DRAFT

North Pacific Fishery Management Council
Steller Sea Lion Mitigation Committee Meeting
July 25-27, 2006
Talaris Conference Center, Seattle

Minutes

The Steller Sea Lion Mitigation Committee (SSLMC) convened at the Talaris Conference Center on July 25-27, 2006. Committee members present were: Larry Cotter (Chairman), Jerry Bongen, Kevin Duffy, John Gauvin, John Henderschedt, Dan Hennen, Sue Hills, Terry Leitzell, Dave Little, Max Malavansky, Steve MacLean, Art Nelson, and Earl Krygier (alternate for Ed Dersham). Also present were Bill Wilson (Council staff), Doug DeMaster and Lowell Fritz (NMFS AFSC), Kristin Mabry (NMFS AK Region staff), John LePore (NOAA General Counsel AKR), and several other NMML and AFSC staff and members of the public. The primary focus of this meeting was development of a proposal ranking tool and was moderated and facilitated by Dr. Peggy Merritt of Resource Decision Support, Fairbanks, Alaska.

Chairman Cotter reviewed the agenda (attached), the work schedule for the coming several days, and Bill Wilson reviewed the handout materials provided to each committee member. Dr. Merritt reviewed the process the Committee will use in the next few days to develop a proposal ranking tool. Kristin Mabry operated the software used to compile the weighting criteria used in the proposal ranking tool.

Proposal Ranking Tool

Dr. Merritt provided an overview of the mission of this meeting: to develop a decision tool for evaluating proposals regarding changes to SSL protection measures in the Atka mackerel, Pacific cod, and pollock fisheries in the BSAI and GOA. The tool the Committee will develop will be based on the Analytic Hierarchical Process; Dr. Merritt walked the group through a demonstration of how this process works (using a Greek versus Antarctic vacation scenario), defined the issues before the SSLMC, presented a draft hierarchy for the problem, and listed the criteria that could be used to score proposals (based on a survey of Committee members and additional work from a subgroup [DeMaster, Fritz, Wilson] completed this past week). This information served as a starting point for the Committee's deliberation and debate during the next three days.

The SSLMC reviewed how rating factors are scaled on a 1 to 9 scale with 9 equal to an extreme effect and 1 a slight effect. The Committee discussed how this kind of scale compares with a "normal" 1 to 9 rating scale. Dr. Merritt noted it is important that the Committee members use the same scale during this week so results are comparable. She also described how the model uses criteria to help judge the importance of each element among a group.

The group discussed a first-cut at a mission statement: "to build upon previous efforts in developing a rational approach to evaluate proposed changes to regulations that encompasses relevant and observable dimensions of the SSL and its prey field". The Committee edited several parts of this statement and arrived at an initial consensus statement: "To build upon previous efforts in developing a rational approach to evaluating proposed changes in regulations (relative to existing mitigation measures) that encompass relevant and observable dimensions of the prey field of SSLs".

The mission has two main parts, both relating to the SSL prey field. The two main parts are: how fisheries affect prey items for SSLs, and how fisheries may affect SSL foraging ecology. The Committee discussed each and whether to add a third – effects of fisheries that may directly injure or kill SSLs or disturb SSLs. This aspect would relate particularly to proposals that might ask for fishing within the 0-3 n mi zone where such direct interactions (e.g., harassment) with SSLs could occur. The Committee did not concur on this but agreed to revisit this during a later part of the meeting. Dr. DeMaster reiterated that

the last two Section 7 consultations regarding groundfish fisheries in Alaska focused on the potential for adverse impacts on SSLs mediated through competitive interactions. This also comports with the main issues defined in the Draft Revised SSL Recovery Plan.

The Committee reviewed the hierarchical list of how fisheries may affect SSL's ability to obtain prey items through effects on 1) prey fields or 2) the SSL's ability to forage. For the fishery effects on the prey field element, the dimensions are fishery effects on prey availability and fishery depletion of prey. And for the fishery effects on SSL foraging ecology element, the dimensions are fishery competition with adult SSLs and fishery competition with weanling/juvenile SSLs. The Committee suggested that these elements be explained – i.e. what assumptions are implied? After some discussion, it was agreed that the two primary assumptions were that (1) more aggregated prey are easier or more efficient for SSLs to capture and (2) reduced fish abundance diminishes the value of a prey field for a SSL.

