverine species such as Chinook, coho, and steelhead. They may be modified for pink and chum salmon, and for other species, with sufficient reasoned argument and justification.

Accommodations should be made for different species, differing hatchery practices and fitness studies.

The top table on page 42 (Influence table) is apparently for data poor instances, meaning lack of data for pHOS or pNOB. Wild/Hatchery Composition of the population or harvest in not a meaningful manner in which to describe the "influence". The objective of hatchery fish should be to harvest or use for broodstock all of the production. If all of the production falls into one of these categories, then there will be no concern. Perhaps a more meaningful statistic would be the percentage of hatchery fish that are not harvested or used for broodstock.

With respect to the table on the bottom of page 42 (Conservation concern), it is not clear what the purpose of this table is as scores could be developed within the two mutually exclusive tables above. One is for data rich, the other for data poor, there is essentially no overlap. This table confuses the scoring.

Management of Artificial production
Factor 5.2.1: Management Strategy and Implementation

Highly Effective: It is not clear what is meant by "Scale of artificial production is appropriate to meet, but not exceed **population goals**"

Factor 5.2.2: Research and Monitoring

Moderately effective: Change "annual" to "appropriate time basis" in; *Contribution of artificially produced fish to natural spawning escapement is estimated with reasonable accuracy on an (annual)*<u>*appropriate time*</u> *basis."*

Factor 5.2 Management of Artificial Production

Public Comment Guidance: Factor 5.2 assesses the management systems in place for artificial production. Due to the large number of artificial production systems that may be associated with fish caught in any given fishery, the proposal is to assess a 'typical' or 'average' artificial production system. This is consistent with Seafood Watch Aquaculture assessments at a country level where it is not practical to assess the wide range of performance that is often found across an industry. Where there are regional management systems in place, it is likely that most systems operate at a similar level of performance.

Feedback: The requirements are based on recommendations from the HSRG. We welcome comments regarding whether these requirements are appropriate; whether it is appropriate to require all of them for a highly effective management plan; whether there are additional requirements that should be considered.

Comments:

No comments.