

## **Minutes: Seventh Meeting of the Alaska Scientific Review Group (2-4 June 1998)**

### **I.1. Introduction**

The seventh meeting of the Alaska Scientific Review Group (AKSRG) was held at the NMFS Regional Office facility in Juneau, Alaska from 2-4 June 1998. The purposes of the meeting included: 1) final review of revised 1997 Stock Assessment Reports for NMFS stocks; 2) final review of revised 1997 Stock Assessment Reports for FWS species; 3) in depth discussion of marine mammal-fishery interactions; and 4) discussion of NMFS and FWS management and research plans for 1998. Appendix 1 presents the list of participants, including participants invited to supplement the AKSRG's expertise regarding commercial fisheries in Alaska. Appendix 2 presents the adopted agenda. Appendix 3 lists the background papers that were distributed prior to the meeting or made available during the meeting. The meeting was chaired by Lloyd Lowry. Doug DeMaster agreed to be the rapporteur.

### **I.2. Adoption of Agenda**

The agenda was adopted as shown in Appendix 2.

### **I.3. Recommended Changes to the Minutes from the 21-23 October 1997 meeting (meeting number 6)**

Jan Straley asked that the list of potential biases attributed to her on pages 12-13 be changed to read as follows: "... 2) at the time the data were collected the sex ratio of whales on wintering areas was unknown, which is potentially problematic as a skewed sex ratio would bias the estimate (e.g., if the sex ratio was 3 males to 1 female, a mark-recapture estimate of abundance would underestimate abundance by 25%), and 3) the social structure (i.e., lack of independence of sightings) could not be determined using the available data."

It was agreed that the third line in paragraph 5 on page 15 be changed to read "Alaska. AKSRG members present agreed that the Southeast stock and the Southcentral stock division is".

It was further agreed that the second sentence on page 16 (paragraph 1) be replaced with "The AKSRG recommended that FWS staff discuss with the Alaska Sea Otter Commission the possible coordination of the boundary between the proposed Southcentral and Southeast Alaska stocks."

### **I.4. Other Business**

Carl Hild noted that a meeting was being held this week in Anchorage to review the draft "Science Plan for the Bering Sea." Hild added that a copy of the draft plan can be found on the following web site: <http://www.pmel.noaa.gov/bering/pages/interagency>. Finally Hild commented that he was interested in comments from any of the AKSRG members regarding a recent ARCUS

workshop.

## II.1. FWS - General Comments

Joel Garlich-Miller reported that the FWS had published a Federal Register notice regarding the availability of Stock Assessment Reports (SAR) for the sea otter, walrus, and polar bear. The public comment period was scheduled to end on 3 June 1998. The primary changes to the FWS Stock Assessment Reports were that a proposal was made to manage sea otters as three separate stocks in Alaska and that new information on harvest levels for sea otters, polar bears, and walrus was added. As has been the practice at other AKSRG meetings, comments on SARs related to minor editorial changes would be passed directly to the author and not included in these minutes. Also, to accommodate a teleconference call with certain FWS staff, it was agreed that the sea otter discussion would follow the discussion of walrus and polar bear.

## II.2. Walrus

Sue Hills, Caleb Pungowiyi, and Brendan Kelly led the review of this species. It was noted that the estimation of total mortality related to the subsistence harvest included a correction factor based on the results of the Marking and Tagging Recovery Program (MTRP). Several AKSRG members requested that FWS develop a manuscript regarding the use of this correction factor that included a discussion of the added variance in the estimate of total mortality related to the use of the correction factor. Kelly added that the section of the report on population trends should include the statement "reliable information on trends in abundance currently do not exist."

Lowry questioned whether there were adequate data to justify in the SAR the statement that the walrus population in Alaska was below its carrying capacity. Garlich-Miller responded that the available data included the following: 1) the mean age of the population, based on a sample of animals killed by native subsistence hunters, was lower now than it had been previously; 2) the percentage of mature females in the harvest that had produced a calf that previous spring was higher than previous years; and 3) the average age of sexual maturity was lower now than it had been in the 1980s. After some discussion regarding the difficulty in interpreting trends in life history parameters based on samples collected from harvested animals and the possibility of environmental changes confounding the interpretation of the data, the AKSRG concluded that the data are insufficient to conclude what the status of the walrus population is relative to its carrying capacity. The AKSRG also commented on the importance of getting reliable information on the Russian take of walrus, as this was a transboundary stock between the U.S. and Russia.