Dr. DeMaster noted that the primary concern regarding an ESA consultation would either be competition between the groundfish fisheries and adult SSLs or competition between groundfish fisheries and juvenile SSLs (or both). The Committee discussion led to a more specific statement of the issues: fishery effects on adult females (because males are able to forage further and more independently because they do not care for young – and do not need to convert food to maternal milk) and fishery effects on weanling SSLs (recognizing that weaning is a gradual process that would typically take place anytime between 1-3 years in this species). The Committee believed that these were the two principal categories of concern.

The next levels in the analytic hierarchy are seven variables: gear, vessel size, geographic area, fish species, season, SSL site type, and distance from SSL site. A subgroup of the Committee developed a straw man ranking of these variables in three pair wise comparisons: area by species harvested, vessel size by vessel type, and SSL location type by proximity. Each of these comparisons was ranked by the subgroup based on the best available information on SSL ecology.

For the area by species harvested rankings, data used to develop rankings included the most recent SSL food habits data (including particularly the Sinclair and Zeppelin 2004 paper). No rankings of 9 (on a scale of 1 to 9) were made because the SSL diet is diverse and not wholly comprised of just P. cod or Atka mackerel or pollock, but rather a combination of prey items; thus a fishery that harvested these species would still leave unharvested many other prey items. Each geographic area was judged of equal importance to the others because the draft SSL recovery plan requires an increasing trend in five of the six subareas used to describe subpopulations of the wSSL DPS. Therefore, all areas are considered important (and it was further noted that if the recovery plan criteria change, than this supposition may well have to be changed). It was suggested that perhaps the Pribilof Islands should be a separate region (i.e., a seventh region). It was recognized that the main SE Bering Sea fishing area is considered part of the eastern Aleutian Islands subarea. A concern was raised over the subgroup's ratings that give an equally high level of concern over P. cod and pollock removals in the eastern GOA given the known increasing trends of SSLs in this region and the general lack of any large cod or pollock fishery in that area.

For the gear type by vessel size rankings, the rationale for initial rankings by the subgroup was based on fishing power of a given gear type. The 2003 BiOp Supplement provided a rationale for evaluating impacts of trawl versus longline versus pot or jig in terms of fishing power. New data from 2004 on catch rates for trawl, longline, and pot fishing provided additional rationale (see figures that Lowell Fritz distributed). In this data set, it was noted that trawl gear harvested a large fraction of catch from small areas while longline gear harvested large catches spread out proportionately across geographic areas. Pot and jig gear were intermediate. Based on these new data, the subgroup developed ratings of severity of effect from various gear types. Some Committee members noted that the number of vessels in each gear category was not considered by the subgroup; multiple vessels in a gear type greatly increases fishing power. Some were also concerned that these rankings did not include recognition that in many cases fisheries occur on large schools of target species, and when targets are so abundant the catch levels in a

specific geographic area will logically be high, but this is a function of schooling, not particularly a function of that specific gear type; and when targets are not aggregated these fisheries often are not prosecuted. In addition to the above comments on the subgroup's initial rankings, some suggested breaking fisheries into smaller sector groups. Dr. DeMaster, speaking for the subgroup, reported that the attempt was to simplify and not add redundancy across the seven variables.

For the SSL location type and season by proximity rankings, the subgroup's primary rationale was that sensitivity of the SSL to location is different for rookery and haulout and further sensitivity is also different in summer vs. winter. Highest weightings were for the 0 to 3 n mi zone and least for areas outside 20 n mi (outside critical habitat). Winter, in the 0 to 3 n mi area, is most sensitive since prey are more dispersed and pups are still nursing. The 3 to 10 n mi zone is similarly sensitive for the same reasons based on new telemetry data. Some noted that the weightings by the subgroup didn't appear to accurately match the rankings discussed at the beginning of this meeting. It was recognized that the subgroup did the scoring prior to the start of the SSLMC meeting. Therefore, the subgroup was asked during a break to rescore the various subunits. Another question was how to address a proposal that would affect multiple areas; one option would be to develop a weighted average of scores for those areas that are affected. The Committee discussed the issue of redundancy and how to include in the hierarchy all necessary variables without introducing double counting.

