


MEMORANDUM

TO: Council, SSC and AP Members

FROM: Chris Oliver 
Executive Director

DATE: June 3, 2003

SUBJECT: Groundfish Issues

ESTIMATED TIME 1 HOUR

ACTION REQUIRED

Ad hoc working group report on rockfish/non-target species management

BACKGROUND

An ad hoc working group has met three times in 2002 and 2003 to develop recommendations for revising management of all non-target groundfish species managed under the BSAI and GOA groundfish fishery management plans based on a proposal (Item D-1(a)) submitted to the Council by the groundfish plan teams. The reports for its three meetings are attached as Items D-1(b), (c) and (d). The group likely will meet one more time before presenting its conclusions to the Council in October 2003. Staff plans to present the conclusions to the BSAI and GOA Groundfish Plan Teams at their joint September 2003 meeting, and to the Council's committee (nominations close on June 20 for appointments to this committee).

Work group recommendations include:

1. The group recommended that the Council send a letter to Dr. Hogarth supporting the 2003/2004 Other Species Research Plan funding and for full funding of the North Pacific Rockfish Research Plan for 2004 and beyond, which were developed under the Stock Assessment Improvement Plan.
2. The group recommended that the Council send a letter to Dr. Hogarth supporting the incorporation of additional data collection on minor species into the national observer program design.
3. The group recommended that additional skate observer manuals be distributed widely to the observer corps, cadre, and fleet to collect as much voluntary information as possible.
4. The group recommended restarting the analysis to separate BSAI and GOA skates from the "other species" complexes. A developing fishery for GOA skates may warrant additional management action for 2004.

At its April meeting, the Council indicated its intent to schedule a day-long session to review rockfish biology and management. The Council may wish to identify at which meeting it plans to receive these presentations (I have tentatively scheduled that for the December meeting).

FISHERY MANAGEMENT PLAN AMENDMENT PROPOSAL
North Pacific Fishery Management Council

Name of Proposer: Jane DiCosimo Date: August 20, 2002

Address: North Pacific Fishery Management Council
605 W. Fourth Avenue, Suite 306
Anchorage, Alaska 99501

Telephone: 907/271-2809

Please check applicable box(es):

- IFQ Program
- Bycatch Reduction
- BSAI Groundfish FMP
- GOA Groundfish FMP
- BSAI Crab FMP
- Scallop FMP

Fishery Management Plan: BSAI and GOA Groundfish

Brief Statement of Proposal: Revise the alternatives in Amendments 63/63 or initiate new plan amendments to:

- (1) identify the fishery management units in the groundfish FMPs to include only target and non-target species categories (non-specified species allow for incidental catch measures and monitoring but are outside of the FMP);
- (2) list the species in the target and non-target species categories that are within the FMP management area;
- (3) identify a *policy* based on scientific *criteria* to determine single species or assemblage management (split or lump);
- (4) identify a *policy* based on scientific *criteria* to determine when sufficient data is available to move species from the non-target to target species categories.

Objectives of Proposal: (What is the problem?)

- (1) not identifying the species in the fisheries management unit has led to an overly broad interpretation of the species under management in some cases;
- (2) NMFS currently reports every species (including anomalous catches, misidentified species, etc.) that appears in the observer and survey databases, and NMFS and the Council is ultimately graded on the status of overfishing for all of them;
- (3) the Council currently uses ad hoc approach recommended by Plan Teams and SSC for splitting lumping species;
- (4) the "other species" category includes species/groups for which directed fishing does not occur/is not desirable from an ecosystem perspective.

Need and Justification for Council Action: (Why can't the problem be resolved through other channels?)

Moving species to the forage fish category and revising the "other species" category to a non-target category require plan amendments. Some, but not all, of the proposed goals of the proposal can be met by separating species out of assemblages and setting TACs at bycatch levels in the annual specifications process. This is limited for the GOA groundfish FMP, where the FMP requires the other species TAC be set equal to 5 % of the cumulative TACs of all other groundfish. This proposal also would incorporate the proposal by the State of Alaska to manage sharks and skates as bycatch fisheries.

Foreseeable Impacts of Proposal: (Who wins, who loses?)

FMP amendments would be required to change species listed in the FMPS, should they require revision. Setting policies based on scientific criteria would result in unbiased determinations of when actions (categorizing species or assemblages (decision 1) into target, non-target, or forage fish categories (decision 2)) should occur. Species would be managed under a more precautionary approach, at the risk of closing commercial fisheries that land those species needing additional protection.

Are there Alternative Solutions? If so, what are they and why do you consider your proposal the best way of solving the problem?

The analysis could consider setting criteria in the FMPs, but allowing the Council to make decisions 1 or 2 (see above).

Supportive Data & Other Information: What data are available and where can they be found?

The groundfish Plan Teams and Scientific and Statistical Committee have recommended that a uniform approach to BSAI and GOA groundfish management be applied, rather than the current ad hoc approach. Setting a policy after analysis and debate should eliminate contradictory advice offered by the teams and SSC, as has occurred in the past.

Ad hoc meeting on non-target species management May 5-6, 2003

The ad hoc group on non-target species management convened on May 5-6, 2003 for its third meeting. Sue Hills, Pat Livingston, Sarah Gaichas, Jim Ianelli, Grant Thompson, Joe Terry, Paul Spencer, Andy Smoker, Tom Pearson, Galen Tromble, Ivan Vining, Mike Ruccio, and Jane DiCosimo attended the entire meeting. Anne Hollowed, Terry Quinn, Doug Limpinsel, Kerim Aydin, Rebecca Reuter, Mary Furuness, David Ackley, and John Lepore attended part of the meeting.

Review. Sarah Gaichas and Jane DiCosimo presented a quick overview of previous group discussions and April 2003 Council meeting comments.

Stock Assessment Improvement Plan. Life history information is generally not available, so monitoring minor species and in general increasing knowledge of these species are critical features of proposed management changes. Anne Hollowed reported that AFSC received \$2.1 M for 2003 and \$1.9 M for 2004. Projects that got funded include: (1) developing aging techniques for non-target species; (2) increased observer sampling; (3) investigate changes to observer sampling protocol; (4) systematics of "other species" components; (5) additional stock assessment staff for other species and other flatfishes and rockfishes; (6) improving MACE division staff for research vessel operations; (7) maintain bottom trawl survey; and (8) pilot or single year projects. The following are included in item 8: (a) catchability of other species in bottom trawl surveys to improve biomass estimates, (b) investigation of juvenile flatfishes in the inner front in the GOA and BS, (c) habitat of juvenile rockfishes around Pribilofs; (d) survey standardization; (e) add assessment scientist at Auke Bay Lab for sharks and grenadiers; (f) enhance BS trawl survey funds; (g) development of molecular markers for species identification; (h) sampling of SR/RE bycatch in the sablefish fishery; (i) fisheries oceanography program to bridge gap between at-sea fishery programs and ecosystem integration in stock assessments.

Anne continued with a summary of proposed \$2.9 M rockfish research for 2003/2004 that was presented to the Council in April 2003. **The group recommended that the Council send a letter to Dr. Hogarth supporting the 2003/2004 Other Species Research Plan funding and for full funding of the North Pacific Rockfish Research Plan for 2004 and beyond that were developed under the Stock Assessment Improvement Plan.** The letter also should note the need for full funding of ongoing research surveys so that new monies are spent on new research.