## II.3. Polar Bear

### II.3.1. Chukchi Sea stock of polar bear

Hild lead the discussion for the AKSRG. He noted that in general the written comments from the AKSRG's subgroup on polar bears had been incorporated into the draft SARs for polar

bears. Hills recommended that the section on stock identification should be formatted similar to that in the NMFS SARs, where the information both supporting and refuting a particular stock designation was presented using the criteria in Dizon et al. 1992. There was general support for this recommendation.

#### II.3.1. Beaufort Sea stock of polar bear

Milo Adkison questioned whether the approach used to estimate  $N_{min}$  in the SAR was sufficiently conservative. Scott Schliebe (via teleconference) responded that the approach used was justified because of the high degree of confidence in the best estimate of abundance and based on an "in-house" report. Kelly responded that, in general, information not available in the form of a final report or a published paper was not to be used or referenced in a SAR. Lowry recommended that FWS amend the SAR to include a statement as to how the "public" could obtain a copy of the report.

The AKSRG recommended that a section on potential impacts of oil and gas operations on polar bears should be added to the SAR.

#### II.4. Sea Otter

Carol Gorbics (via teleconference) summarized the public comments that had been received to date. Most of the comments were from the Alaska Sea Otter Commission (ASOC) and included: 1) because sea otters are not incidentally taken in commercial fisheries, a SAR was not necessary for this species; 2) the available information on genetics was insufficient to justify the proposed stock boundaries; 3) the entire PBR process should not be applied to sea otters in Alaska, as the PBR process was intended to be used to manage commercial fishery-marine mammal interactions and not for the management of Alaska Native subsistence harvests of marine mammals; and 4) the stock boundary between southeast Alaska and central Alaska was invalid as hunters had observed sea otters moving across this putative boundary. In addition, the Minerals Management Service had asked that the SARs for southeast and southwest stocks of sea otters not include references to risk of oil and gas development, as this is only a problem for the central stock.

Pungowiyi expressed his support for the comments from the ASOC. He added that the number of sea otters in British Columbia should also be added to the estimate of abundance for sea otters. Craig Matkin responded that sea otters do not have a continuous distribution in southeast Alaska and British Columbia and could logically be managed separately. Gorbics added that she had received an estimate of abundance for sea otters in British Columbia, but had no mortality data to accompany the abundance estimate. She also noted that the population of sea otters in British Columbia was the result of translocating animals from Alaska. There was general agreement that FWS should include this information in the SAR.

Hild asked whether the FWS had considered using the ASOC's boundaries as stock boundaries for the development of the SARs. Gorbics responded that both the ASOC and the AKSRG had recommended against such an action.

Pungowiyi asked whether the reported population trends by stock were really local trends. He noted, for example, there was recent information that suggested that sea otter numbers in the vicinity of several Aleutian Islands had declined, but that no such data were available for the entire area. Gorbics responded that the information necessary to assess trends in abundance along the Aleutian Islands as a whole was currently not available. Kelly asked whether there was any evidence of localized declines of sea otters in southeast Alaska. Gorbics responded that there were no such data.

Matt Kookesh supported earlier comments by Pungowiyi that the data presented in the SAR were insufficient to support the adoption of three separate stocks. After considerable discussion, the AKSRG agreed to the following: 1) the sections in the SARs on stock identification should be expanded to include appropriate caveats; 2) the AKSRG minutes could be used as a reference for the stock boundary between the putative southeast and southcentral stocks, but not for the southcentral and southwest stock boundary; 3) the comment that otters have been observed moving across boundary lines for putative stocks by Alaskan Native subsistence hunters should be added to the text; and 4) a comment that otters in southeast Alaska were the result of a translocation of sea otters from the Aleutian Islands and Prince William Sound should be added.

The AKSRG also noted that several of the comments included in all three SARs are not appropriate for all of them (e.g., risk from oil and gas development, removal of animals for public display) and that for the southeast Alaska stock mention of risks due to tourism should be added. Gorbics agreed to try to incorporate those suggestions into the revised SARs.

