

## Non-Target Species Committee

April 23, 2008

The Non-Target Species Committee convened at 9 am (PST) on April 23, 2008 from numerous locations. The committee's charge was to review a set of prioritized actions that the Council adopted at its February 2008 meeting, after it reviewed two staff discussion papers on a large suite of alternatives to break apart the other species complex in the GOA and BSAI groundfish FMPs and manage some or all of the groups separately. The committee also added a review of the forage fish complex to its agenda, after unusually high harvests around Kodiak resulted in numerous enforcement actions.

Seattle: Dave Benson, Julie Bonney, Lori Swanson, Dr. Paul Spencer, Janet Smoker, John Gauvin, Karl Haflinger, Jane DiCosimo, Dr. Olav Ormseth, Liz Connors, Dr. Kerim Aydin, Dr. Sarah Gaichas, Rebecca Reuter, Mary Hutzinger, Mike Guttormsen, Kenny Down.

Juneau: Jon Warrenchuk, John Lepore, Andy Smoker, Cindy Tribuzio, Dave Clausen, Johanna Vollenweider

Kodiak: Tom Pearson, Wayne Donaldson

Nome: Simon Kineen

Homer: Dr. Ken Goldman

Absent: Michelle Ridgway

I. At the request of the committee, Jane DiCosimo reviewed the ten year history of the Council initiative to revise management of the other species complex. The committee discussed the pros and cons of shifting its focus back to the larger non-target species issue rather than on interim steps, since rulemaking on annual catch limits and revised guidelines for national standards 1 (overfishing) and 2 (best available science) was expected to be published by the end of 2008. The committee also discussed concerns about the impacts of managing many, smaller allocations as these groups are managed separately.

In February 2008, the Council modified its previous suite of alternatives for analysis (see box). Those alternatives were separated into separate draft action analyses for committee review and comment: 1) move BSAI and/or GOA squid into the forage fish category; 2) move BSAI and/or GOA octopus into the forage fish category or remove it from the FMPs and defer management to the

Alternative 1.	No Action
Alternative 2.	Eliminate "other species" assemblage and manage squids, skates, sculpins, sharks, and octopi as separate assemblages.
Alternative 3.	Manage only BSAI skates and BSAI and GOA sculpins as separate assemblages.
Alternative 4.	Manage only BSAI skates as separate assemblage
Alternative 5.	Add grenadiers to BSAI and GOA TAC specification process: Option 1. in a separate assemblage Option 2. in the other species assemblage

State of Alaska; 3) delete Alternative 5 (add grenadiers to the TAC specification process); and 4) separate the proposed alternatives into distinct BSAI and GOA amendment packages.

II. The committee recalled the requirement for implementing **annual catch limits (ACLs)** by 2010 according to the Magnuson-Stevens Act and that proposed rulemaking for ACLs has been delayed. The committee requested an update on how they may affect management of other species and non-target species in the North Pacific. Drs. Paul Spencer and Olav Ormseth reported on their participation in the Vulnerability Evaluation Working Group, one of three groups developing national policy guidance on ACLs. This group is developing technical guidance for evaluating the relative vulnerability of species within a given FMP. The approach computes vulnerability as a function of: 1) the ability of stock to recovery from fishing impacts; and 2) the susceptibility of the stock to fishing impacts. Several fisheries throughout the U.S will be used as case studies in the final report, which is scheduled for completion in

December 2008. Two other groups are compiling reports on 1) dealing with uncertainty and how to translate that into management measures and 2) dealing with the role of the SSC and the issue of independent review of stock assessments.

