

# Monterey Bay Aquarium Seafood Watch

## Seafood Watch® Criteria for Fisheries

### Public Consultation 2: Compiled Comments and Responses

#### Criterion 1 – Impacts on the Species Under Assessment

##### Factor 1.1 Abundance

<p><b>Thoughts on Proposed PSA approach:</b></p> <ul style="list-style-type: none"> <li>We support using the published PSA studies and the method used by the MSC. The latter will provide a higher degree of consistency with that approach, which has already undergone extensive review.</li> </ul>	<p><b>Response:</b></p> <ul style="list-style-type: none"> <li>We have decided to adopt the MSC approach for the full PSA (productivity and susceptibility analysis). We agree that they have peer-reviewed and tested the thresholds, and then made appropriate modifications informed by the results of their pilot testing and peer review process.</li> </ul>
<ul style="list-style-type: none"> <li>No need to do PSA for all species with stock assessments (e.g. if data-limited assessments exist?). See Data-limited proposal feedback.</li> </ul>	<ul style="list-style-type: none"> <li>We agree it is unnecessary to do PSA for species with stock assessments. However, the TAC considered PSA still to be a useful tool to consider when there are other data-poor assessment methods being used. For this reason we will be continuing its use in all cases where there is no full stock assessment. We also will wait until the SNAP tool is available so we can have more confidence that the data-limited assessment methods chosen are applicable.</li> </ul>
<ul style="list-style-type: none"> <li>Define attributes in table. Write out “PSA” at first use (p. 10)</li> </ul>	<ul style="list-style-type: none"> <li>We made this suggested change.</li> </ul>
<ul style="list-style-type: none"> <li>Should Seafood Watch choose to pursue removing the “very high concern” category,</li> </ul>	<ul style="list-style-type: none"> <li>Combination of very high and high concern: We will proceed with a high concern</li> </ul>

<p>the distinction should be very clear. As with the case of Pacific Bluefin Tuna, though not formally listed, the species and related fisheries are no doubt of “very high concern,” and moving the species to a new category should in no way communicate diminished levels of concern to consumers, but more clearly communicate the nature and cause for elevated concern.</p> <ul style="list-style-type: none"> <li>Strongly disagrees with combining high and very high concern categories. “Yes, some species may be missing from classification schemes and others may have changed status but not been updated, but isn’t this why you get experts to check your scorings? Simply being below a limit reference point is less of a sustainability issue (assuming the stock isn’t too far below this level) than it is a lost utilization opportunity.”</li> </ul>	<p>category which includes definitions from the very high concern and high concern categories from the previous iteration of the criteria. We believe that when biomass is below a Limit Reference Point it is a sustainability concern because our system is a simplification of a continuous spectrum of sustainability outcomes into a few categories. , Inevitably some species in the “high concern” category will be of much greater concern than others. However, all of these can be considered of concern and we have found endangered/threatened listing to be too inconsistent; yet we cannot rely on expert advice to override ESA listings, etc. as this is highly subjective and would lead to inconsistency.</p>
<ul style="list-style-type: none"> <li>Suggests simplifying wording as follows (details that have been taken out are overly prescriptive and may not apply in all cases):</li> </ul> <p><i>“There is a recent stock assessment or update that has been approved through a robust scientific peer review process, and biomass is estimated to be above or fluctuating around a target reference point (that is appropriate given the species’ ecological role) ”</i></p> <ul style="list-style-type: none"> <li>Agree with proposal to assess vulnerability only when stock is unknown. Raises some concerns with PSA approach: “While I agree that low productivity may generally equate with high vulnerability, I believe that the same is also true of high productivity. I won’t repeat my somewhat extensive text here, but there are a number of low trophic level, high productivity fish stocks that have suffered very long periods of being severely depleted and at risk of extinction – e.g. Pacific sardine and many North Atlantic herring stocks. But,</li> </ul>	<ul style="list-style-type: none"> <li>We have altered the wording as suggested but retained the deleted portions in the guidance.</li> <li>We agree that productivity alone is not a good measure of vulnerability, so we propose to use the full PSA approach when stock status is unknown. Moreover, we expect that the more conservative reference point requirements for forage species (based on the Lenfest Forage Fish Task Force recommendations) account for this concern.</li> </ul>