Dr. Merritt then described the next steps. The Committee will continue to fill in the variables and subunits in the hierarchy matrix, debate the straw man scores developed by the subgroup, and come to consensus. Some still question the heavy emphasis on prey depletion as the primary issue. Dr. DeMaster noted that the subgroup's scoring factors were relative to each other and based on findings in the last two Biological Opinions (included the 2003 Supplement). Mr. Cotter stated that more discussion will occur and that eventually all on the Committee will be involved in setting the weighting factors; the subgroup's goal was to get this process started. Others noted that they want to see an example of this model, using a realistic fishery scenario, to better understand how the weights are factored into the final scoring process.

The Committee discussed how a group of proposals, when scored using this model, will be compared with the status quo. Will status quo be run through the model also? Will only differences in management measures between a proposal and the status quo be scored? How will a group of proposals be judged compared to the jeopardy bar? It was agreed that these kinds of questions need to be explored further.

Scoring Process Discussion – Wednesday, July 26

The working group that worked on the straw man hierarchy reported on options for structuring the elements. An idea surfaced to divide the issues into two parts: fishery effects on SSL prey (which would include prey fields and prey items) and fishery effects on SSLs themselves. Some noted that missing in this array is consideration of how much food is harvested in a fishery relative to how much is there – an exploitation rate issue. John Gauvin noted that the two main effects of a fishery on the prey field are how much is harvested relative to standing biomass, and how fast the fish are harvested. He asked that the Committee consider the question: will prey be 'measurably' depleted?

Discussion focused on the removal rate issue. Could a rating be assigned to a fishery based on the percentage of the TAC that was taken? Do we have the data to make an exploitation rate calculation for small areas (smaller than the GOA and BSAI)?

Lowell Fritz reviewed the data used to develop the straw man rankings for the area, zonal, and fishing gear effects rankings discussed the previous day. These data are on handout charts provided by Mr. Fritz. The data include new information on SSL diet composition by region and season. It was noted that summer was defined as the period May through October and winter the period November through April.

After discussion, the periods were thought to be better characterized as May through September for summer and October through April for winter.

It was recognized that temporal aspects of fishery effects on SSL prey fields are difficult to rate because of poor data. Diet data for winter are limited. The two seasons described above were felt to best characterize the available data. The Committee reached consensus on the months allocated to each as above.

Prey removal rate was discussed, primarily focusing on how to calculate or rate a fishery effect on target species that are prey for SSLs. This may be complicated by seasonal behavior of fish prey items; for example, pollock aggregate for spawning in winter and a fishery targeting these would have an exploitation rate that is affected to a large extent by the schooling behavior of the prey species. Fish migratory behavior also could affect exploitation rate and introduce a seasonal element that might be hard to capture in a single rating scheme. Mr. Gauvin suggested that perhaps using a proportion of TAC could work as long as geographic area was factored in as well.

Mr. Fritz continued (after the public comment period – see below) with a review of data used to develop rankings on importance of zones around SSL sites. The telemetry data presented to the SSLMC at its last meeting from juvenile SSL telemetry studies show a continued importance of the 0 to 10 n mi zone; Mr. Fritz noted that data were binned in the 0 to 10 n mi zone, as was done in the 2003 Supplement. DeMaster noted that a finer scale breakout of the telemetry data would be difficult to support given the scale of uncertainty in the position data derived from the satellite tags placed on the animals. In addition, Mr. Fritz noted that the data bear out an equal importance of both – that the 0 to 10 n mi zones around haulouts and rookeries are important and that telemetry studies show greater use of the 3 to 10 n mi zone than previously observed.