III. Staff briefed the committee on a 2007 petition to list populations of Pacific **eulachon** in Washington, Oregon, and California as a threatened or endangered species under the Endangered Species Act (ESA). In response, NMFS will initiate a status review of the species regarding the population structure and status of Pacific eulachon throughout their range in Alaska, British Columbia, Washington, Oregon, and California. Mike Guttormsen presented information on eulachon in the GOA, including some results from the 2008 EIT (acoustic) survey in Shelikof Strait. This survey covered the entire sea valley associated with the strait, i.e., it extended approximately 100 nm south of Kodiak. Eulachon constituted 43% of the biomass recovered in sample tows. The proportion of eulachon in tows was also highly variable, so some tows were almost entirely eulachon. This result is consistent with a general trend during the 2000s of an increasing proportion of eulachon (relative to pollock) in EIT sample tows. Part of this is due to decreasing pollock abundance, but recent trends are separate from that. The surveys use a 1.25" mesh liner in the codend, but tend to lose a substantial number of eulachon through the net. AFSC staff (Kresimir Williams) is analyzing this type of escapement. Over the last two decades there has also apparently been a shift in eulachon distribution. Before 1991, there were few eulachon along the western edge of Shelikof Strait, where most of the pollock were located. During the 1990s more eulachon moved into this area, and since 2000 eulachon have been ubiquitous in the strait. Eulachon are hard to assess using acoustics because they have no swim bladder. Using different acoustic frequencies may allow for direct estimation of eulachon abundance, but another possibility is to estimate eulachon as a proportion of the pollock abundance, which is easier to estimate. Eulachon generally occur lower in the water column than do pollock. The separation of the two species appears to follow a diurnal cycle.

Olav Ormseth advised the committee on the composition of these offshore, anadromous eulachon stocks. Rob Spangler (US Forest Service) is working on some genetics of eulachon in the Twentymile River (Cook Inlet), and the Auk Bay Lab staff is conducting similar genetic studies of eulachon in southeast Alaska. Eulachon found off British Columbia apparently come mostly from Canadian stocks, so ocean migrations may not be very extensive, but there is only one study that has looked at this so far. No efforts are currently underway to look at the composition of offshore stocks in Alaska. Spawning runs of eulachon are found throughout Alaska. Historically there have been huge runs in the Fraser and Columbia Rivers, but these have diminished in recent years. In early 2008 a petition was submitted to list eulachon in Washington, Oregon, and California as an endangered or threatened species. It is not known if any lower-48 or BC eulachon are found in Alaska. There was discussion about the difficulty of estimating eulachon biomass from spawning runs.

Tom Pearson referenced the materials he provided for the meeting, which indicate that the Gulf of Alaska eulachon population periodically peaks, as it is doing now. Julie Bonney reported that the Kodiak-based pollock trawl fishery progressed differently in 2008. The fleet was fishing near Areas 610 or 620, about 20 h from town; when pollock are closer to town, then the fleet has a 12 h run to the grounds. Staff reviewed the history of the development of the forage fish category and the maximum retainable allowance (MRAs) of forage fish in directed fisheries. The committee discussed that if the Council decides to consider adding new species to the forage fish category, then the analysis should also consider new MRA rates and the possibility of removing processing restrictions (i.e., eliminating the fishmeal-only provision). Management issues related to the forage fish category was discussed more below.

IV. Dr. Kerim Aydin presented a summary of the central role that **squids** play in the Bering Sea ecosystem, compared with the localized effect that **octopuses** play (i.e., they can be an important prey for a few species and therefore has a more questionable role as forage species).

Liz Conners provided discard mortality rates for octopus in the groundfish fisheries (see box below). While octopuses are not a directed fishery, they add economic value as incidental catch to the cod pot fishery. Because octopuses are poorly sampled in the trawl surveys, the OFL and ABC estimates are based on historical catches. The current levels of removals do not appear to be a conservation concern.

Wayne Donaldson summarized a written report on state fishery management of octopuses. The committee agreed with the staff conclusion that there was no clear advantage to state management of octopuses. The state report also identified a management problem the results from different approaches between state and federal management. The committee endorsed Council consideration of action to address the concerns that ADF&G staff identified in its paper (Appendix). Jane DiCosimo suggested that this paper could be added to the Joint Plan Team meeting agenda in September 2008.