Doug Limpinsel reported on an AFSC pilot program which temporarily funded paired observers to collect additional life history information and species identifications on shortraker and roughey rockfishes in longline fisheries. Coordination with the Observer Program will be critical for the proposed management program to succeed. The program will need to increase sample sizes to improve estimates for rarer species. **The group also recommended that the Council send a letter to Dr. Hogarth supporting the incorporation of additional data collection on minor species into the national observer program design.**

Developing Kodiak skate fishery. Mike Ruccio reported on a developing small boat, longline skate fishery near Kodiak in spring 2003 (Appendix 1). Under a 1998 Alaska Board of Fisheries action, a Commissioner's permit was required to target skates in state waters. Participants requested permits after the cod fishery closed this spring. Permits for fishing in state waters are only issued when the other species category is open and the gear type to be used remains open federally. There were landings reports for vessels operating in state or federal waters, weekly production reports from federally permitted processors, but there were no logbooks, vessel observers, or plant observers (plant volume too low) Mike reported that most Bathyrja are going to meal plants. No one at the state has experience in ageing skate species. NMFS and ADFG staff will measure

skates in dockside sampling and summer surveys to reconcile NMFS and ADFG data. Due to other state management priorities, sampling skates from federal waters has dropped from #3 to #7. No additional Federal staff are available to sample this fishery, although some observers received training to identify skate species, but were not assigned to these vessels. Skate ID manuals were produced but not distributed to all observers. ADF&G continues to sample all landings from state waters. Two processors are processing skates. Landings in 2002 went mostly to meal; directed harvest of skates in the 2003 longline fishery increased tenfold. Trawl catch is increasing also. The dried product is shipped to Korea. **The group recommended that additional manuals be distributed widely to the observer corps, cadre, and fleet to collect as much voluntary information as possible.**

The group recommended restarting the analysis to separate GOA skates from the “other species” complex as listed below. The proposed FMP amendment could create new data collection/reporting/observer requirements, provide Regional Administrator authority for an EFP-type program, include estimate of economic cost of management program.

Alternative 1. No action

Alternative 2. Separate GOA skates from the “other species” complex, assign OFL, ABC, TAC, Option. Place skates on bycatch status

Council comments. Grant Thompson led a discussion of whether the Council has legal authority to create a new category in the groundfish FMPs for groundfish species that would not be subject to OFLs, ABCs, or TACs. The question posed by the Council was: *Does every stock of fish within the Council’s geographical area of authority have to be a member of some group for which OY and OFL are specified?* The Short Answer: No. (See Appendix 2 and 3 for the long answer).

However, we do not yet have an answer to the following, and perhaps more relevant, question. Can we prevent target fisheries for non-target species if they are not in an FMP and, if they are in an FMP, do we need to establish an OFL and MSST for them? We believe the answer to this question is yes, but General Counsel has not yet confirmed this.

SSC comments The group discussed the SSC response to its March 2003 recommendations on separate management strategies for target and non-target groundfish and the application of Tier 3 as a minimum standard for allowing target fisheries to occur. The SSC approved of the former, but disagreed on the latter, favoring an ad hoc approach with the stock assessment authors, plan teams, and SSC. The group agrees that tier 3 information is often sufficient but not always necessary to provide adequate protection for target species. The group, SSC and Council will need to develop criteria or a process for determining if there is adequate information to switch a species from the non-target to the target category.

Management objective for non-target species The management goal for target species is to optimize yield. The catch of non-target species is retained or discarded incidental catch. Therefore, based on the broad definition of bycatch used by NMFS, the catch of non-target species is bycatch and the appropriate management objective is to decrease bycatch to the extent practicable (National Standard 9). It is practicable to reduce bycatch mortality if a reduction in bycatch mortality would increase the overall net benefit of that fishery to the Nation. Identifying when it is practicable to decrease the bycatch mortality for particular species is a difficult issues that is at the heart of this proposal.

Some suggestions for management sub-objectives for use in determining when it is practicable to decrease bycatch of non-target species include the following:

- Fisheries will not cause an unacceptable risk of extinction.

- Non-target population should be healthy, sustainable.
- Fisheries will not cause an unacceptable risk of a steep and rapid population decline.

The group, SSC and Council will need to develop criteria or a process for determining the extent to which it is practicable to decrease the bycatch of non-target species, where it is understood that the overall fishery management regime and the methods used to decrease bycatch are among the factors that determine the extent to which it is practicable to decrease the bycatch of non-target species.

Secondary goals include:

- Preventing “squid boxes” (a constraint on a target fishery resulting from the fishery hitting its catch limit of a non-target species before hitting the limit of the target)
- Determining whether cost of recovering a stock may exceed the benefits
- Developing an accounting system that provides “early warning”
- Examine distribution effects of: (a) chasing a fishery into different bycatch areas because of closed areas for a given non-target species and (b) shrinking species distribution as a result of indirect fishery effects.

Observer Program. The proposed management program would serve as an early warning system. The North Pacific and National Observer Programs will be critical components of this program. Collection of additional information on more species will require either: (1) reallocation of current observer program costs or (2) increased observer program costs. The group discussed how much observer time should be spent on collecting data on rare species. The fishery and survey data may be used to identify sensitive, nonsensitive, and uncommon species. The goal would be to make the best use of existing data, not to expand hugely beyond what we have now. The group needs to further discuss how we account for rare species to assess their biomass (next meeting).

The observer program does not sample the small boat fleet, a significant portion of the current directed fisheries. The group noted that data collection/monitoring issues are being discussed in other management initiatives: (1) improved retention/utilization in the BSAI; (2) GOA groundfish rationalization; (3) restructuring of the observer program and its funding mechanism. Monitoring is key under all management programs. Each of these analyses (including non-target species) should be analyzed under all these management scenarios.

The group discussed categorizing species as sensitive or non-sensitive. Some complexes may be either due to trophic role, ecological importance, low abundance, low fecundity, long life, slow growing, poorly understood, current stock trend, historical abundance. Life history traits may lead to a determination of sensitive. Non-sensitive species were identified as high r-selected¹ species; squid and Alaska plaice are examples. Sensitive species were identified as low r-selected species, such as rockfish and sharks. Sensitivity to negative fishery effects would determine the priorities for data collection. Non-sensitive species may be limited to a monitoring program. A research plan would be needed to develop an optimal sampling methodology. The group identified tentative non-target monitoring categories: high, medium, low (uncommon).

¹r selected species are defined by an unstable environment; density independent; small size of organism; energy used to make each individual is low; many offspring are produced; early maturity; short life expectancy; each individual reproduces only once; most of the individuals die within a short time but a few live much longer

A species may be a target species in one management area and a non-target or transition species in another. For example Dover sole is a target species in the GOA, but may be a non-target species in the BSAI. Pollock could be a target species in the BS, a non-target species in the Bogoslof area, and a transition or target species in the AI. **The group identified the following case studies to be prepared by AFSC staff for the next ad hoc meeting.**

non-sensitive: BSAI and GOA squid (Sarah Gaichas)

sensitive: BSAI northern rockfish (Paul Spencer)

transition: BSAI and GOA skates (Sarah Gaichas)

Two methods for opening a target fishery were discussed: (1) industry would request a directed fishery or (2) the Plan Teams would report that the retention rates of a particular species are maximized and may warrant consideration to transition them from the non-target category to a directed fishery under a plan amendment. The first year could be an experimental fishery (issue a permit and attach conditions, for example, small vessels using longlines have to take a VMS or observer. The groups needs to address whether an EFP is an appropriate process for a developing fishery (**next meeting**). The group also needs to identify appropriate monitoring/observer programs or do it case by case (**next meeting**). The new NMFS catch accounting system was implemented with the goal of computing catch of species using the same method as for PSC. Which species appear enough in the observer sampling that makes it reasonable to do estimates? Species that are rare might be most sensitive to harvest (and are also more subject to sampling error).

The proposed process would involve the Groundfish Plan Teams. AFSC staff monitors harvests and reports to the Plan Teams at their September meetings. Plan team looks at trends, picks from management options depending on category of species and severity of problems. It forwards recommendations either for additional targeted data collection or fishery restriction to the SSC and Council. The SSC makes its recommendations to the Council, and the Council recommends to NMFS.

The group seeks procedural guidance from the Council regarding further development of its recommendations. The group is recommending a short term fix for the developing skate fishery while the long term management issues are resolved. The group could recommend one amendment package to address long term management of all non-target species simultaneously. This has the inherent risk of delaying implementation for all species should management approaches for a few species be more difficult to resolve. Or the group could recommend three separate amendments, for (1) non-target rockfishes; (2) non-target flatfishes; and (3) other species (which could be expanded to include grenadiers, eelpouts, etc.). The Council could set the priorities of development of these amendments, which due to staffing constraints, may have to occur sequentially.

Next meeting: tentatively scheduled for 1-2 days preceding the Groundfish Plan Team meetings.