<p>perhaps this ends up being accounted for by having higher targets for forage species such as these?” Overall the PSA “is a useful approach if a robust and reliable stock assessment is not available”</p> <ul style="list-style-type: none"> <li>Disagrees with setting a threshold at 75% of <math>B_{MSY}</math>(or any threshold between the LRP and TRP) as “splitting hairs”: “If the limit is as high as 20% <math>B_0</math> or <math>\frac{1}{2} B_{MSY}</math>, then I don’t see the need to set an even higher trigger point or threshold” and would like to see more use of trends where abundance relative to reference points is unknown.</li> </ul>	<ul style="list-style-type: none"> <li>We do not think that it is unreasonable to set a “higher trigger point” than <math>B_{lim}</math> given this is distinguishing between low and moderate concern – i.e. stock abundance does not need to be much greater than the limit reference point to get out of high concern, but it does need to be substantially greater than the limit reference point to be a low concern, which we consider appropriate . The TAC generally felt, especially as SFW is based on a snapshot, it was more appropriate to use the current biomass and split the space between target and limit reference points than to use trends. Several reviewers also raised concerns over the use of trend data during the first public comment period.</li> <li>Using trends where abundance isn’t known: unfortunately where abundance isn’t known trends may not be either, but if they are this can be incorporated as part of the data-limited assessment. As discussed with TAC, trends on their own may not be meaningful so sticking to the guidance in the data-limited assessment table is needed.</li> </ul>
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**Factor 1.2 Fishing Mortality**

<p><b>Comments:</b></p> <ul style="list-style-type: none"> <li>We support avoiding double-counting of issues wherever possible. It is a good idea to deal with depletion and management under the more directly relevant factors. The assessment of indirect fishing mortality for target or species under assessment (re-catch losses, where catch dies from the fishing operation but is not brought onboard when the gear is retrieved; post-release mortality of catch that is</li> </ul>	<p><b>Response:</b></p> <p>No changes are needed here based on these comments, but we made the following clarifications in the criteria document.</p> <ul style="list-style-type: none"> <li>Under Criterion 1, indirect fishing mortality for the target species should</li> </ul>
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<p>retrieved and then released alive but later dies) should be considered under criterion 1 instead of criterion 2. (Gilman et al. 2013. Causes and methods to estimate cryptic sources of fishing mortality. Journal of Fish Biology; 83(4):766---803. DOI:10.1111/jfb.12148)</p> <ul style="list-style-type: none"> <li>• Clarify that cumulative fishing mortality includes rec and subsistence fishing</li> <li>• I also think that you need to make greater use of information on trends, particularly where fishing mortality is unknown. Otherwise, I think the number of classes of criteria and their descriptions are reasonable, concise and straightforward.</li> <li>• I suggest deleting the phrase “and to fulfill its role in the ecosystem”.</li> </ul>	<p>be considered (i.e., included in the total fishing mortality from that fishery).</p> <ul style="list-style-type: none"> <li>• We added language to the text stating that “cumulative” fishing mortality includes recreational and subsistence fishing mortality as well as commercial fishing mortality and ghost fishing mortality.</li> <li>• If data are available data-limited assessments may be used. Trends can be problematic and trends in fishing mortality in and of themselves may not be informative For example, fishing mortality could be increasing in an historically under-fished fishery or conversely, finally decreasing in an historically over-fished fishery.</li> <li>• This was deleted.</li> </ul>
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### Criterion 1 Scoring and Rating