Mr. Fritz also reported that the data show less of a distinction in terms of importance between haulouts and rookeries – that both kinds of sites are important and haulouts are used for longer periods of time by a more diverse group of SSLs than previously observed. Telemetry and diet data bear this out. Thus the recommended weighting factors reflect this increased importance of haulouts. These new data (i.e., since the publication of the 2003 Supplement) will be included in the new BiOp. The Committee discussed this issue at length, and concluded a consensus that both rookeries and haulouts be retained as separate kinds of sites to allow flexibility in application to proposal rankings.

Public Comment

Mr. Cotter invited public comment. Dave Fraser noted that for the SSL diet data, the older Sinclair and Zeppelin data are similar to the newer data developed for the new BiOp. However, he felt that different ratings for pollock and cod in the Aleutians than those developed by the subgroup would better reflect the available data (Mr. Fraser suggested a pollock rating of 1 to 1.5 and a cod rating of 2 to 2.5). Mr. Fraser also noted that many other species are taken in high proportion in SSL diets (Irish lords, salmon, cephalopods) and should be factored into the rating schemes.

Weighting Factors Discussion – Continued

The Committee reviewed data provided by Mr. Fritz that support the subgroup's recommended weighting factors for gear type and removal rates. These are based on the 2004 annual catch rate distribution for EBS pollock, BSAI Atka mackerel, BSAI cod trawl, BSAI cod pot, and BSAI cod longline fisheries. The data are displayed as catch from 100 sq km cells, by gear type. The data show the potential removal rate capacity of the gear types. It was recognized that this analysis does not include a measure of the available biomass or such factors as gear preemption and agreements between sectors to avoid fishing conflicts.

The Committee discussed the issue of how to account for fish removal relative to available biomass. There are inadequate data on fish abundance and seasonal movement patterns to estimate biomass in small geographic areas for a given season. Another concern is how to measure duration of a fishery harvest. One idea is to score the fishery such that a high harvest in an area of low fish abundance would be rated high in terms of impact on the prey field. Some desire to include a seasonal element – and perhaps break summer into two sub time periods and winter into two sub time periods. This could provide the flexibility to evaluate fisheries that occur in different time periods or different parts of the summer. The Committee decided to retain quarters of the year as the smallest time span.

Exploitation rate relates to the amount of harvest to available biomass; the Committee recommended including this concept, but was uncertain how it could be achieved. As noted above, there is a general lack of biomass data for specific geographic areas and seasons. Ideas considered included using the biomass data for the GOA and BSAI from the 2003 BiOp Supplement (Tables III-7a-f), or use percent of TAC as a proxy for biomass. Another concern was how to ensure SSC approval of either method; it may be unlikely that any attempt at calculating an exploitation rate that requires biomass data for small areas would pass SSC muster. The Committee concluded that a qualitative weighting could be assigned – does the proposal increase or decrease the catch to biomass rate, and if yes it gets a higher score, and if no it gets a lower score. There was agreement to adopt this approach.

The Committee reviewed fishing duration; to a SSL would it be better if a fishery harvested small amounts incrementally over long periods of time versus high harvests in a short period of time. Harvests over a 1 to 3 day period, even if high, likely can be tolerated by SSLs but longer duration harvests could be more detrimental to SSLs; data suggest that SSLs likely can deal with low food abundance for a few days but not longer than 8-10 days. The Committee was not convinced they could meaningfully or accurately describe or weight duration. Therefore, as a proxy for duration, the SSLMC decided to use a yes/no decision related to whether the fishery was rationalized. If rationalized, the Committee felt that its prosecution would be more measured, spread out in time, and there wouldn't be a race for fish occurring. Dr. Hennen suggested also retaining a two-way metric which includes a yes/no for rationalized and a yes/no rating for whether the proposal would spread out the fishery in time. The Committee consensus was to accept this two-way decision component.