**AD HOC WORKING GROUP ON GROUND FISH
MANAGEMENT, MAY 5 and 6
Overview of ADF&G skate fishery management and data
collection, 2003**

Skate fisheries in state waters:

- ◆ Alaska Board of Fisheries requires a Commissioner's permit for vessels targeting skates in state waters (adopted 1998). Permit stipulations can:
 - ◆ Restrict depth of fishing operations
 - ◆ Specify season dates
 - ◆ Specify areas of fishing to district, subdistrict, or other portions of a management area
 - ◆ Establish minimum size limits
 - ◆ Specify legal gear types and configuration
 - ◆ Require completion of logbooks
 - ◆ Require other conditions determined to be necessary for conservation and management purposes. On our permits these include:
 - ◆ Vessels required to notify ADF&G of deliveries (to ensure dockside sampling can occur) when skates landed in state waters total more than 20% of the total skate poundage
 - ◆ ADF&G reserves the right to deploy staff as onboard observers
 - ◆ Bycatch limits mirror those in place for adjacent federal fisheries
 - ◆ Permits are valid for 90 days at a time

- ◆ To date, ADF&G has only issued skate permits for state waters when the 'other species' assemblage is open in adjacent federal waters and the gear type to be used is open. It is not ADF&G's intention to develop a state water fishery that operates independently of the federal TAC.

Shark Fisheries in state waters:

- ◆ There is no open season for sharks, except sharks may be retained as bycatch in state waters (adopted 1998).
 - ◆ Any person that retains any shark species must sell or utilize the shark and the fins, head, and tail must be attached at the time of sale.

- ◆ ADF&G Sport fishing restrictions limit harvesters to two sharks per year.



NOT VALID FOR REGISTRATION

Commissioner's Permit Requirements for Directed Skate Harvest

1. Valid CFEC interim-use permit card for miscellaneous finfish required.
2. This permit is valid for 90 days from issuance only if adjacent federal waters are open for the "other species" category and gear type operated. Bycatch allowances will mirror those in place for the federal fishery.
3. Fishing may only occur in the _____ groundfish registration area as specified in 5AAC 28._____.
4. A fishing logbook is required and must be submitted with the fish ticket at the time of landing directed fishing amounts of skates.
Logbook must contain the following information:
 - Date fished
 - Each set location by latitude and longitude of beginning and ending location
 - Average depth of each set
 - Average soak time for each set
 - Number of skates per set
 - Number of hooks per skate
 - Number of skates, Pacific cod, pollock, halibut, dogfish, Pacific sleeper sharks, salmon sharks, other flat fish, sculpins, crabs and other fishes caught per set
5. Only longline, mechanical jig or hand line gear may be used.
6. ADF&G must be notified about all deliveries (including advance notice for evenings and weekends as needed, 486-1840 message phone) when skate poundage exceeds 20% of the delivery.
7. The department reserves the right to deploy ADF&G personnel as an onboard observer with cost borne by the department.
8. Failure to complete all fields requested in the fishing logbook, notify ADF&G of deliveries, or comply with the other stipulations specified above will result in revocation of this Commissioner's permit.

Department Representative Date

Operator Date

Vessel Name ADF&G #

CFEC Permit Number

Table 1. Kodiak vicinity of the CGOA skate harvest from state and federal waters through April 21, 2003

Gear	State waters			Federal waters			Total		
	Pounds	Metric Tons	Vessels	Pounds	Metric Tons	Vessels	Pounds	Metric Tons	Vessels
Trawl	6,972	3	3	315,641	143	29	322,613	146	34
Longline	332,192	151	34	1,231,312	559	39	1,563,504	709	51
Total	339,164	154		1,546,953	702		1,886,117	856	

Source: Alaska Department of Fish and Game fish ticket database, 4/21/03

Table 2. Kodiak vicinity of the CGOA skate harvest from state and federal waters, 2002.

Gear	State waters			Federal waters			Total		
	Pounds	Metric Tons	Vessels	Pounds	Metric Tons	Vessels	Pounds	Metric Tons	Vessels
Trawl	19,500	9	13	1,333,019	605	29	1,352,519	614	30
Longline	29,577	13	17	120,599	55	37	150,176	68	44
Total	49,077	22		1,453,618	659		1,502,695	682	

Source: Alaska Department of Fish and Game fish ticket database, 4/29/03

- This includes all skate information sampled before May 1, 2003

Skate deliveries sampled

State-waters only:	3
Federal waters only:	16
Mixed state and federal waters:	1
Total skate samples:	20

Species and sex composition of samples

Total skates: 962

- Big skates 79%

Females:	529	78%
Males:	148	22%
Total big skates:	677	

- Longnose skates 21%

Females:	97	52%
Males:	88	48%
Total longnose skates:	185	

- Bathyrāja spp. skates

Females:	77
Male:	23
Total <i>Bathyrāja</i> spp. skates:	100

These are sampled opportunistically, so the proportion sampled is not the same as the proportion in the catch and is not included in the overall percentages of big and longnose skates

Bathyrāja spp. breakdown

Bathyrāja aleutica

Females:	63	<u>79%</u>
Males:	17	<u>21%</u>
Total <i>Bathyrāja aleutica</i> :	80	

Bathyrāja parmifera

Females: 1

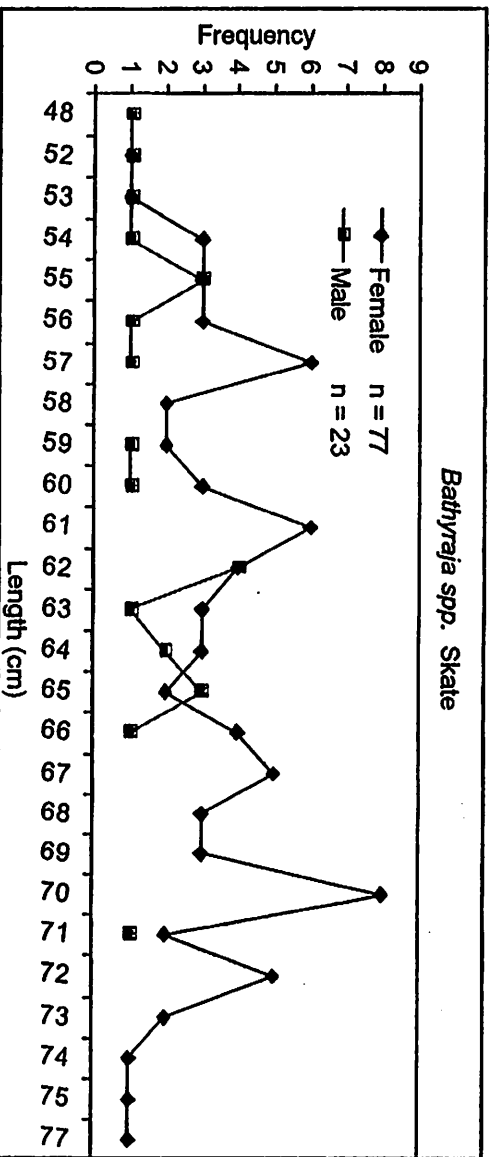
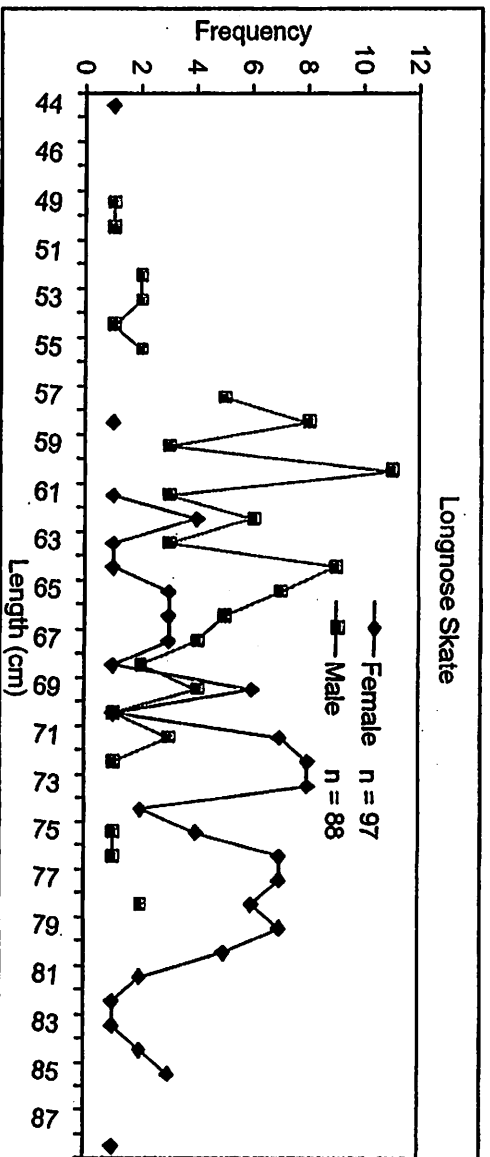
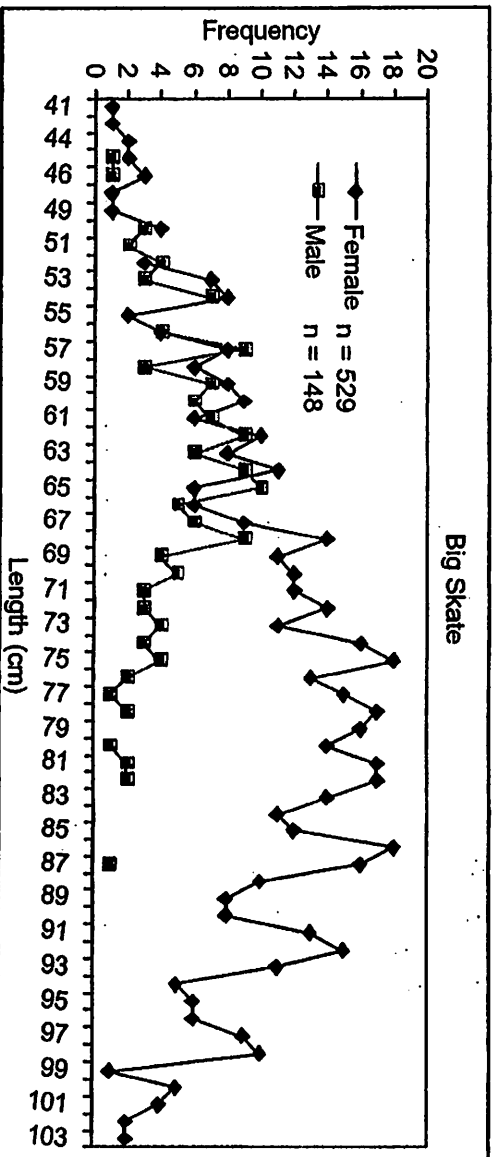
Bathyrāja spp. (unidentified)