<ul style="list-style-type: none"> <li>• It is unclear how an inability to assess a given criteria is handled. Clarification of the process for handling criteria that SFW is unable to assess is suggested.</li> </ul>	<ul style="list-style-type: none"> <li>• Every criterion must be assessed. Each criterion has language to explain how to rank it when data are unavailable.</li> </ul>
<ul style="list-style-type: none"> <li>• First, I really think you need to include use of trend information for the third case, where stock status and fishing mortality are both unknown. There is potentially a huge range of actual sustainability outcomes depending on whether the stock in question has been increasing or decreasing over the short- and long-term.</li> </ul>	<ul style="list-style-type: none"> <li>• See response above in reference to using trend data to assess fishing mortality.</li> </ul>

<ul style="list-style-type: none"> <li>• My second concern is related, and concerns the 4th and 5th examples above. Rather than splitting the space between the target and limit into two sections (and creating more complexity than necessary, as I've suggested earlier), why not simply have the two cases where the stock is between the target and limit and has exhibited either a decrease or an increase over the most recent 5 years.</li> </ul>	
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## Criterion 2 – Impacts on Other Capture Species

Comments on structure of Criterion 2:	Response
<ul style="list-style-type: none"> <li>• <b>Additional literature for ghost fishing</b> E. Gilman, Status of international monitoring and management of abandoned, lost and discarded fishing gear and ghost fishing, Mar. Policy (2015),</li> <li>• Inherent vulnerability, stock status, and fishing mortality are difficult to score for marine mammals, sea turtles, and seabirds due to data deficiency and resultant heavy reliance on IUCN ratings. The IUCN ratings are global in nature, and may not reflect the situation in individual regions adequately. They are also often out of date. The general tendency is to score too highly and subsequently face criticism from local experts. We recommend instructing analysts to not base Criterion 2 bycatch species status ratings upon IUCN ratings if they are over five years old. If the IUCN rating is more current but does not appear to be motivated by the region of assessment, the species should be handled as 'data deficient' rather than scored upon the basis of the IUCN rating.</li> <li>• Strongly agree that IUCN ratings should be avoided in general. The different specialists groups are not consistent with each other, and some have much stricter criteria to list than others. Some groups just collect listings.</li> </ul>	<ul style="list-style-type: none"> <li>• Thank you for this reference. We've added additional language in Criterion 3 to address ghost gear impacts.</li> <li>• IUCN ratings are overruled if there are more recent or specific data, but otherwise we prefer to err on the side of caution. Unfortunately "data deficient" is not an option, and a flag that a stock, population or species was rated as vulnerable/threatened in the last 10 years is a concern if a more recent assessment is not available.</li> </ul>