Hierarchical Ratings

Dr. Merritt led the Committee though a process of voting on each of the weighting factors for each element in the hierarchy that has been developed so far. This process included using the subgroup's recommended weighting factors, as modified by the subgroup's recommended weighting factors. As previously noted, these factors were based on data that were provided to the Committee. These subgroup ratings would be a starting point and allow the Committee members a point of reference from which to base their recommended weighting factors.

This process started with revisiting the two main elements or "mothers" identified as the start of the hierarchy the previous day. After some discussion and a bit of confusion, the Committee agreed to the following two:

1. Fishery Actions on the Potential Prey Field – including catch/biomass; seasons; gear/vessels; duration of the fisheries – and

2. SSL Needs – including food preferences, by area; zones around rookeries and haulouts

The Committee voted on a relative importance weighting for these two elements – scores are in the AHP model.

Effects of Fishing on SSL Needs – Scoring

Under SSL Needs, the Committee discussed a rationale for how to weight the relative concerns over two sub elements: proximity and removal of target species by location. Rationale for removals included a measure of how deleterious a level or location of harvest would be to SSLs. The ranking scores recommended by the subgroup were taken from the 2003 BiOp Supplement as a starting point. It was noted that the target species (Atka mackerel, pollock, and P. cod) are only a portion of the SSL diet, and many other diet components are not harvested by commercial fisheries and thus will remain available to SSLs when the three target species are harvested.

For the proximity element, the Committee broke season into two main periods: winter and summer, and considered breaking each of those into two sub seasons. This would create a winter season which extends from the last quarter of the year to the first quarter of the next, or "DA" and a summer season denoted as "BC". Summer is a period when SSLs breed, give birth, and females are lactating and closely attend pups on the rookery and thus are more tied to rookeries. The use of space around rookeries and haulouts by SSLs is different for each season. Winter is the non breeding season, and SSLs tend to forage greater distances from rookeries and haulouts. Ratings were for the following categories: summer rookery (most important, 7), summer and winter haulouts (5), winter 'other' ('other' are sites that are not used by enough animals to qualify as either a rookery or haulout but are still of concern, 5), summer 'other' (less concern due to low numbers, 2) and winter rookery (lower use than summer, 2).

The Committee voted on the relative importance of these categories to SSLs – scores are in the AHP model. Justification for scoring included differing views about higher importance of rookeries because of SSL breeding activity.

Removals by season were discussed and scored. Dr. DeMaster noted that in the draft recovery plan, all areas are important from a recovery standpoint. Some seasonal differences were recorded by the subgroup. Those recommended scores were: summer (5) and winter (4); SSL data now suggest there is little difference in importance of feeding by SSLs between seasons. For regions, the following were recommended: EGOA, CGOA, WGOA, EAI, CAI, WAI (with a weighting factor of 5 for each) and Pribilof Islands (weighted 3). The lower Pribilofs score is because the haulouts are not identified in the recovery plan. Some members felt the Pribilofs should rank the same because of its growing population of SSLs; other Committee members suggested that a special area for the Pribilofs was just as important as the other six areas, even though this area is not specifically mentioned in the draft recovery criteria.

The Committee voted on the weighting factors for geographic regions – scores are in the AHP model.

The next category was prey species removed by geographic area. The Committee reviewed the subgroup's recommended rankings. Mr. Fritz noted that these scores represent the frequency of occurrence of the three target species in SSL diets by geographic area. There was some discussion about the pollock scores in the WAI. Others described their views of how their suggested scores better matched the data provided in the handouts.

The Committee voted on the importance of the three target species – scores are in the AHP model.

This ended the first part of the rankings process. The next step is to score the various sub elements under Fishery Actions on the Potential Prey Field.

Public Comment – Thursday Morning

Dave Fraser asked how the number of SSLs on a site would be addressed in the model. Dr. Merritt recounted that the agency feels each region is similar and of equal importance, and abundance is implicit in weighting the regions equally. Mr. Fraser noted that if a proposal would harvest a large number of prey items in an area of few SSLs, then how would that be weighted versus a proposal that did the opposite?