Females:	13	<u>68%</u>
Males:	6	<u>32%</u>
Total <i>Bathyrāja</i> spp.:	19	

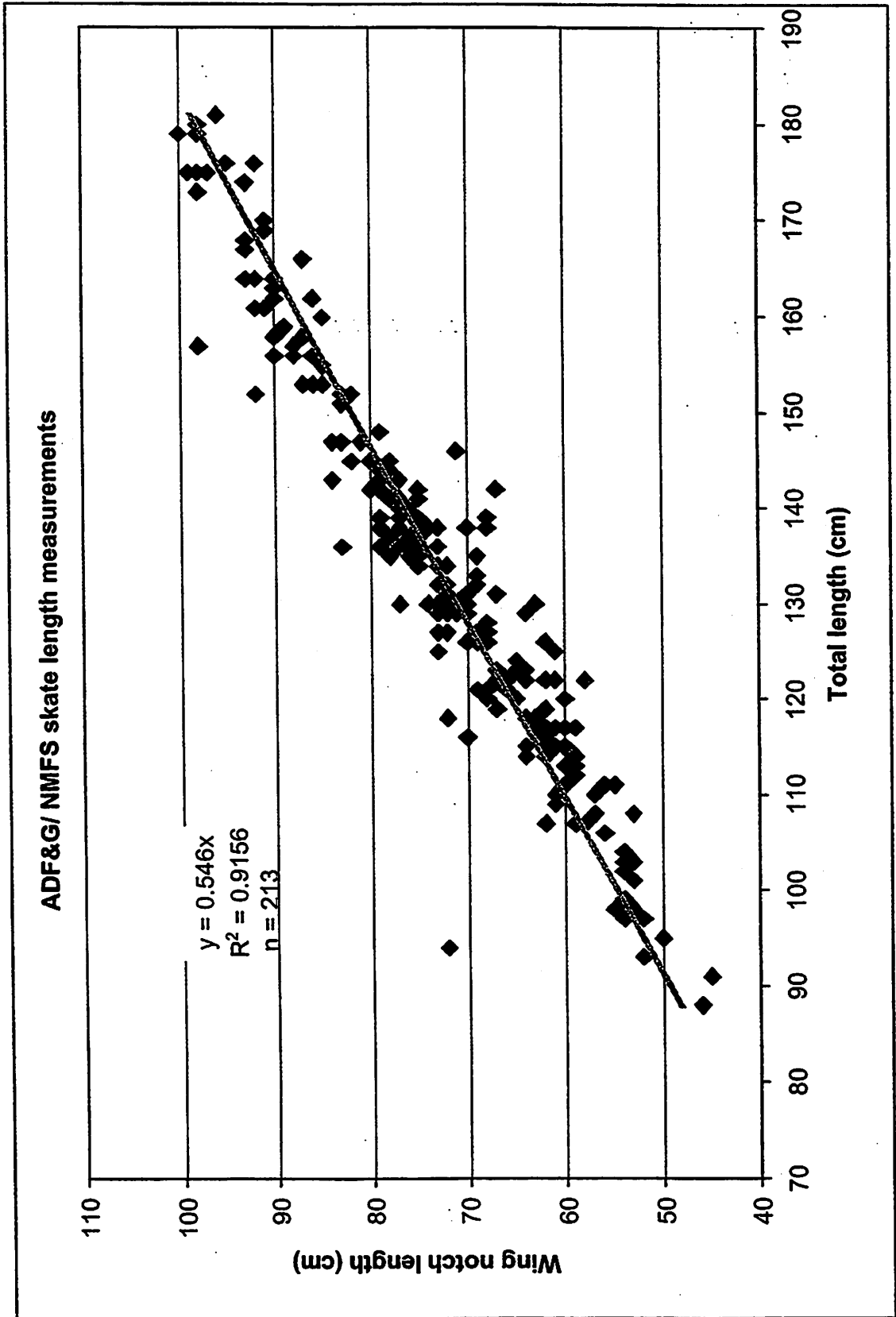
Number of vertebrae collected

Big skate:	29
Longnose skate:	16
<i>Bathyrāja aleutica</i> :	15

Deliveries with both F&G (wing notch) measurements and NMFS (total length) measurements taken: 5



ADF&G collected skate length frequency samples, 2003.
 (Tip of snout to wing notch measurement)



Note- for all species of skates, includes five skates with damaged but not missing tails

Appendix 2:

Does every stock of fish within the Council's geographical area of authority have to be a member of some group for which OY and OFL are specified?

A Longer Answer: First, it is important to remember the statutory definition of "fish," as shown below from the Magnuson-Stevens Act. Experience with FMPs developed by Councils in other parts of the country provides many examples in which numerous stocks of "fish" are not members of any group for which OY and OFL are specified. To craft OY and OFL specifications for all forms of marine animal and plant life (even if marine mammals and birds are excluded) would be a massive task.

3(12) *The term "fish" means finfish, mollusks, crustaceans, and all other forms of marine animal and plant life other than marine mammals and birds.*

Second, the Act itself implies that some stocks do not require Federal management, as stated below:

302(h) *FUNCTIONS.—Each Council shall, in accordance with the provisions of this Act—*
(1) for each fishery under its authority that requires conservation and management, prepare and submit to the Secretary (A) a fishery management plan, and (B) amendments to each such plan that are necessary from time to time (and promptly whenever changes in conservation and management measures in another fishery substantially affect the fishery for which such plan was developed); [emphasis added]

Inclusion of the phrase "that requires conservation and management" implies that some fisheries *do not* require conservation and management. A "fishery," in turn, is defined as follows:

3(13) *The term "fishery" means—*

- i. one or more stocks of fish which can be treated as a unit for purposes of conservation and management and which are identified on the basis of geographical, scientific, technical, recreational, and economic characteristics; and*
- ii. any fishing for such stocks.*

Thus, if a fishery is defined as one or more stocks of fish, if some fisheries do not have to be governed by an FMP, and if OYs and OFLs are specified only for fisheries governed by an FMP, it follows that some stocks do not have to be members of any group for which OY and OFL are specified. NOAA General Counsel staff will provide additional guidance prior to the June 2003 Council meeting.