## Factor 2.1 Abundance

<p><b>Comments on the Unknown Bycatch Matrices revision:</b></p> <ul style="list-style-type: none"><li>• The matrix needs to be revised for tuna fisheries, as the values -- especially for purse seining -- are outdated. ISSF would like to provide input into the revision that is taking place.</li><li>• Active resolutions on sharks Table 1: Add Non---entangling FADs: Resolution IOTC 13---08; IATTC C13---04; ICCAT Rec 14---01</li><li>• <b>Additional guidance for unknown bycatch species</b> We recommend adding to this section the following reference literature:</li><li>• <b>Sea turtles</b> Wallace, B.P., DiMatteo A.D., Bolten A.B., Chaloupka M.Y., Hutchinson B.J., <i>et al.</i> (2011) <i>Global Conservation Priorities for Marine Turtles</i>. PLoS ONE 6(9): e24510. doi:10.1371/journal.pone.0024510.  Wallace, B.P., C.Y. Kot, A.D. DiMatteo, T. Lee, L.B. Crowder and R.L. Lewison. 2013. <i>Impacts of fisheries bycatch on marine turtle populations worldwide: toward conservation and research priorities</i>. Ecosphere 4(3):40. <a href="http://dx.doi.org/10.1890/ES12--00388.1">http://dx.doi.org/10.1890/ES12--00388.1</a></li><li>• <b>Sharks, marine mammals and seabirds</b> Lewison, R.L., L.B. Crowder, B.P. Wallace, J.E. Moore, T. Cox, R. Zydalis, S. McDonald, A. DiMatteo, D.C. Dunn, C.Y. Cott, R. Bjorkland, S. Kelez, C. Soykan, K.R. Stewart, M. Sims, A. Boustany, A.J. Read, P. Halpin, W.J. Nichols and C. Safina. 2014. <i>Global patterns of marine mammal, seabird, and sea turtle bycatch reveal taxa---specific and cumulative megafauna hotspots</i>. PNAS Early edition, 2014. <a href="http://www.pnas.org/cgi/doi/10.1073/pnas.1318960111">www.pnas.org/cgi/doi/10.1073/pnas.1318960111</a></li><li>• <b>Sharks</b> RFMO resolutions, recommendations and conservation and management measures in <b>Table 1</b></li></ul>	<p><b>Response:</b></p> <ul style="list-style-type: none"><li>• The International Seafood Sustainability Foundation (ISSF) was invited to provide expert input on the revisions to the Unknown Bycatch Matrices.</li><li>• The suggested literature has been added already except for the one that is in review</li></ul>
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<p>should be updated. A short summary of these can be found in <i>ISSF Status of Stocks report Appendix 1</i> (latest version: <a href="#">ISSF Technical Report 2105-03</a>) and/or <a href="#">ISSF Technical Report 2015-02 Preliminary study of the relative fishery impacts on non-tuna species caught in various tuna fisheries</a>.</p> <p><b>Seabirds</b>  Anderson, O.R.J., C.J. Small, J.P. Croxall, E.K. Dunn, B.J. Sullivan, O. Yates and A. Black. 2011. <i>Global seabird bycatch in longline fisheries</i>. Endangered Species Research Vol. 14, P. 91–106. Zydalis, R., C. Small and G. French. 2013. <i>The incidental catch of seabirds in gillnet fisheries: A global review</i>. Biological Conservation Vol. 162, June 2013, pages 76---88. <a href="https://doi.org/10.1016/j.biocon.2013.04.002">doi:10.1016/j.biocon.2013.04.002</a>.</p> <p><b>Purse seine and Longline, all species, tuna fisheries:</b>  Clarke, S., M. Sato, C. Small, B. Sullivan, Y. Inoue and D. Ochi. 2015 (Under Review). <i>Bycatch in Longline Fisheries for Tuna and Tuna---like Species: a Global Review of Status and Mitigation Measures</i>.</p> <p>Hall, M. and Roman, M. 2013. <i>Bycatch and non---tuna catch in the tropical tuna purse seine fisheries of the world</i>. FAO Fisheries and aquaculture technical paper 568. Rome, 2013.</p> <ul style="list-style-type: none"> <li>Clarify that there is nuance among gear types and a certain fishery may be assessed differently if they can demonstrate that gear is more selective.</li> </ul>	<ul style="list-style-type: none"> <li>This comment is in line with how we use the Unkown Bycatch Matrix (UBM) but we have added guidance to clarify that default values in the UBM can be overruled if there are data to indicate a specific fishery is operating differently.</li> </ul>
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**Factor 2.3 Modifying Factor: Discards and Bait Use**