The committee discussed that some of the larger squid (e.g., *Berryteuthis magister*, commonly referred to as “red”) may not have the same forage role as some of the smaller squid species, although they are eaten by larger animals such as toothed whales. Kerim Aydin presented the role of squid in the ecosystem, noting that they occupy a trophic level that is similar to many of the species currently in the forage fish category. Aydin's ecosystem model suggests that an average of 1 million mt of squid are consumed in the BSAI by all predators, compared with a tiny amount taken by commercial fisheries. An even smaller proportion of squid are taken by the commercial sector in the GOA. The committee suggested that there may not be a conservation concern for squid given those numbers, and that an unnecessary move of squid into the forage fish category may present other difficulties. They were concerned about additional and more constraining limits on the fisheries that incidentally catch squid. While there is no incentive to target squid, the industry may want to market incidental catches. Processors put up squid for bait for the crab season. Catcher vessels delivering to shore do not sort at sea, but brings all of its catch to shore. While commercial fisheries typically are not retaining squid, they do not control harvests at sea in order to discard incidentally caught squid down to the MRA. And the MRAs are accounted instantaneously rather than by trip and therefore can result in violations. While squid harvest can be avoided, changes in fishing behavior are expensive. Julie Bonney noted that current Tier 6 specifications are an artificial cap based on catches from the foreign fishing period, when catches were higher than in recent years.

Olav Ormseth summarized the status of squid assessments. There are 15 species in the Bering Sea and 18 species in the Gulf of Alaska. Because AFSC surveys are inappropriate for surveying squids, biomass information on squids is considered unreliable. Squids are identified to species in the AFSC bottom trawl surveys, and length data from the surveys and fisheries are becoming increasingly available. The Tier 6 specifications include early (since 1978) foreign directed fishing catches. Ormseth considers squids to play a forage role in the ecosystem. He suggested that while MRAs need to accommodate some level of incidental catch of squids, they also need to be based on maintaining a sustainable level for the populations. Tom Pearson concurred that if squids are moved into the forage fish category, then appropriate MRAs and processing limits should be implemented for them in the category.

Jon Warrenchuk suggested that MRAs under the forage fish category may not necessarily be the best management for squids since there is no upper limit on harvests, such as an OFL. He felt that management under current specifications has been adequate.

Sarah Gaichas identified what would be needed to allow development of a new directed fishery: species identification of the catch, biomass estimates, and catch accounting. Exempted fishing permits could be used to collect additional life history and food habit data. This was the planned approach for a developing GOA skate fishery, but the commercial fleet did not initiate discussions with the Council or NMFS to develop an EFP and a directed GOA skate fishery has not been authorized.

V. Dr. Dave Clausen summarized a paper prepared for committee review on **grenadiers**, which provided the AFSC rationale for including grenadiers in Alaska Groundfish FMPs. Reasons included: 1) ecological importance of giant grenadier; 2) high rates of bycatch and discards of giant grenadier, which far exceeds that of any other non-target species in the “other species” or “non-specified” categories in both the GOA

and the AI; 3) while overfishing does not appear to be occurring, giant grenadier may be particularly susceptible to overfishing because of its 100% discard mortality rate, the disproportionate catch of females, and the documented vulnerability of many deep-sea fish to overfishing because of their peculiar life history traits; and 4) grenadiers meet the definition of “other species” although this same definition was used to justify its removal from the other species category and placement into the ‘non-specified’ category under GOA FMP Amendment 5.

There was concern expressed by the non-target committee that observer coverage in the sablefish fishery may not be robust enough to determine grenadier catch within the fishery. This is also true for the halibut longline fishery, although Julie Bonney reported that IPHC staff thinks that very few, if any, grenadier are caught in that fishery. A large component of the shoreside sablefish fleet is under 60 ft and has no observer requirements. According to observer data tables provided by NMFS, observed catch for the shoreside sector for the GOA sablefish hook and line target fishery ranged from 13% to 14% for the years 2004 to 2006. Janet Smoker reported that there was good observer coverage on turbot boats.

Dave Benson suggested that there was more rationale for moving grenadiers into the specification process in the GOA than in the BSAI based on biomass. Staff acknowledged that using Pacific g for proxies, proxy results in lower M and therefore higher ABC; area of greatest abundance is WGOA and EBSAI.