Kelly added that he was very concerned regarding the lack of information on interactions between commercial fisheries and sea otters. He recommended that FWS add a statement that the necessary data are not available and that recommendations on what needed to be done to gather those data be included in the SAR. Gorbics responded that all of the available information to date indicated that the level of interaction between commercial fisheries and sea otters was negligible, although the potential for a significant interaction exists.

The AKSRG also agreed that FWS should revise the SARs for sea otters to include: 1) a section on habitat concerns (e.g., effects of El Nino, risk of an oil spill, indirect effects of shellfish fisheries); 2) references to the existing co-management agreement; and 3) a fix for references to Credle et al. similar to what was done in the SARs prepared by NMFS.

Regarding discussions on the southwest stock of sea otters, Gorbics noted that the available information on declines indicates localized depletions on the order of 70% over the last 6 years. Hild recommended using separate RFs for the sea otters along the Alaskan Peninsula and the Aleutian Islands. Also, for this stock the section on habitat concerns should include: 1) potential impact of killer whale predation; 2) relatively high concentrations of PCBs; 3) potential overshoot of carrying capacity (at least locally); and 4) potential impact of large scale weather patterns (e.g., El Nino).

Finally, Gorbics noted that the FWS had approved the joint publication of their SARs with those of NMFS. The AKSRG expressed its appreciation to FWS for their efforts to produce a joint publication for all marine mammal stocks in Alaska. The AKSRG also thanked Gorbics for her efforts to circulate all of the new papers and manuscripts that were use in the revision of the sea otter SARs.

### III. Future plans for FWS Research and Management

#### III.1. Marking, Tagging, and Reporting Programs

Scott Schliebe (via teleconference) reported that FWS was intending to expand the MTRP with the goal of reducing the number of unreported takes to levels approaching zero (note: the current level of unreported takes was estimated at 7% of the total harvest).

Regarding sea otters, Gorbics reported that the MTRP program would continue, as in the past. She added that a biomonitoring program, which had been implemented several years ago, would also continue with the objectives of collecting information on morphometrics and contaminant levels, and samples for genetic analysis.

Garlich-Miller reported that the MTRP program for walrus would also continue. He noted that in some villages (e.g., Gambell) village residents are employed to run the program locally. In 1999, as possible, the MTRP program will be expanded to additional villages.

#### III.2. Co-management

In FY98, \$90K was made available to the Nanuuq Commission. Part of those funds were to be used to support a study documenting Traditional Ecological Knowledge (TEK) from the Chukotka Peninsula in cooperation with the National Park Service. Regarding support for the ASOC, Gorbics noted that funding had been available in FY97 for the following activities: 1) biomonitoring; 2) joint U.S. - Russia workshop; 3) TEK study on distribution; 4) harvest monitoring; and 5) development of local plans and ordinances. In FY98, \$70K was available to support biomonitoring, a small boat survey, and the development of a local management plan. In FY98, the FWS intended to provide \$80K to the Eskimo Walrus Commission. These funds were to be used to support co-management activities, a Native policy on harvest levels, actions

associated with the bilateral agreement between the U.S. and Russia, and the development of a cooperative enforcement agreement.

Pungowiyi noted that the Native community had requested that its Congressional delegation add an additional \$250K to support co-management activities for the three FWS species.

### III.3. Population Assessment

Lowry commented that the focus of this discussion should be on what FWS intended to do over the next five years regarding the assessment of the status of populations of polar bear, walrus and sea otter in Alaska. Garlich-Miller responded that the Service's two main problems with planning assessment oriented research were the lack of funding in general and the lack of assurances regarding funding availability from year to year. He added that his office had recently developed several initiatives to increase the base funding of the marine mammal program in Alaska, although the likelihood of actually being awarded those increases in the current fiscal environment was not good. Nonetheless, the FWS had scheduled the following activities over the next five years: 1) joint U.S.-Russia polar bear den surveys in the spring of 1999; 2) U.S. Geological Survey (USGS) surveys of sea otters in Prince William Sound in the summer of 1998 and winter of 1998/1999; 3) surveys to determine sea otter abundance in the Aleutian Islands and southeast Alaska, in whatever year funding is available; and 4) a survey to determine the age and sex composition of the walrus population along the ice edge in the fall, whenever funding is available.