<p><b>Comments</b></p> <ul style="list-style-type: none"> <li>We would argue that in order for a fishery to not impact a baitfish population and to ensure that management of baitfish is sufficient, it would be more important to consider the specific circumstance and health of the baitfish population rather than rely on a ratio. A ratio could be erroneously high or low and not reflect the actual health of the specific bait fish stock under consideration nor the severity of impact</li> </ul>	<p><b>Response:</b></p> <ul style="list-style-type: none"> <li>We clarified that bait species, if known and if their use in the fishery under assessment is a significant contributor to that bait species mortality, should be considered as C2 species. Consideration of the ratio of discards to landings as a waste issue is consistent with our approach for aquaculture.</li> </ul>
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<p>of the fishery under assessment. We would suggest revising the baitfish factor to explicitly consider potential impaired recruitment and effective management. We also believe that even if bait use is not always quantified, the expectation should be that it is.</p> <ul style="list-style-type: none"> <li>• An alternative to this approach might be that baitfish could be considered a retained/bycatch species under Criterion 2 and baitfish management also considered under Criterion 3. The challenge of assessing baitfish as a retained species is noted - however, appropriate assessment is important.</li> <li>• Makes point that normally discards from fisheries are recycled into the food web; “discards are not necessarily as evil as they are made out to be, so I wouldn’t necessarily give this factor a huge influence (unless of course the discards are brought ashore and put into a landfill, which truly is a total waste).”</li> </ul>	<ul style="list-style-type: none"> <li>• Under Criterion 3, Seafood Watch assesses the management of only those species that are caught in the fishery either as bycatch or target species. We assess the bycatch management but not the management of the fishery that targets the bycatch species, if there is one. It is beyond the scope of that criterion and unnecessary, especially when a particular fishery is not using a large amount of the baitfish (therefore not a driver of its dynamics or management). When a significant contributor to fishing mortality for the baitfish species, a baitfish is assessed under Criteria 2.</li> <li>• The idea that discards are recycled is only valid in some cases (e.g., shallow water fisheries). Discards at depths of the order of a few hundred to thousands of meters may only be recycled after centuries, since most of the discards end up in the bottom, and the vertical exchange may be very limited. Discards may also feed populations of scavengers at the expense of other species, and may be causes of ecosystem imbalance. It is not an easy subject to make a call either way. We believe keeping this as a waste issue is the most consistent with our aquaculture criteria. In addition, it only penalizes fisheries that have &gt;100% discards which is quite high, and beyond the waste issue, this high level of bycatch leads to a much</li> </ul>
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	<p>higher risk that one or more of these species caught as bycatch will be overfished (but that may be unknown and therefore come out yellow). In practice we do not think this will change many rankings since all fisheries we have analyzed with &gt;100% discards were red for C2 already. Finally, we received a lot of strong feedback in the 1<sup>st</sup> consultation (from multiple reviewers) that the role of the discard rate should be strengthened in the criteria.</p>
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**Criterion 3 – Management Effectiveness**

<p><b>Comments</b></p> <p><b>Factor 3.1:</b></p> <ul style="list-style-type: none"> <li>Does the 70% requirement refer to 70% of total volume? 70% of species groups? Please clarify.</li> </ul> <p><b>Factor 3.2:</b></p> <ul style="list-style-type: none"> <li>When considering Criteria 2, “Impacts on Other Capture Species,” factor 3.2 seems redundant. The primary difference appears to stem from the qualitative framing of guidelines for Criteria 2, and the quantitative thresholds used for assessment of Factor 3.2. Unless Criteria 2 and Factor 3.2 attempt to assess aspects of a species differently, the decision to remove quantitative thresholds should be consistent between the two Criteria.</li> </ul> <p><b>Factor 3.3 (research and monitoring)</b>  <b>Factor 3.4 (enforcement)</b></p> <ul style="list-style-type: none"> <li>Include in guidance, permits must be in order, including any requirements of the BiOp.</li> </ul> <p><b>Other comments:</b></p> <ul style="list-style-type: none"> <li>When using several “AND” and “OR” operators</li> </ul>	<p><b>Responses</b></p> <p><b>Factor 3.1:</b></p> <ul style="list-style-type: none"> <li>We clarified in the criteria that the 70% refers to 70% of species/stocks by number, not by volume.</li> </ul> <p><b>Factor 3.2:</b></p> <ul style="list-style-type: none"> <li>Criterion 3.2 covers management whereas Criterion 2 covers outcomes, and we feel both are needed.</li> </ul> <p><b>Factor 3.3 (research and monitoring) and Factor 3.4 (enforcement)</b></p> <ul style="list-style-type: none"> <li>We added language about permits and requirements of Biological Opinions to 3.4.</li> <li>We modified the formatting as suggested</li> </ul>
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<p>within factor scoring tables, some use of indentation would facilitate the rapid understanding of the tables. This could be applied throughout the whole document.</p> <ul style="list-style-type: none"> <li>• <b>Comments on Appendix 5. By-catch reduction approaches:</b> Within strategies for Purse Seine, “Use of modified FAD designs” should also apply for sharks not only for turtles.</li> </ul>	<ul style="list-style-type: none"> <li>• We have added this to Appendix 5.</li> </ul>
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**Criterion 4 – Impacts on the Habitat and Ecosystem**