**Can Some Stocks be Protected Under the MSFCMA
Without Engendering a Need to Specify MSY, OY, and Overfishing Criteria?**

(A Draft Paper Intended for Purposes of Discussion Only)

Grant Thompson

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Fisheries Science Center
7600 Sand Point Way NE., Seattle, WA 98115-6349

May 22, 2003

Scenario: Suppose that a stock S_x is the target of a fishery F_x managed under a fishery management plan P_x . Suppose that another stock S_y is part of the environment of S_x and is taken incidentally in F_x but is not the target of any fishery.

Question: Can P_x can impose conditions on F_x designed to protect S_y from irreversible or long-term adverse effects without first determining the existence of a fishery F_y that requires development of a fishery management plan P_y containing all of the provisions described in §303(a), including specification of MSY, OY, and objective and measurable criteria for identifying when F_y is overfished?

Argument in Favor: Every FMP must contain “conservation and management measures” (§303(a)(1)) and an “optimum yield” specification (§303(a)(3)). Conservation and management measures are defined, in part, as those which are “useful in rebuilding, restoring, or maintaining, any fishery resource *and the marine environment*” and which are designed to assure that “irreversible or long-term adverse effects on fishery resources *and the marine environment* are avoided” (§3(5), emphasis added). The specification of optimum yield is defined, in part, as the amount of fish which “will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account *the protection of marine ecosystems*” (§3(28), emphasis added). Thus, the definitions of both “conservation and management” and “optimum yield” allow for the imposition of measures designed to maintain/protect the marine environment/ecosystem apart from measures designed to maintain fishery resources or to produce food and recreational opportunities. Furthermore, National Standard 9 states, “Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch” (§301(a)(9)). Therefore, in the special case where incidental catches of S_y taken in F_x are not sold or kept for personal use (§3(2)), the Act not only allows but requires P_x to impose conditions on F_x designed to protect S_y .

Argument Against: A Council must submit a fishery management plan “for each fishery under its authority that requires conservation and management” (§302(h)). A “fishery” is defined, in part, as “one or more stocks of fish which can be treated as a unit for purposes of conservation and management” (§3(13)). The imposition

This is a draft and is intended for discussion purposes only. It does not represent agency policy.

of conditions on F_x designed to protect S_y from irreversible or long-term adverse effects necessarily means that S_y itself is being managed. If a stock is being managed, it meets the statutory definition of “fishery” even if it is neither targeted nor retained. Therefore, the fact that S_y is being managed means that a fishery F_y exists. Finally, the fact that S_y is being managed in order to protect it from irreversible or long-term adverse effects proves that management of F_y is required. Therefore, development of a fishery management plan P_y containing all of the provisions described in §303(a) is also required.

Rebuttal of Argument Against: The “argument against” consists basically of the following syllogism: (A) If S_y is being protected from F_x , S_y is being managed. (B) The only legal justification for protecting S_y from F_x is a determination that a fishery F_y exists and that F_y requires conservation and management. (C) Therefore, if S_y is being protected from F_x , F_y must exist and it must require conservation and management. There are several reasons why this syllogism is problematic.

- 1) While (A) may be *consistent* with the Act, it is not *required* by the Act, because the Act does not contain a definition of “managed.” The Act does contain a definition of “conservation and management,” but this definition does not directly address (A).
- 2) (A) is contrary to common sense. For example, it would be nonsensical to claim that a regulation requiring drivers to yield to pedestrians means that pedestrians are being managed. Likewise, it is nonsensical to claim that a regulation protecting S_y from the effects of F_x means that S_y is being managed.
- 3) (B) is not consistent by the Act, because the Act explicitly allows for the use of measures designed to protect the marine environment/ecosystem and to minimize bycatch, in addition to the use of measures designed to conserve and manage fisheries.
- 4) If the implications of the “argument against” were acted upon, the result would be a grossly inefficient system of management. Vast resources would be wasted in developing specifications of OY and overfishing criteria—both of which are defined in terms of MSY—for countless stocks that produce neither food nor recreational opportunities.
- 5) A reasonable alternative exists. Instead of endlessly identifying alleged “fisheries” where none exist and attempting to optimize production of food and recreational opportunities from stocks which provide neither, Councils could focus on managing *real* fisheries (human activity which is intended to result in the capture of fish from a particular stock or group of stocks) while requiring protection of the marine environment (the things that might be impacted unintentionally by the real fisheries).

Selected Excerpts from the Magnuson-Stevens Conservation and Management Act:

§3(2) *The term “bycatch” means fish which are harvested in a fishery, but which are not sold or kept for personal use, and includes economic discards and regulatory discards. Such term does not include fish released alive under a recreational catch and release fishery management program.*

§3(5) *The term “conservation and management” refers to all of the rules, regulations, conditions, methods, and other measures (A) which are required to rebuild, restore, or maintain, and which are useful in rebuilding, restoring, or maintaining, any fishery resource and the marine environment; and (B) which are designed to assure that—*

1. *a supply of food and other products may be taken, and that recreational benefits may be obtained, on a continuing basis;*
2. *irreversible or long-term adverse effects on fishery resources and the marine environment are avoided; and*

This is a draft and is intended for discussion purposes only. It does not represent agency policy.

3. *there will be a multiplicity of options available with respect to future uses of these resources.*

§3(12) The term "fish" means finfish, mollusks, crustaceans, and all other forms of marine animal and plant life other than marine mammals and birds.

§3(13) The term "fishery" means—

- i. one or more stocks of fish which can be treated as a unit for purposes of conservation and management and which are identified on the basis of geographical, scientific, technical, recreational, and economic characteristics; and*
- ii. any fishing for such stocks.*

§3(14) The term "fishery resource" means any fishery, any stock of fish, any species of fish, and any habitat of fish."

§3(28) The term "optimum", with respect to the yield from a fishery, means the amount of fish which—

- (A) will provide the greatest overall benefit to the Nation, particularly with respect to food production and recreational opportunities, and taking into account the protection of marine ecosystems....*

§3(37) The term "stock of fish" means a species, subspecies, geographical grouping, or other category of fish capable of management as a unit.

§301(a)(9) Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

§302(h) FUNCTIONS.—Each Council shall, in accordance with the provisions of this Act—

(1) for each fishery under its authority that requires conservation and management, prepare and submit to the Secretary (A) a fishery management plan, and (B) amendments to each such plan that are necessary from time to time (and promptly whenever changes in conservation and management measures in another fishery substantially affect the fishery for which such plan was developed);

§303(a) REQUIRED PROVISIONS.—Any fishery management plan which is prepared by any Council, or by the Secretary, with respect to any fishery, shall—

- (1) contain the conservation and management measures, applicable to foreign fishing and fishing by vessels of the United States, which are—*
 - (A) necessary and appropriate for the conservation and management of the fishery to prevent overfishing and rebuild overfished stocks, and to protect, restore, and promote the long-term health and stability of the fishery;*
 - (B) described in this subsection or subsection (b), or both; and*
 - (C) consistent with the national standards, the other provisions of this Act, regulations implementing recommendations by international organizations in which the United States participates (including but not limited to closed areas, quotas, and size limits), and any other applicable law;*
- (2) ...*

- (3) *assess and specify the present and probable future condition of, and the maximum sustainable yield and optimum yield from, the fishery, and include a summary of the information utilized in making such specification;*

**REPORT
AD HOC WORKING GROUP ON GROUND FISH MANAGEMENT
MARCH 4-5, 2003**

The Scientific and Statistical Committee/Plan Team/Alaska Fisheries Science Center ad hoc working group met on March 4-5, 2003 to continue its discussions of revising management of BSAI and GOA target and non-target species. Sue Hills, Steven Hare, and Pat Livingston represented the SSC; Grant Thompson, Sarah Gaichas, and Jane DiCosimo represented the Plan Teams; Galen Tromble represented the NMFS Regional Office; and Paul Spencer, Rebecca Reuter, Doug Limpinsel, and Joe Terry represented the NMFS AFSC. The group made significant progress in identifying goals and an overall approach to modifying the existing management categories. This report summarizes the progress made by the working group to date. It should be emphasized that this report is neither a complete nor a final description of the modifications to the existing management categories that might result from the approach currently envisioned by the working group. Several issues remain to be addressed and the working group's thinking continues to evolve as the approach is developed. Some informal notes on such issues are included in the appendix to this report. Material contained in the appendix should be viewed as a preliminary discussion of possible future directions rather than a final recommendation.