### III. 4. Walrus Research Needs

Garlich-Miller noted that research needed by the FWS is supposed to be conducted by the USGS. However, he added that routine monitoring activities were not considered research and were therefore the responsibility of the FWS. Garlich-Miller also commented that the current walrus monitoring program of the FWS was the monitoring of the four major terrestrial haulouts in Alaska (Round Island, Cape Peirce, Cape Seniavin, and Cape Newenham).

Kelly asked whether the Service had plans for research that would lead to an abundance estimate for walrus. Garlich-Miller responded that the Service recognized the need for an abundance estimate, but the techniques to produce such an estimate were either not well developed or prohibitively expensive. Therefore, the Service currently viewed the following four research activities as high priority: 1) improve the estimate of  $R_{max}$  in the PBR formula; 2) improve annual estimates of total mortality due to Native subsistence hunting (in Alaska and Russia); 3) develop techniques to determine trends in abundance; and 4) finalize the decision on whether to conduct another range wide survey to estimate abundance.

DeMaster commented that the reference to the 8% figure for  $R_{max}$  in the draft SAR should be

changed from the minutes of previous meetings of the AKSRG to a FWS personal communication or another document. Garlich-Miller agreed to make this change. DeMaster added that the approach described in a recent paper by Caswell et al. for estimating  $R_{max}$  for harbor porpoise should be considered for walrus.

Kelly questioned whether index counts of male haulouts over time constituted a valid index of abundance for the population. Garlich-Miller responded that he considered the index valid and certainly better than no trend data at all. DeMaster commented that the International Whaling Commission had adopted a policy of not managing large whale populations based only on trend information and harvest monitoring data. Rather, their management strategy was based on harvest monitoring, periodic (e.g., once every eight years) estimation of absolute abundance, and a conservative estimate of maximum productivity. This conclusion was based on the results of population simulations, which indicated that a management strategy based only on trends would lead to standard management objectives not being met at an unacceptably high rate. Kookesh commented that the harvest monitoring programs were very important to maintain as they were one of the few management related programs that included the Native hunters. There was general agreement among AKSRG members that it is a high priority for the harvest monitoring programs to be continued.

Hills questioned what the base funding program was for walrus and how it was allocated to various management related activities. Garlich-Miller responded that all of the current base operating budget for walrus was used to support the harvest monitoring program. He was not able to address the operating budget of the USGS regarding walrus. However, he added that currently the USGS's research on walrus was focused on providing information on diving behavior via satellite telemetry and on foraging ecology (e.g., dietary studies).

After some discussion, the AKSRG noted that it was very difficult to develop meaningful recommendations regarding research on walrus without the participation of USGS researchers at the AKSRG meetings. Therefore, the AKSRG recommended that USGS researchers participate in future AKSRG meetings, where issues related to walrus (and the other two FWS species) were considered a priority discussion topic.

### III. 6. Schedule for Future Stock Assessment Reports

Garlich-Miller noted that the SARs for all three FWS species were revised in FY1998. He added that if there were no additional data in the next three years that would lead to a change in the classification of the stocks, the SARs would not be revised for a period of three years. After some discussion, the AKSRG noted that it was comfortable with the process by which the FWS would make an in-house determination as to whether the SARs for any of the stocks should be revised. Where such an evaluation was made, it was agreed that the FWS staff would work with

the chair of the AKSRG in scheduling discussions related to proposed revisions at subsequent meetings of the AKSRG. Pungowiyi commented that recent evidence supported the concept that the carrying capacity for species like walrus was not constant and, therefore, assumptions regarding  $R_{max}$  should be periodically re-evaluated.

#### IV. NMFS Species

DeMaster commented that the NMFS has not finalized the Federal Register notice announcing the availability of the draft revised SARs for Alaskan stocks of marine mammals. As this notice is necessary to start the 90 day public comment period, DeMaster noted that while he expected the FR notice to be published shortly, the public comment period would not be over before September 1998. He agreed to send AKSRG members a summary of public comments as was done before. Any member who wanted to see all or individual comments could of course do so.