Chuck McCallum asked that the public continue to be provided information about the ranking tool so the public can track how the model is developed and ultimately used to score proposals.

Thorn Smith noted that copies of the handouts provided to the Committee members also help the public understand this process.

Fishery Actions on the Potential Prey Field – Scoring

Dr. Merritt revisited the work accomplished the previous day. The Committee revisited some of the elements in the hierarchy. The Committee discussed how the status quo might be ranked in the tool, noting the great difficulty of running all the myriad elements of status quo through the model. Some suggested running through the model examples of the various elements of status quo. The Committee agreed that more discussion is needed to resolve this question.

The Committee reviewed the four elements under Fishery Actions: is the fishery rationalized, duration, catch/biomass, and removals (what, where, when).

The category of rationalization was discussed in depth. Some felt it was an appropriate variable, others felt it was not. If rationalized, it was noted that such a fishery would have some capacity to reduce practices that could affect SSLs, but it also was noted that this capacity might not always be exercised. Is this category necessary or appropriate, then? Some suggested it be removed. One concern was that a proposal for a fishery that is not rationalized could be "penalized" for not being rationalized. After much discussion, the consensus was to not include this variable in the hierarchy.

Another issue is what to do with other benefits of a proposal that are not judged in this model – e.g. a proposal that improves safety, or has a large economic benefit, or one that improves the ability to manage a fishery – measures that don't impact SSLs. Dr. Merritt suggested that such benefits could be aggregated in a separate list during the proposal screening process and evaluated after the model runs are completed.

Fishery duration was discussed again. Some believed a fishery of short duration would have minimal effects on SSLs, while a fishery of longer duration could have adverse effects. Some believed spreading out a fishery was better for SSLs. Art Nelson suggested setting up a matrix that contrasted fishery harvest against abundance and scoring combinations of these two variables. For example, a proposal for a high harvest in an area of low target species abundance would be rated high (more adverse). Terry Leitzell suggested a modification that added scores for each of these two variables, then divide by two, to provide a sum ranking for a combination of the factors. This scoring would be done region by region. Dr. DeMaster added that the Agency could provide to the Committee a qualitative statement of biomass in each of the six subareas (and perhaps for the area around the Pribilofs, as well). This would allow the Committee to have data on how to address the issue of harvest vs. abundance. Catch to biomass comparisons could be provided by developing a ratio between TAC (or ABC) for a region with the estimated biomass in that region. The Agency could provide those estimates for at least six of the seven regions for the upcoming year (in our case, fishing year 2008) from the next stock assessments and SAFE reports. Thus, the Committee would have the ratio for expected harvest (TAC or ABC) to biomass for each geographic area. This would be for the three target species for a total of 21 data points (fewer given Atka mackerel do not occur in harvestable amounts in the EGOA or CGOA nor the Pribilofs). NMFS

would use their best judgment to estimate regional biomass for these three species. The SSLMC would then use these ratios to score proposals for catch/biomass effects.

Dr. DeMaster was asked why the Agency believes all areas are of equal importance to SSLs. Why aren't separate haulouts and rookeries to be evaluated against each other? He noted that, as has been expressed before in BiOps III and IV, the non-pup count data were not designed to be used to evaluate trends in abundance at individual rookeries or haulouts. The data, as collected (e.g., biennial counts), are simple too noisy for this purpose. Therefore, DeMaster cautioned the SSLMC regarding the establishment of metrics that were not robust to known uncertainty or data quality. He added that this was an issue the SSC would consider carefully in their review of the recommendations of the SSLMC. Dr. Hills noted that the SSC would likely be comfortable with such an approach as long as the assumptions about those data are clearly stated up front.

The Committee questioned how to deal with a proposal that would affect only a single SSL site or a small number of sites and not an entire region? Dr. Merritt indicated that to do so we'd have to incorporate such a variable in the model now and weight the variables. It was suggested that an element be included in the model that addresses the number of SSL sites that could be affected by a proposal: 1 site, 2-5 sites, 5-10 sites, 10-50 sites, or more than 50 sites. The consensus was to include this variable. The Committee also requested that regional trends (i.e., by one of the six subregions used to characterize trends in abundance in the draft Recovery Plan) in SSL abundance be included as well.