<p><b>Comments on 4.1a:</b></p> <ul style="list-style-type: none"> <li>• Impacts on the habitat could be extended to pelagic habitat, not only on the seafloor. FADs could be then considered under Factor 4.1.a due to potential impact on the surface habitat of pelagic animals (which is very difficult to assess but is under focus of scientist working on pelagic species). The phrase "other ecological impacts" is broad, vague, and leaves room for subjectivity.</li> </ul> <p><b>Comments on 4.1b:</b></p> <ul style="list-style-type: none"> <li>• This factor is burdensome to score for most fisheries, as information regarding the percentage of habitat protected is often not readily available. We recommend that MBAq develop default scores for broad fishing areas such as Gulf of Mexico, USA, or Bering Sea, Alaska. Alternatively, MBAq staff could review existing reports and compile a table illustrating how various regions were scored. This table could be added to the method as an appendix and included in the “help” section within SWAT.</li> <li>• Clarify that there is nuance among gear types and a certain fishery may be assessed differently if they can demonstrate that gear is more selective.</li> </ul>	<p><b>4.1a:</b></p> <ul style="list-style-type: none"> <li>• We have not extended impacts on the marine habitat to pelagic habitats as the scientific rationale is still being developed. We will revisit this during the next review of the Seafood Watch standards and criteria.</li> </ul> <p><b>4.1b</b></p> <ul style="list-style-type: none"> <li>• This is an interesting proposal and we will explore this outside of the criteria revisions. Consistency in scoring across reports is currently ensured through our assessment process.</li> <li>• We have added this clarification explicitly to the instructions text before 4.1a. More minor modifications to the gear are accounted for in 4.1b.</li> </ul>
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<ul style="list-style-type: none"> <li>Seafood Watch is encouraged to pursue the proposed changes to Factor 4.1 in light of contention relating to scoring for West Coast trawl fisheries and management systems designed to mitigate fishing activity in rocky habitat areas.</li> <li>Changes to 4.1-4.2 all seem reasonable</li> </ul>	<ul style="list-style-type: none"> <li>No response required</li> <li>No response required</li> </ul>
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### Criterion 5 Ecosystem-based Fisheries Management