Staff identified that moving grenadiers into the FMPs would not change their harvest estimates in the catch accounting system unless retention was required and that the additional grenadier TAC (admittedly small, at about 4,500 t) would count against the 2 million mt OY cap in the BSAI and could lower TACs for more valuable species.

Jon Warrenchuk noted that grenadiers account for the biggest bycatch/mortality issue in the North Pacific that is not being addressed by the Council. He added that we have good estimates of grenadier biomass and bycatch and a framework in place for their management.

**Priorities** The committee applied two criteria in developing its recommendations for prioritizing analyses: conservation concerns and data availability. While the committee identified high conservation concerns for sharks, skates, grenadiers, and sculpins, it recommended that the Council set the highest priority for preparation of an analysis in 2008 to separate skates from the BSAI other species complex. This priority was based on 1) its Tier 5 status (having a reasonable estimate of biomass upon which to base annual specifications), 2) its potential economic value as a fishery, 3) parity with the GOA FMP amendment (#63) to separate skates from the GOA other species complex in 2005, and 4) enhanced protection of remaining groups in the other species complex by removing a high biomass (and ABC) from the cumulative biomass for the complex. Jane DiCosimo responded that she and Scott Miller could prepare a draft analysis for Council review in October 2008, if the Council concurred with this committee recommendation.

The committee identified preparation of an analysis for BSAI and GOA squid as its second priority. This analysis would include two alternatives to 1) manage GOA squid separate from the complex (BSAI squid is already managed separately) and 2) move them into the forage fish category. This latter action would include a review of the forage fish category and development of appropriate maximum retainable allowances for squid, as the current maximum retainable allowance for the category (2 percent) is not viewed as appropriate for squids. Jane DiCosimo reported that this analysis could be scheduled for initial review as early as April 2009.

The committee identified BSAI sharks as having the highest conservation priority, but low data availability. Therefore the committee gave this complex a medium ranking for action. The committee noted that Council action for separating sharks from the other species complex should be scheduled after significant improvements during the next two assessment cycles on both BSAI and GOA shark complexes were completed. Jane DiCosimo reported that this analysis could be scheduled for initial review possibly in October 2009.

The committee did not rank the remaining groups (octopuses, sculpins, and grenadiers) for action at this time. It concluded that the Council might prefer to reevaluate action for the broader non-target species initiative in two years (see below).

- A. BSAI skates (1<sup>st</sup>)
  - 1. No Action
  - 2. Separate into its own specification group
  
- B. BSAI and/or GOA squid (2<sup>nd</sup>)
  - 1. No Action
  - 2. Move BSAI and/or GOA squid into forage fish category
  - 3. Separate GOA squid into its own specification group
  
- C. BSAI and/or GOA sharks (3<sup>rd</sup>)
  - 1. No Action
  - 2. Separate into their own specification groups
  - 3. Non-Target Species Management Approach
  
- D. BSAI and/or GOA octopus
  - 1. No Action
  - 2. Move into forage fish category (with different maximum retainable allowance)
  - 3. Separate into their own specification group
  - 4. Non-Target Species Management Approach
  - Option: Harmonize state and federal regulations (HIGH)
  
- E. BSAI and/or GOA sculpins
  - 1. No Action
  - 2. Separate into their own specification group
  
- F. BSAI and/or GOA grenadiers
  - 1. No Action
  - 2. Set BSAI and/or GOA grenadiers as specification groups
  - 3. Non-Target Species Management Approach

## **APPENDIX. Brief overview of octopus management in state waters and our understanding of octopus management in federal waters.**

Contributions from:

Alaska Department of Fish & Game (ADF&G) staff in Southeast, Prince William Sound, Cook Inlet, Kodiak, Chignik, South Alaska Peninsula and BSAI management areas

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National Marine Fisheries Service (NMFS) classifies octopus as a groundfish in federal waters, whereas the state of Alaska classifies octopus as a miscellaneous shellfish in state waters. Different classification by state and federal management systems results in fishery management that is not coordinated for this transboundary species.