At its March meeting, the working group reviewed the current groundfish categories in the North Pacific and reached two general conclusions.

1. Some stocks/species are true targets of groundfish fisheries, in the sense that groundfish fishermen actively seek to catch and market fish from these stocks/species in significant quantities. The groundfish FMPs need to insure that these stocks/species are managed on the basis of National Standard 1, where both optimum yield and overfishing are defined relative to maximum sustainable yield.
2. Some stocks/species are not true targets of groundfish fisheries, in the sense that groundfish fishermen do not actively seek to catch and market fish from these stocks/species in significant quantities. The groundfish FMPs need to insure that these stocks/species are adequately protected, but such protection need not always be based on criteria related to maximization of yield from these stocks/species.

GOALS

- Provide appropriate protection for all species in the ecosystem impacted by the groundfish fisheries, including species for which little biological information is available.
- Provide appropriate opportunities for all groundfish fisheries, including those which might be impacted by measures designed to protect species for which little biological information is available.

APPROACH

- Divide the BSAI and GOA groundfish species into two categories:
 - (1) species intended to be caught ("target" species)
 - (2) species not intended to be caught ("non-target" species)
- Clarify that the fisheries being managed under the groundfish FMPs are the fisheries for the target groundfish species.
- Manage the target groundfish fisheries accordingly, for example by:
 - (1) specifying optimum yield and overfishing definitions for the target species relative to MSY and
 - (2) establishing additional management measures such that all species in the ecosystem receive appropriate protection from potential impacts of the target groundfish fisheries.
- Establish a mechanism for transitioning species between the categories.

OVERVIEW: TARGET SPECIES (THOSE FOR WHICH FISHERIES ARE DESIGNED)

All target species will be listed individually in the groundfish fishery management plans. They will be managed under OFLs, ABCs, and TACs with the objective of optimizing yield while preventing overfishing, as defined under the Magnuson-Stevens Act. Complex-wide OFL, ABC, and TAC specifications will exist only in those cases where identification to the species level is not practical or as a temporary measure during transition to the new approach. For the most part, these species are already being managed under Tiers 1-3. For those few cases in which *de facto* target species are not already managed under Tiers 1-3, a high priority will be placed on obtaining the data necessary to manage them under Tiers 1-3 as soon as possible. For all future transitions between categories, Tier 3 management will be a minimum condition of becoming a target species.

Broadly speaking, management of target species in the new approach will be similar to the current approach. Clear priorities for management and research will typically arise from the objectives for in-season management and stock assessment preparation, which then filter down to the observer program and AFSC survey designers to collect appropriate data on these species, etc.

OVERVIEW: NON-TARGET SPECIES (THOSE WE DON'T MEAN TO CATCH)

Non-target species will not necessarily be listed individually in the FMPs, but will be monitored at the lowest practical taxonomic level. This category would include most species currently in a target category management complex but not specifically assessed, and all those currently in the nonspecified category. The target groundfish fisheries will be managed such that the non-target species are provided appropriate protection from potential impacts of the groundfish fisheries. This protection will be based on criteria such as maintaining healthy populations of the non-target species and maintaining the non-target species' roles in the overall functioning of the ecosystem. Such protection will typically *not* be related to maximizing the sustainable yield from the non-target groundfish species. Therefore, if stock assessments for non-target species are conducted, they will not include OFL and ABC recommendations, and TAC specifications will not be set.

Catch of species in this category would continue to be monitored and managed (at incidental levels) with Maximum Retainable Allowances (MRAs) or other mechanisms. Additional management measures may be applied to increase protection of particularly sensitive non-target species. While some level of retention and utilization will be permitted to avoid waste, target fisheries (intentional exploitation) would not be allowed to develop on these species without the information necessary to conduct stock assessments and set quotas using at least Tier 3 criteria.

These species will be monitored using fishery-independent information (abundance/biomass estimates, planned schedule for research, rotating through species, collecting life history data for major bycatch species), and annual total catches. Species complexes will be allowed in this category if the species are actually caught together and share some form of life history or habitat characteristics, or if species are currently indistinguishable to fishery observers.

One objective of AFSC research would be to increase the amount of information available for species in this category. Such new information could be used to allow development of future target fisheries, but its primary purpose would be to provide a basis for evaluating the appropriate level of protection and both the adequacy and efficacy of existing or potential protective measures. It is likely that such research would require the observer program and surveys to collect baseline and monitoring data on these species—but not necessarily annual age collections or other stock assessment data on the same scale as would be expected for target species.

APPENDIX:
INFORMAL NOTES ON SOME IDEAS DISCUSSED BUT NOT FULLY DEVELOPED

Process and criteria for distinguishing intended target species from non-target species

Intended target species:

- Are already target species with fully developed fisheries (e.g., pollock, Pacific cod)
- Have market value and are currently marketed
- Are species fishermen say they want to catch (because they have market value)
- Would be the targets of fisheries if we allowed them (currently on bycatch only status)??
- Are caught and retained over threshold levels (set by NMFS)??

If it is not defined as an intended target species, it is automatically a non-target species.

Transition between categories

Transition between categories can happen two ways:

1. Fishermen request that the Council/NMFS create a target fishery on species that is not currently listed as a target species. NMFS may initiate an experimental fishing permit regulatory analysis to collect appropriate data to manage the species at Tier 3 (minimum criteria for target fishery) or
2. NMFS staff or Council Plan Teams may identify an increasing trend in capture and retention of a non-target species (e.g., at or above the MRA) that is not currently on the target list. The Council or NMFS may initiate an EFP to get collect data to manage the species at Tier 3.

In either case, additional protection measures (unspecified as yet) will go into effect for the transitional species until data are adequate to set quotas. The transitional management objective is to protect species from fishing effects until NMFS has appropriate information to responsibly optimize yield. Transitional fisheries may take one to two years to become fully open with a quota, depending on time needed to collect necessary data.

Note on Tier 3 level data quality

The transition procedure described above requires data quality standards that are recognized to provide quality stock assessments at Tier 3. The working group noted that determining when the appropriate level of data quality has been achieved for Tier 3 assessment is at the discretion of the SSC. These criteria can be used to move new target category species to Tier 3 management and to improve target species to a higher tier level. The working group requests that the SSC provide guidelines for the collection of data necessary to meet Tier 3 data quality requirements.

Process and criteria for determining sensitivity and additional management measures for non-target species and complexes

All species not listed as targets will continue to be monitored. Targeting will be discouraged by the use of MRAs or other management measures. Monitoring will include both fishery dependent and fishery independent elements. NMFS staff will monitor survey biomass and or abundance trends, fishery catch-per-unit-effort trends, and fishery retention rates at the lowest practical taxonomic level (although bycatch MRAs might be set at higher, complex levels). In addition, "representative species" from each major taxon will be monitored for changes in length composition or age composition if ageing methods exist. Representative species would be most useful indicators for a group if they were the most commonly encountered in the fishery. Improvements to fishery species identification, which are already in progress in the observer program, will be required for this program to succeed.

Non-target species will be divided into two general categories: (1) those unlikely to suffer negative population effects from fishing and (2) those more likely to suffer negative population effects even as bycatch. The latter category is termed "sensitive" non-target species. The only management measure proposed for non-sensitive non-target species will be monitoring and an MRA. Sensitive non-target species may require additional management measures to ensure protection from fishing effects.

The working group identified four possible criteria for defining non-target species as sensitive (formerly known as "vulnerable" in previous reports):

- (1) rapidly declining abundance trend,
- (2) sensitive life history traits,
- (3) restricted range and or specific habitat, and
- (4) crucial role in ecosystem (predator prey or other dependent association).

The working group attempted to outline methods for assessing species sensitivity within each of these broad criteria. It is possible to specify criteria for *rapid decline in an abundance trend* (x% per year) although the working group did not do so at this meeting.