<p><b>Comments on the proposal to move ecosystem-based fisheries management (EBFM) into its own Criterion 5:</b></p> <ul style="list-style-type: none"> <li>We support this proposal.</li> <li>Steering toward holistic, systems sustainability is necessary, however some concerns arise. There may be unjust negative economic consequences for docking fisheries that do not fit the chosen definition of EBFM but are otherwise sustainable fisheries. Many fisheries might be unable to meet the factors for a good score under this criteria as they cannot afford the demands of data intensive EBFM practices and face challenges to secure funding for improvements to management and practices. Further, addition of a new criterion dedicated to EBFM appears to be redundant with subfactors accounted for in the extant criteria. Rather than score for EBFM principles twice (once in the EBFM criterion and once in other criteria) it could be more appropriate to incorporate EBFM theory and values into scoring of the other criteria; indeed, it seems as though this has already been done to a large degree. Lastly, definitions of EBM, are known to still vary broadly, how Seafood Watch defines ecosystem based management should be clearly presented, (i.e. as defined by the Lenfest Forage Fish Task Force or other agreed upon definition).</li> </ul>	<p><b>Response:</b></p> <ul style="list-style-type: none"> <li>No response required</li> <li>The science is still new and until it is better developed it is prudent to keep these combined rather than separating. In addition, pilot test results revealed a significant raising of the bar. The scientific understanding of EBFM since the previous SFW revisions is not significant enough to warrant the splitting of this criterion, which would result in significant downgrades of fisheries.</li> </ul>
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- I do not think that 4.3 should be made into a separate criterion. I also question whether habitat effects should be a criterion all on its own. I don't think we understand enough about ecosystem dynamics, the effects of fishing on ecosystems, and how to compare and evaluate different ecosystem states to elevate the current Criterion 4 into 2 (of 5) separate criteria.
- Also suggests some edits to the factor: Spatial management may or may not be effective or useful...There are also other policy instruments that could be used with beneficial outcomes that don't necessarily involve spatial management; for example seasonal closures of fisheries, either as an explicit management measure, or because market conditions are more favorable during some periods than others.
- What is an ecosystem study?... [The "ecosystem study"] criterion would seem to me to be virtually impossible to satisfy.
- 3) As stated above, it is not possible for fisheries to have zero impact and in most cases the impact is likely to be considered negative... It might be more appropriate to refer to "unacceptable impacts", but then of course you need to define unacceptable and/or provide examples. 4) I suggest inserting "long-term" before the word "adverse" (for the non-native species criterion). 5) Under the High category, why are "alternative stable states" necessarily bad?

- Based on the Lenfest report as well as other recent research, we feel that full closures provide a level of ecosystem protection that is not afforded through seasonal closures or similar efforts (in terms of pristine ecosystem).
- The ecosystem study language was included because some fisheries do have this type of assessment. It isn't a requirement for a "very low" rating because it is after an "or" but the high score can also be achieved through management measures.
- Alternative stable states can be a concern (when the fishery pushes the system from one state to another) because it is by definition an irreversible change. While the change may not be for the worse from a human perspective, for example, changing the environment in an irreversible way is considered a serious concern.
- We have edited the text to refer to "unacceptable impacts" and "long-term" adverse impacts as recommended by the commentor.

## Overall Score and Final Recommendation

<p><b>Comments on the new proposed decision rule for “Best Choice” fisheries (i.e., a green is needed in either C1 or C3 for an overall “Best Choice” rating):</b></p> <ul style="list-style-type: none"> <li>• We support the idea of a revised decision rule that requires certain factors to be in place if a fishery is to receive a Best Choice rating. However, we feel that it is not sufficient for a fishery to have a healthy stock OR effective management to be considered a Best Choice fishery and rewarded as such. At a minimum, a sound and effective management program should be required in every case; we would propose that in order to receive a Best Choice rating a fishery must score green in Criterion 3.</li> <li>• A sound management program will generally attain and maintain good stock health. However, good stock health is not a sufficient condition alone, as it will degrade without appropriate management (although stock health should of course at least score yellow to be considered Best Choice).</li> <li>• This makes sense.</li> </ul>	<p><b>Response:</b></p> <ul style="list-style-type: none"> <li>• Based on piloting the two decision rules we have decided to use our original proposal. Our “green” bar for management is quite high, and based on pilot testing, requiring a green in management for a “Best Choice” overall is too harsh, particularly for small-scale fisheries that may have a limited capacity for data-intensive management measures, and for fisheries on invasive species.</li> </ul>
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## Comments on Social Issues