### **State Waters**

Directed fishing for octopus in state waters may occur only by commissioner's permit (5 AAC 38.062) and requires a Commercial Fisheries Entry Commission (CFEC) interim use permit card for octopus. The commissioner's permit allows ADF&G to stipulate harvest location and duration, limit gear and other harvest procedures, and require periodic or annual reporting. Commissioner's-permit terms are crafted to structure fishing so that ADF&G may gather CPUE, distribution and other biological data with gear restrictions designed to reduce crab and fish bycatch. Harvests are closely monitored through catch reporting and biological catch sampling. In Westward Region, during recent years only several vessel operators have requested this permit and harvests have been very limited. In Prince William Sound no permits have been issued in recent years. Cook Inlet is closed to directed fishing; octopus may only be retained as bycatch. In Southeast Alaska, in the 1980s, permits were issued for exploratory fisheries using lair pots but catch was insignificant. Since 2000, two permit requests in Southeast Alaska for a directed octopus fishery were denied since ADF&G has no funding or program in place to sustainably manage a directed octopus fishery. In all management areas there are no preseason harvest levels established for octopus, or survey or biomass information.

Retention of octopus bycatch in other directed fisheries within state waters is allowed (this would include parallel groundfish fisheries). In most management areas bycatch is allowed at 20%, however in the Southeast Alaska pot shrimp fishery octopus bycatch is limited by permit to 5% of the total converted whole weight of shrimp on board the fishing vessel. In Southeast Alaska a commissioner's permit is required for retaining octopus bycatch, however the bycatch is landed on the directed fishery CFEC permit card. In Southeast Alaska, since 2001 an average of 22 permits have landed an average of 2,806 pounds of octopus per year, 0.3% of total shrimp landings.

Bycatch is landed on the harvester's directed species CFEC permit, not an octopus CFEC permit. This practice allows ADF&G to calculate the octopus bycatch harvest as a percentage of the target species harvest. Bycatch retention does not require a registration, except in Southeast Alaska. Octopus are regularly landed as bycatch, constituting the bulk of octopus landed from state waters.

### **Federal Waters**

In federal waters octopus is open to directed fishing with any legal gear for groundfish. Octopus are part of the federal "other species" groundfish assemblage. The TAC for this assemblage is set at an arbitrary percentage of all other TACs. These levels are generally set to provide for traditional bycatch retention without restricting the major directed fisheries and to provide limited opportunity for the development of new fisheries. Substantial bycatch landings of octopus occur during the Pacific cod fishery. At times these incidental harvests are landed on a CFEC octopus permit card indicating a directed fishery, whereas they were actually taken in conjunction with fishing for another species. Landing octopus on a separate

octopus permit card does not provide a true picture in the state's fish ticket database of harvesting practices.

If a directed octopus fishery were to develop in federal waters there are few protection measures in place. Skates are a good example of a species that was in the other species assemblage and quickly developed into a targeted fishery simultaneous to the Pacific cod fishery, particularly for the longline fleet. In 2003, markets for skates developed creating rapid increases in effort and harvest. The 2002 skate harvest in the Central and Western Gulf was 15.9 million pounds and the 2003 harvest was 74.1 million pounds.

### **Concerns**

The management differences for octopus between state and federal waters may lead to misreporting of octopus bycatch harvests when vessel operators are participating in a directed fishery that is open in state and federal waters (e.g. parallel/federal Pacific cod). A vessel participating in both state and federal waters could not land more than 20% octopus bycatch from state waters but could land an amount above 20% from federal waters.

The generic life history of octopus is conducive for a viable directed fishery because they are short-lived, fast growing, and are fecund. However, little is known about the species assemblage. Cephalopod identification is difficult and it is likely that there are several species that are harvested in Alaska. The majority of harvested octopus is assumed to be the Giant Pacific octopus. Biomass, migrations, and discard mortality by gear type and the level of non-reporting of octopus retained for personal use as bait, are unknown. Biomass estimates of octopus from the NMFS trawl survey have been produced but are considered highly unreliable.