More discussion continued about how to include fishery duration; Committee concerns focused on whether a proposal would spread out the harvest, condense it, or leave it unaffected. It was generally agreed to include as a variable the degree to which a fishery would spread out the catch. The Committee felt that by doing so it would include the issue of fishery duration.

Public Comment – Thursday Afternoon

Dave Fraser noted the willingness of fishermen to help spread out harvest, minimize impacts, etc. but that he was uncertain that this model would have the ability to give credit to these kinds of actions.

Hierarchy Rating Process

The Committee continued to work through the development of ratings for hierarchy elements. TAC/biomass estimates could be provided by the Agency which would be used by the SSLMC to agree a score ranging from 1 to 9 (assumption that 9 means high TAC for a low biomass situation in that region, and 1 the opposite). Then the Committee would determine a rating for whether the proposed fishery measure would result in a pulsed fishery or a fishery spread out in time. Much discussion ensued on the meaning of these two terms. The Committee decided that to score the relative impact of a pulsed or spread out fishery, the TAC to biomass ratio would need to be considered. If there is a large TAC for a small biomass species, then a pulsed fishery might have more impact than a pulsed fishery on a species where TAC was low relative to available biomass.

Mr. Nelson suggested that the key issue is whether the fishery is pulsed, because the impact of a spread out fishery would be similar regardless of TAC/biomass ratio. Then followed considerable discussion about how to rate these factors.

Dr. Merritt requested the group vote on a pulsed fishery vs. a spread out fishery for the 9 TAC/biomass scenarios. What constitutes a "pulse"? How does this concept apply to each fishery? The Committee considered possible pulse lengths (in days) of: 1-2, 3-10, 11-20, 20+. The consensus was to retain these pulse lengths.

The Committee returned to the issue of SSL trends and whether to factor these count trends into the model. The Committee decided to not include this rating factor based on the recommendations of Agency staff.

The Committee also revisited the element dealing with number of SSL sites affected by a proposal. The Committee discussed Dr. DeMaster's previous suggestion of 1, 2-5, 6-10, 11-50, and 50+ sites affected. The Committee decided to proceed with the percentage of sites affected approach: 1-10%, 11-25%, 26-50%, 51-75%, and 76-100%.

SSLMC Meeting Schedule

Mr. Cotter noted that the model developed at this July meeting should be considered the first cut or a straw man model. The Committee will need some time to work with it and may make modifications. The model will be presented to the SSC on August 16 and based on SSC comments the SSLMC may further modify the model. Dr. Merritt will use notes from Bill Wilson and other information to develop a draft report on model development. The Committee will have the opportunity to make comments on the report.

Mr. Cotter suggested that the Committee be prepared for a full agenda at the August 28-30 meeting. At this meeting the Committee will receive proposals and will hear from the proposal proponents their justification of the proposal and to answer questions. There also will be time for public comment. The Committee also is scheduled to hear additional scientific presentations on SSLs. Given this expected agenda, the Committee will likely face a full three days of work. In September the Committee will review the draft BiOp and prepare comments on the BiOp for the Council at its October meeting. The SSLMC will meet again in October to run the proposals through the model and to prepare recommendations for the Council.

Continued Work on the Hierarchy and Element Rankings

The Committee discussed whether or not to include another major element called impacts to type of SSL site, by region. The concept is to allow for ranking a proposal in terms of effects on rookery, haulout, or other site based on the number of sites the proposal would likely effect. Another option is to include site effects under the proximity category. The consensus was to do the latter and include the following categories of number of sites affected (percent of sites in a geographic region affected by the proposal): 1-10, 11-25, 26-50, 51-75, and 76-100 % of the sites in the region. The Committee then developed rankings of these categories in three zones: 0-3, 3-10, and 10-20 n mi. The scores are in the AHP model.