Sensitive life history traits were identified as those contributing to the overall potential for a population to increase (the "r" parameter in the logistic growth equation or its equivalent). A spectrum of life history patterns were identified which ranged from "high resilience" to "very low resilience" categories. In general, "high resilience" species with high potential rates of population increase have one or more of the following traits: fast growth rates, low age at maturity, high fecundity, and are relatively short lived. At the other end of the spectrum, "very low resilience" species with low potential rates of population increase may have slow growth rates, late age at maturity, low fecundity, and / or very long lives. Two intermediate categories were identified, such that species could be classified generally as high resilience, average resilience, moderate to low resilience, and very low resilience. Perhaps non-target species could be classified as having sensitive life history traits if they were classified as moderate to low resilience or very low resilience species. No strict boundaries were drawn between these categories at this meeting, nor was it clear to all working group members that strict boundaries are necessary.

The working group discussed definitions for *restricted range* and *habitat specificity*. The working group agreed that these characteristics should be examined, but it was difficult to establish criteria for the amount of range restriction that would cause concern. However, because we know so little about the specific habitat associations of most current target species, let alone non-target species, the working group agreed that observed restricted range or occurrence in specific locations over time might indicate a habitat association and be evidence enough for additional management measures (likely spatial) to protect the species from fishing effects.

Crucial role in the ecosystem also remains undefined at this time. The main questions that can be answered with current data are who eats the species, and who is eaten by the species? The working group suggested that simply gathering adequate data to address this would be useful and would likely identify which non-target species were candidates for special management under this criterion. One example would be the already existing Forage Species FMP category where multiple families were placed off limits as target species because of their collective importance as prey for marine mammals, birds, and target groundfish. It may be possible to assign other non-target taxa to this existing category as it becomes clear that they are essential forage species (e.g., squid, octopus, and eelpouts).

Additional management measures would be designed to apply to the criterion of highest concern. For example, a non-target species with an extremely restricted range would receive additional protection from fishing effects by closing part or all of the range to fishing (with certain gear types, during certain seasons, as appropriate). Alternatively, a more evenly distributed species with sensitive life history traits and a severely declining abundance trend might be managed with a bycatch cap to limit take to a known amount each year.

Real life details:

Current intended target species are pollock, Pacific cod, sablefish, Atka mackerel, rock sole*, yellowfin sole, flathead sole, rex sole, Dover sole, Greenland turbot, Pacific ocean perch, shortraker rockfish, roughey rockfish*, shortspine thornyheads, northern rockfish, yelloweye rockfish (perhaps Arrowtooth flounder and dusky rockfish). All these would be managed under single species TACs at Tier 3 or above. Species with asterisks include more than one species (e.g., rock sole and a newly identified sister species). Management agencies would have to decide whether to separate the rock sole species (can be distinguished in observer data, but not by industry), and what to do about species that can only be distinguished genetically at present.

Some of the species identified above as intended targets are not currently assessed at Tier 3 or above. It might be prudent to recommend that within one year of implementation of the proposed management regime, NMFS would be required to implement a plan to improve data quality to the level established by the SSC for Tier 3 assessment (getting the appropriate data may take longer than one year, but the plan must be done within a year). If NMFS and the SSC determine that it is not cost effective to improve data quality to Tier 3 for any intended target species, then no target fishery would be allowed on that species and it would be moved to the non-target species category and protective measures would be implemented for it

All current rockfish and flatfish complexes would be eliminated in the following manner. An intended target species (or multiple species if appropriate) from each complex would be split out to the individual species level. The remainder of the complex will go into the non-target category and be managed under MRAs or other management measures. It appears that some complexes, like GOA Other Slope Rockfish, are entirely non-target species. This resulted from a long history of splitting out target species. These complexes would be moved to the non-target species category. If the remaining non-target species are caught together in real life then the MRA may be set at the complex level; if they are not then non-target catch complexes should be reorganized based on which species are actually caught together as bycatch of target fisheries to determine what MRA(s) should be by target fishery.

The working group may determine that some species currently managed with a single species TAC are not in fact the intended target of any fishery. BSAI Alaska plaice is one example. The working group would not recommend that a TAC be set for these species, and annual stock assessments would not be necessary. AFSC staff may continue to prepare full age structured stock assessment for non-target species, but highest priority would be given to improving stock assessments for intended target species (e.g., shortraker and roughey rockfishes), for those non-target species proposed for target fishing, or for those non-target species whose ecosystem role is deemed important to assess annually (e.g., Arrowtooth flounder).

REPORT
AD HOC WORKING GROUP ON GROUND FISH MANAGEMENT
AUGUST 5-6, 2002

The Scientific and Statistical Committee/Plan Team/Alaska Fisheries Science Center working group (Dan Kimura, Steve Berkeley, Sue Hills, Sandra Lowe, Jim Ianelli, Grant Thompson, Sarah Gaichas, Andy Smoker, Tom Pearson, Paul Spencer, Ivan Vining, Jane DiCosimo) met on August 5-6, 2002 to discuss management of BSAI and GOA other species and BSAI other red rockfish and other rockfish. Additional NMFS Regional Office staff attended the meeting. The group discussed the need to develop criteria for separating species from aggregate complexes for all groundfish species and assemblages, rather than the current ad hoc approach. The objective is to protect species that need protection and not to lump and split species aggregates just for the purpose of standardizing procedures. The group made the following recommendations.

Criteria for splitting/lumping species for all groundfish

After considerable discussion, the group developed a decision matrix (below) of when to split or lump species out of or into assemblages. One participant questioned the notion that all species or assemblages must be maintained above B_{MSY} as the Magnuson-Stevens Act defines overfishing at the unit of "fisheries," not individual species. Others stated concern over overfishing individual species even if the MSA did not require preventive measures. The risk of overfishing/extinction was identified as unknown, along with risk of unknown ecosystem effects (at both the fishery and species levels). The group identified its preference for proactive and precautionary fisheries management. The case for lumping species into assemblages occurs with poor data and low vulnerability. The case for splitting assemblages into species occurs with good data and high vulnerability. Lumping can occur with good data and low vulnerability, if convenient for management. The group also discussed which species could be lumped into an assemblage, regardless of the data quality/vulnerability issue. Considerations should include if they are caught together, have the same possible or recommended exploitation rate, similar life history, etc. (Dissimilar life histories, rather than insufficient data, would lead to a recommendation to not lump sharks and skates).

Data and vulnerability are defined below. The source and age of data should be considered in determining placement in the overfishing tier categories.

- Data quality** defined by: 1) the appropriateness of the survey coverage in space (relative to the species range and to its habitat), time (of year), gear; and 2) the precision of the survey estimate (i.e., the CV).
- Vulnerability** defined by life history, habitat, economic value, co-occurrence with target fishery, easily misidentified, risk of disproportionate harvest to biomass, current management measures, exploitation rate, biomass

Data Quality (tier-specific)	Vulnerability	
	high	low
good survey coverage	single species	complex if needed for management or single species
poor survey coverage	single species	complex or single species
	start high quality data collection	collect additional data if possible
	interim quality, precautionary	
	no directed fishery	
alternative management strategies		
	under alternative management schemes, low MRB, area/time closures, creative thinking.	

The group is developing a table of species managed at Tier 5 to identify current patterns of splitting and lumping, with the assistance of stock assessment authors. The table will compare MSA requirements and North Pacific fisheries management. It will be available for review prior to the Plan Team meeting.

Need for additional action

“Other species” are described in the BSAI groundfish FMP as, “species groups which currently are of slight economic value and not generally targeted upon. This category, however, contains species with economic potential or which are important ecosystem components, but sufficient data are lacking to manage each separately. Accordingly, a single TAC applies to this category as a whole. Catch of this category as a whole must be recorded and reported. The category includes sculpins, sharks, skates, and octopus (and squid in the GOA). Eulachon, smelts, capelin were removed from the other species category and placed in a newly created forage fish category beginning in 1998.

The FMPs describe forage fish species as “those species not included in the target species category and which are a critical food source for many marine mammal, seabird and fish species. The forage fish species category is established to allow for the management of these species in a manner that prevents the development of a commercial directed fishery for forage fish. The forage fish plan amendments: 1) prohibited directed fishing; 2) established a 2 % maximum retainable bycatch limit; and 3) limited their sale, barter, trade or processing above the MRB amount. AFSC assessments are poor due to lack of survey coverage, squid are important prey species, and it would be precautionary to foreclose development of a commercial fishery.

