

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 of minor species is a critical feature of proposed management changes. Increasing knowledge of “other species” is the most pressing issue. 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; (8) pilot or single year projects : (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 shorttraker and rougheye 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 skate fishery near Kodiak in spring 2003 (Appendix 1). Under a 1998 State action that placed skates on bycatch, a Commissioner’s permit was required to target skates in state waters. Participants requested permits after the cod fishery closed. Boats fishing for skates in federal waters are under the radar—no logbooks, no observers, no plant observers (plant too low volume). Mike reported that Bathyraja 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 to reconcile NMFS data and ADFG data. Due to other state management priorities, sampling skates dropped from #3 to #7. 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. 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. **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 Assistant 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).

The group noted that Councils prepare FMPs “for each fishery that requires conservation and management.” There is not an intent to conserve and manage everything with an OFL and OY. “Fisheries” describe those that are “managed,” the rest include those that are protected. The distinction between the two are addressed in the management objectives. The group noted the creation of a forage fish category in 1998, which are not managed under an OFL or OY. The group discussed, but did not recommend, having a separate FMP for non-target species to alleviate the misperception that all fisheries must be managed under MSY. The group discussed “active” versus “passive” management, and concluded that monitoring species would be characterized as “management.”

SSC comments and “when bad things happen to good species:” 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. Identifying a threshold below which we wish to avoid driving a species/stock is at the heart of this proposal. Management goal for target species is to optimize yield; management goal for non-target species is keep “bad things” from happening.

Some suggestions for management objectives in the non-target category include the following:

- Fisheries will not cause unacceptable risk of extinction.
- Non-target population should be healthy, sustainable.
- Don't let populations dive (steep decline over short time is bad).

Defining the bad things provides action triggers. Criteria based on extinction can be set very conservatively to make the risk of extinction very low. The new system should provide a warning when bad things are happening and an opportunity to take some action to avoid harm. Bad things happening to non-target species

may not indicate that we HAVE to constrain target fisheries. The new system may allow harvest rates to exceed MSY for non-target species (since this is not an appropriate tool for these species), as long as these rates do not result in these bad things happening. The status quo would be to not go below where we are now. The group may wish to develop a threshold for non-target species, similar in construct to MSY for target species (**next meeting**). Tier 3 (or some standard very much like it) is sufficient, but what standard may be necessary? We are fairly confident that our current targeting level is not impacting the stock negatively. The PSEIS model could be adapted to this analysis to determine the effect of not having constraints.

The group identified two main goals for management of non-target species:

- 1. Keep bad things from happening to a species/stock**
- 2. Standardize data collection/monitoring process**

Secondary goals include:

- Preventing “squid boxes” (a constraint on a target fishery resulting from the fishery hitting its catch limit of a nontarget 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

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

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).

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.

Next meeting: tentatively scheduled for 1-2 days either during the week of August 18th, or September 4/5 preceding the Groundfish Plan Team meeting.

Appendix 1:

insert 6 page report on skates from Mike Ruccio

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)),

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

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 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:

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

§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
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;*