#### V.1. Steller sea lion

##### IV.1.1. Western stock

Hill summarized the changes that were made to the SAR for the western stock of Steller sea lion. John Gauvin asked whether the index counts could be summarized by the areas used to manage the Bering Sea-Aleutian Island (BSAI) groundfish fishery. Lowry responded that while that was possible, because of the small number of rookeries per area, the CV's would be considerably larger than those currently reported in the SARs. Adkison commented that he was not convinced that the CV's for the index counts accurately reflected the true uncertainty in the counts. For example, he noted that the estimated CV for the index counts did not incorporate the variance associated with the correction factors for either the proportion of non-pups hauled or the proportion of the population that were pups. There was general agreement among AKSRG members that the calculated  $N_{min}$  for this stock was not adequately conservative. It was further recommended by Lowry, and agreed by the AKSRG, that the recent workshop report on Steller sea lions, which discussed this issue in part, be provided to each of the AKSRG members.

Beth Mathews questioned why the harvest data from 1996 were not included in the draft revised SAR. Steve Zimmerman responded that, while ADFG had produced a draft report on the 1996 harvest, the estimated number of harvested animals at the Pribilof Islands was in dispute.

Brendan Kelly recommended, and the AKSRG agreed, that a statement should be added to all of the SARs regarding the depleted status under the MMPA of all stocks listed as threatened or endangered under the ESA.

##### IV.1.2. Eastern stock

No changes were recommended, other than minor editorial comments.



#### IV. 2. Northern fur seal

Hill summarized the changes in the SAR for northern fur seals. Hild questioned whether mortality associated with entanglement in "ghost nets" (i.e., discarded or lost pieces of fishing net, line, or other types of gear) should be included in the estimate of incidental mortality. Lowry responded that reliable estimates of mortality associated with entanglement were not available and that not all of the debris in which fur seals were entangled were the result of commercial fishing. Pungowiyi commented that while not associated directly with an active fishery, this form of mortality could be associated with fishery interactions. After some discussion, it was agreed that this type of mortality should not be included in table of estimated incidental mortality.

Pungowiyi also recommended that NMFS consider delisting this stock of fur seal as depleted under the MMPA because of the stability in the pup counts over the last decade and the likely change in the carrying capacity for this stock associated with recent environmental regime shifts. Zimmerman responded that at present it was not possible to estimate the current carrying capacity for this stock. He added that based on pup counts the current population was less than 50% of the historic maximum.

#### IV. 3. Harbor seal

Lowry recommended and it was agreed that the discussion of the memo from Dave Withrow (NMML) regarding how the CV of the abundance estimate was calculated be deferred to the agenda item on future research. Kookesh recommended and it was agreed that the text for all of the stocks of harbor seal (and Steller sea lion) be clarified as to what fishery specific data (including sport fisheries) were available to indicate the extent to which harbor seals interact with those fisheries.

#### IV. 4. Beluga whale

##### IV.4.1. Cook Inlet stock

Lowry summarized the recent history of how estimates of subsistence harvest levels had been derived. There was agreement that past estimates based on household surveys alone were likely not accurate. Efforts to survey hunters directly would likely lead to less negative bias in the estimate of harvest levels. Lowry also summarized the AKSRG's position after the last several AKSRG meetings, which included the need for NMFS to start a dialog with involved Native groups regarding the possibility of listing this stock as threatened under the ESA. If successfully implemented, such an action could allow NMFS to manage the harvest of Cook Inlet belugas.

It was noted that the AKSRG had recommended that NMFS: 1) conduct annual surveys to estimate abundance and to determine trends in abundance; 2) initiate a system similar to that adopted by the FWS for walrus, polar bear, and sea otter, where reporting of animals taken for subsistence is made mandatory; and 3) NMFS should change the classification of Anchorage as a

Native village to allow NMFS to stop the commercial sale of muktuk in the Anchorage area. Kookesh commented that the last recommendation was developed at a meeting where neither Pungowiyi nor he were in attendance. Further, he wanted it noted in the minutes that he did not support such a recommendation. Pungowiyi noted his agreement with Kookesh's statement. Kookesh added that it was important for NMFS to work cooperatively with the Native community and the hunters in the Anchorage area and that NMFS should not take the lead in such management actions. After some discussion, the AKSRG agreed that as a general principle their recommendations to NMFS should focus on what needs to be done (e.g., reduce the number of belugas being killed) rather than how things should be done (e.g., prohibiting sales of muktuk).