The forage fish species have been grouped together because they are considered to be primary food resources for other marine animals and they have the potential to be the targets of a commercial fishery. As described in the EA/RIR/IRFA for FMP Amendments 36/39 (Forage Fish), “Forage fish comprise an important part of the diet of commercial groundfish species, marine mammals and seabirds in the Gulf of Alaska (GOA) and the Bering Sea and Aleutian Islands management area (BSAI). Significant declines in marine mammals and seabirds in the GOA and the BSAI have raised concerns that changes in the forage fish biomass may contribute to the further decline of marine mammal, seabird and commercially important fish populations. Members of the fishing industry and public have expressed concern that the current FMP structure with respect to forage fish may allow unrestricted commercial harvest to occur on one or more of these species. One of the recommendations from the International Council for the Exploration at Sea (ICES, 1994) indicated that fishery managers should develop measures to avoid the commercial targeting of food resources that are key to marine mammals and seabirds. The Council's 1995 Stock Assessment and Fishery Evaluation Report states that if any significant directed fishing on any component of the “other species” category develops, particularly those that serve as prey for marine mammals and seabirds, then future assessments should reflect this change by separating these species out (SAFE, 1995).”

Capelin, eulachon, and other Osmeridae (other smelts) were within the “other species” category of the FMPs. Sand lance, Pacific sandfish, lanternfish and Bathylagidae were within the “nonspecified species” category of the FMPs. A TAC for the “nonspecified species” category is not specified or managed but is defined in the FMPs as the amount taken incidentally while fishing for other groundfish. No reporting is required and no ABC is estimated for this category.

The species in the “other species” category could be moved into the forage fish category if they can be identified as a critical food source for many marine mammal, seabird and fish species since that is how the FMPs define the category. Or they can be reclassified in a new non-target category. This new category could include grenadier and perhaps other species that would be identified in the analysis.

Recommendations

Other Species

For 2003, the committee recommends the following interim actions to address the 1998 State proposal. However, no conservation issues were identified for 2003 should the Council prefer to analyze the impacts of the proposed interim action before its implementation. The committee acknowledged that more, smaller quotas would be created with potential economic impacts on the non-CDQ fisheries and CDQ fisheries.

- Separate sharks and skates from the other species category in the GOA and BSAI groundfish FMPs; Provide OFL and ABC recommendations for sharks (the shark complex could be broken out to the individual species level) and skates;
 - Recommend that the Plan Team and SSC consider whether to combine the two groups into a management assemblage or set separate specifications. For management convenience, the Council might choose to lump species, genera, or phyla, but only if the species contained therein did not fall into the poor data/high vulnerability category (described below).
 - Recommend that TAC(s) be set at bycatch levels. (*Conforms with State action, but not their stated preferred alternative*)
- In the GOA, the remaining other species complex (squids, sculpins, and octopus) TAC would continue to be set equal to 5% of the cumulative GOA groundfish TACs until revised by FMP amendment. Note that the other species TAC (set equal to cumulative groundfish TACs) would be marginally higher for 2003 as a result of creating the additional sharks and skate TAC category(ies).
- In the BSAI, squid are already broken out. Recommend that the Plan Team and SSC consider whether to leave sculpins and octopus in the other species category or break them out. Separate ABCs are currently calculated and summed for the other species total.

For 2004:

- Revise Amendments 63/63 alternatives to:
 - revise management of sharks and skates:
 1. place sharks and skates on bycatch (unless already addressed under specifications)
 2. defer to State management
 3. remove sharks from the FMPs (*State recommendation*) (and skates?)
 4. move sharks and skates into the forage fish category
 - revise management of octopus:
 1. move octopus into the forage fish category
 2. remove octopus from the FMPs and defer management to the State (would the State want management of octopus?)
 - move squid into the forage fish species category
 - manage sculpins as a target category (tier 5)
 - add grenadier as a target category (tier 5)
 - add data collection requirements

ADDENDUM

To address the recommendations of the ad hoc committee, **Council staff will submit a plan amendment proposal for Plan Team adoption** that would develop criteria for splitting/lumping species and for identifying when sufficient data is available to allow a target fishery on the species or assemblage. The proposal takes the ad hoc committee one step further and suggests analyzing the creation of a new “non-target” category that would include “other species” and additional species that are not targets of directed fisheries now, but may be so in the future (e.g., grenadiers).

The analysis could explicitly include the State recommendations for action on sharks and skates, if the State still supports its stated preferred alternative of removing sharks (but not skates) from the groundfish FMPs and deferring to State management. Staff has initiated consultation with ADFG staff to determine the State’s current position. This is Scenario 1.

Scenario 2 is the staff’s recommended approach. It allows for the Council to take action that mirrors State action on sharks and skates either under the annual specifications process or through management of non-target species while addressing the overall management issues that face the Council in management of all groundfish assemblages (i.e., flatfish, rockfish, other species). It also adds other species that have been identified for additional management consideration (e.g., grenadiers).

Scenario 3 combines the measures of scenarios 1 and 2 and allows the Council to consider all proposed options in revising groundfish management. Scenario 1 (and therefore Scenario 3) might be eliminated if the State identifies that its principal goal was to set sharks and skates as bycatch rather than assuming all management for sharks (and skates?).

Scenario 1

Alternative 1: No action.

Alternative 2: Separate sharks and/or skates from the “other species” category through the annual specifications process and enact federal regulations to prohibit directed fishing of those species.

Alternative 3: Amend the BSAI and GOA groundfish FMPs to separate sharks and/or skates from the “other groundfish” species category and defer management to the State of Alaska.

Alternative 4: Amend the BSAI and GOA groundfish FMPs to delete sharks and/or skates from the BSAI and GOA groundfish FMPs.

Or the analysis could implicitly address management of sharks and skates within the newly defined “non-target species” category, under the following alternatives.

Scenario 2

Alternative 1. No action.

Alternative 2. Revise the BSAI and GOA groundfish FMPs:

Action 1. Identify the fishery management units in the groundfish FMPs to include only target, non-target and forage fish species categories (non-specified species allow for incidental catch measures and monitoring but are outside of the FMP).

Option. Move all non-target species into the forage fish category.

Action 2. List the species in the target, non-target, and forage fish species categories that are within the FMP management area.

Option. List non-target and forage fish species.

Action 3. Identify a *policy* based on scientific *criteria* to determine single species or assemblage management (split or lump);

Action 4. identify a *policy* based on scientific *criteria* to determine when sufficient data is available to move species from the non-target to target species categories.

Or the analysis could explicitly address both management of sharks and skates as interim measure and address management of “non-target species” under the following alternatives.

Scenario 3

Alternative 1. No action.

Alternative 2. Revise management of sharks and skates in the BSAI and GOA groundfish FMPs:

Action 1. Separate sharks and/or skates from the “other species” category through the annual specifications process and enact federal regulations to prohibit directed fishing of those species.

Action 2: Amend the BSAI and GOA groundfish FMPs to separate sharks and/or skates from the “other groundfish” species category and defer management to the State of Alaska.

Action 3: Amend the BSAI and GOA groundfish FMPs to delete sharks and/or skates from the BSAI and GOA groundfish FMPs.

Alternative 3. Revise the BSAI and GOA groundfish FMPs:

Action 1. Identify the fishery management units in the groundfish FMPs to include only target and non-target species categories (non-specified species allow for incidental catch measures and monitoring but are outside of the FMP).

Option. Move all non-target species into the forage fish category.

Action 2. List the species in the target, non-target, and forage fish species categories that are within the FMP management area.

Option. List non-target and forage fish species.

Action 3. Identify a *policy* based on scientific *criteria* to determine single species or assemblage management (split or lump);

Action 4. identify a *policy* based on scientific *criteria* to determine when sufficient data is available to move species from the non-target to target species categories.

PUBLIC TESTIMONY SIGN-UP SHEET FOR

AGENDA ITEM D-1 - Non-target R

PLEASE SIGN ON THE NEXT BLANK LINE.
LINES LEFT BLANK WILL BE DELETED.

	NAME	AFFILIATION
1.	Ilia Kuzmin	K Bay fisheries
2.	Ilia Kuzmin	
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