At this point, the model development process was completed, and Dr. Merritt and Ms. Mabry worked additional time to flesh out the categories and to populate the model based on the Committee's rankings. The Committee received an overview of how proposals could be reviewed using the model and the Committee discussed some options for how to compare a proposal to status quo. One option would be to run the proposal through the model and then run through the model just those status quo elements for that specific proposal to see the net effect of the proposed change. The Committee agreed that additional discussion will be required to develop a process for using the model to rate proposals. That work will begin after the SSC has a chance to comment.

Draft Revised SSL Recovery Plan

The Committee was briefed by Mr. Cotter on suggested comments to provide to the Council on the draft revised SSL recovery plan. The Committee agreed at the last meeting to only forward to the Council comments the entire group could agree on. Those could include:

- A suggestion that the PVA could be more clearly explained and the process for how it was used to develop the criteria could be clarified.
- The recovery plan could provide more flexibility in the recovery criteria to respond to future new information on SSLs and fisheries and not lock in to the criteria as presently stated.
- The plan could structure the list of recommended research and management activities into a more clear hierarchy of necessary research and management rather than only reporting a laundry list of activities, and include a plan to acquire sufficient funding to accomplish this work.

Mr. Cotter stated that he would develop a draft letter that summarizes the Committee's concerns with the draft revised SSL recovery plan and then circulate that draft letter to the Committee; Mr. Cotter then would incorporate comments from committee members before sending it to the Council. The letter will contain only consensus comments.

Adaptive Management Subcommittee Report

Dr. Hennen provided a review of the work accomplished by the subcommittee that worked on designing an approach to an adaptive management experiment. Such an experiment would investigate the relationships between fishing and SSLs. A short written report was provided to the Committee. The general approach would be to test fishery effects in an area where harvest occurs and where SSL rookeries can be accessed by researchers. The work would involve remote video cameras monitoring females attending pups; females make repeated and fairly predictable lengths of foraging during the period they attend pups, and the foraging trip duration in areas fished and in areas not fished could be measured from these observations. It was noted that one area suggested for this experiment, the Aleutian Islands, does not support a fishery of sufficient magnitude during the period SSLs are on rookeries and attending pups. Additional work on the proposed approach will be required, perhaps focusing on Atka mackerel.

Adjourn

The Committee adjourned at 5:15 pm Thursday July 27. The next meeting will be at the AFSC on August 28-30, starting at 8:30 am on August 28. This meeting will be available via teleconference by calling 907-789-6622. Meeting times are Pacific Standard Time.

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North Pacific Fishery Management Council
Steller Sea Lion Mitigation Committee Meeting
Talaris Conference Center, Maple Room
4000 NE 41st Street, Seattle
July 25-28, 2006

Purpose: Review comments on draft Revised SSL Recovery Plan and discuss adaptive management. Develop a trade-off tool using the Analytic Hierarchy Process. The tool will be used by this committee to evaluate proposals for changes in fishing regulations related to Steller sea lion protection measures in the pollock, Pacific cod, and Atka mackerel fisheries in the Gulf of Alaska and Bering Sea/Aleutian Islands.

AGENDA

July 25 – 1:00 PM

1. Introductions and Opening Remarks, Announcements, Agenda Approval (Cotter)

2. Minutes of Last Meeting, Update on Call for Proposals (Wilson)

3. Committee Work Session Using Analytic Hierarchy Process to Develop Trade-off Tool (Merritt, All)

July 26 – 8:30 AM – 5:00 PM

4. Committee Work Session (Continued)

July 27 – 8:30 AM – 5:00 PM

5. Committee Work Session (Continued)

July 28 – 8:30 AM – NOON (If Needed)

6. Committee Work Session (Continued)

7. Review Committee Comments on draft Revised Recovery Plan (Cotter, All)

8. Discuss Adaptive Management Subcommittee Report (Gauvin, All)

9. Action Items, Closing Remarks, Adjourn (Cotter)

Public comment periods will be provided during the meeting.

Contact Bill Wilson at the Council offices if you have questions: 907-271-2809 or bill.wilson@noaa.gov