Zimmerman responded that regarding the initiation of "marking, tagging, reporting" regulations the priority objective of the NMFS Alaska Region was to reduce the number of Cook Inlet beluga whales harvested annually by subsistence hunters, and establishing marking, tagging, reporting regulations for Cook Inlet belugas is not a current priority. This decision was based on the premise that it would be more difficult to both reduce the harvest and implement marking, tagging, reporting regulations than it would be to try to only reduce the size of the harvest. Lowry responded to Zimmerman's comments that the information from a marking, tagging, reporting program would greatly improve the estimate of the number of animals harvested annually, and that information that would become available on the age and sex structure of the harvest is critical to predicting the impact of the harvest on the population.

Craig Matkin noted that the Cook Inlet population was small (i.e., less than 1,000 animals) and that allowing the current level of Native subsistence harvest to continue at its current level (e.g., greater than 50 animals per year) would cause the population to decline and potentially become extirpated in this area. He added that the AKSRG had an obligation to serve as a conduit for information from the general public to NMFS and from NMFS to the general public. There was general agreement that, while no AKSRG member was responsible to (or for) any particular constituency, AKSRG members should attempt to discuss this issue with a wide spectrum of the general public.

#### IV.5. Killer Whale

It was noted that the recommended changes from the last meeting of the AKSRG had been incorporated into the draft revised SAR. Denby Lloyd asked why the recovery factor for both stocks of this species was 0.5 rather than 1.0, as he thought the population was within its optimum sustainable population range. Matkin responded that the data necessary to make such a determination were not available, and likely would not be available in the foreseeable future. DeMaster added that an RF of 0.5 was considered appropriate for stocks where there was uncertainty regarding stock structure (such as killer whales).

#### IV. 6. Sperm Whale

There was general agreement that references on the population size of sperm whales in the North Pacific and on  $R_{max}$  reported in Reeves and Whitehead were not based on peer-reviewed, published studies and should therefore be excluded from the SAR at this time. There was also agreement to add references from the 1998 IWC Scientific Committee meeting on the abundance of sperm whales in the North Pacific. Finally, DeMaster noted that at this year's IWC Scientific Committee meeting a paper had been tabled on the falsification of commercial whaling records by the government of Japan. It was agreed that the section on other mortality should be revised to include this reference.

#### IV. 7. Humpback Whale

Hill reported that a recent paper (Moezucca et al. 1998) on humpback whale entanglements was inaccurate regarding North Pacific humpback whales, based on a conversation Hill had recently had with one of the paper's co-authors, Gene Nitta (NMFS Southwest Region, Honolulu). There was agreement to add the entanglement information along with Nitta's caveats to the SAR.

#### IV. 8. Fin Whale

DeMaster commented that a recent in-house paper by K. Laidre (University of Washington) and S. Mizroch (NMFS NMML) included a summary of all fin whale sightings in the Platform of Opportunities Program database. Those data had recently been entered into a GIS database. Anyone interested in receiving a copy of the paper can request one from DeMaster. There were no substantive changes recommended for the SAR.

#### IV. 9. Bowhead whale

Hild questioned whether there was new information presented at this year's IWC Scientific Committee meeting in Oman. DeMaster responded that the assessment of the status of the Bering-Chukchi-Beaufort stock of bowhead whales supported last year's action of the IWC to accept a five year quota. He added that one of the papers presented at the Scientific Committee suggested that earlier studies which speculated that bowhead whales may live in excess of 100 years were likely correct. There were not substantive recommendations to change the SAR.

#### IV.10. Co-management

Fadely lead the discussion regarding the NMFS co-management program. He noted that the "umbrella agreement" between IPCoMM, USFWS, USGS, and NMFS was signed in August 1997. He added that subsequent to the signing of the umbrella agreement, cooperative agreements for the purpose of co-managing the following species are in the process of being developed: northern fur seal, harbor seal, Cook Inlet beluga whale, all other stocks of beluga whale, and Steller sea lion.