<p><b>Comment</b></p> <ul style="list-style-type: none"> <li>• We support incorporating social issues. It would be interesting to see the outcomes of your trials and any lessons learned as the wider seafood sustainability movement attempts to find ways to address social concerns.</li> </ul>	<p><b>Response</b></p> <ul style="list-style-type: none"> <li>• Seafood Watch is aware of the social issues associated with wild fisheries and aquaculture and is working with partners to develop a coordinated and comprehensive approach that provides information to our business partners and consumers.</li> </ul>
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<ul style="list-style-type: none"> <li>Seafood Watch should consider including human dimensions of fisheries within their standards for scoring criteria. Human---dimension criteria could encompass economic and social factors, ranging from community employment and income, to food security and slavery in fisheries. Including human dimensions of fisheries in Seafood Watch’s standards could be achieved using quantitative data across fisheries, obtained at local levels or with strong government data as in US fisheries. Where effective social interactions occur in managing fisheries, like co---managed or traditional fisheries, a direct positive link between human use and fisheries sustainability is observed. (McClanahan et al 2006 Current Biolog 16, 1408–1413) By considering human dimensions in scoring criteria, Seafood Watch can demonstrate to consumers how healthy fisheries include both biophysical and social factors.</li> </ul>	
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## Other Comments

Comments	Responses
<ul style="list-style-type: none"> <li><b>Guiding principles:</b> Where “marine” is used, add “and freshwater”; Add “productivity” to GP #10</li> </ul>	<ul style="list-style-type: none"> <li>Changes were made as suggested</li> </ul>
<ul style="list-style-type: none"> <li><b>Glossary:</b> to “Endangered/Threatened” definition, add and spell out ESA, SARA and COSEWIC</li> </ul>	<ul style="list-style-type: none"> <li>Changes were made as suggested</li> </ul>
<ul style="list-style-type: none"> <li><b>Appendix I:</b> Add discussion of minimum viable abundance</li> </ul>	<ul style="list-style-type: none"> <li>No change is needed as our definition of appropriate reference points should be at least as high, or higher than the Minimal Viable Abundance (MVA).</li> </ul>

	<ul style="list-style-type: none"> <li>The MVA concept is relevant in salmon fisheries and will be mentioned in that document.</li> </ul>
<p><b>Regarding communication of standards, process and results:</b></p> <ul style="list-style-type: none"> <li>Providing an easy-to-follow description of the rating process could increase consumer understanding of Seafood Watch’s scores and subsequent ability to follow recommendations.</li> <li>To maximize consumer comprehension, a visual representation of factors considered in the rating process (akin to the Ocean Health Index) could be implemented.</li> <li>To provide consumers with a greater level of detail about each rating while maintaining cohesion and simplicity, this visual representation of the rating considerations could then double as a means of communicating factor scores through a standardized visual representation</li> </ul>	<ul style="list-style-type: none"> <li>We will pass on this comment to the SFW outreach team. It lies outside of the criteria review process. There is a visual representation of the scoring for each factor within each report, which is available on the website</li> </ul>
<ul style="list-style-type: none"> <li><b>Regarding consideration of restaurateurs as a critical stakeholder group</b> We suggest that restaurateurs be included in the Seafood Watch Stakeholder Map. There seems to be no explicit representation for restaurateur users who are in the Seafood Watch restaurant program or who feature Seafood Watch wallet cards at their establishments. We wonder whether their voice is incorporated in the draft review process aside from the general public commenting period and suggest that it could play a vital role in ensuring the usefulness of SFW’s ratings. For example, restaurateurs will know if a certain species has become popular on menus, but is not currently rated by SFW. This information could be essential for SFW, but requires an</li> </ul>	<ul style="list-style-type: none"> <li>We have a restaurant program and an outreach program that both work with chefs. We seek their input on which recommendations we should cover on an annual basis. In our experience there has been less interest from this sector in the criteria than in our priority list for recommendations. Our restaurant/chef contacts, however, were invited to comment on the criteria. Regarding “critical stakeholder groups,” restaurants are classified as businesses that use our program, although the representatives from the business sector in our Multi-Sakeholder Group are not from the restaurant sector.</li> </ul>

open line of communication in order to arrive at the appropriate ears.	
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