Feb. Agenda Item # 6 JA1 NPFC/[illegible]

PROPOSED OUTLINE FOR FISHERY MANAGEMENT PLANS

The attached outline for management plan development is intended to specify the various elements to be considered in the drafting of a specific management plan for fisheries under Council jurisdiction. The outline is not intended to be confining in that the management plan may have to repeat each category for each fishery or management unit. Organization of the plan may logically divide the presentation into fishery-wide overviews and stock-specific sections. Items adequately covered in one section would not have to be repeated in succeeding sections and some items would not be applicable to a particular species, stock or fishery.

1.0 Introduction

- 1.1. Goals and Objectives for Management Plan
- 1.2. Operational definitions of terms used

2.0 Discription of Fishery

- 2.1. Areas and stocks involved
- 2.2. History of Exploitation
  - 2.2.1. Domestic Fishery
    - 2.2.1.1. Description of user groups
    - 2.2.1.2. General description of fishing effort
    - 2.2.1.3. Catch trends
    - 2.2.1.4. Description of vessels and gears employed
  - 2.2.2. History of foreign exploitation
    - 2.2.2.1. Description of user groups
    - 2.2.2.2. General description of fishing effort
    - 2.2.2.3. Catch trends
    - 2.2.2.4. Description of vessel and gears employed

2.3 History of Management

2.3.1 Domestic commercial fishing

2.3.1.1 Investments of harvesters (vessels, gear, labor etc.)
2.3.1.2 Investments of processors (plants, equipment, labor, etc.)
2.3.1.3 Description of products
2.3.1.4 Markets

2.4 History of Research

2.4.1 U. S.
2.4.2 Foreign

2.5 Socio-economic description

2.5.1 Output of subject domestic commercial fishery

2.5.1.1 Value of catch
2.5.1.2 Description and value of product
2.5.1.3 Markets, domestic and export

2.5.2 Domestic Commercial fleet (vessels and/or gear) characteristics

2.5.2.1 Total gross income of fleet from subject fishery and all other fisheries, and average per fleet unit
2.5.2.2 Investment in vessels and gear (Total and Average per fleet/gear unit)
2.5.2.3 Annual participation in subject fishery (in vessel-days or other appropriate measure)
2.5.2.4 Total manpower employed (man-days per season, average weekly employment or other appropriate measure) and labor payments (shares and wages)
2.5.2.5 Other operating payments

2.5.3 Domestic commercial processing characteristics

2.5.3.1 Total gross income of area processors from subject and all other fisheries, and average per unit
2.5.3.2 Investment in plant, equipment, etc., total and average per operator
2.5.3.3 Total employment and labor income
2.5.3.4 Other operating payments

2.5.4 Recreational fishing characteristics

2.5.5 Subsistence fishing characteristics

2.5.6 Indian Treaty fishing characteristics

2.5.7 Other activities directly related to fishing

2.5.8 Area community characteristics

2.5.8.1 Total population by race and other relevant characteristics
2.5.8.2 Total employment from subject and all other area fisheries and related activities (number of workers at peak and annual monthly averages by resident Alaska and non-resident and race)
2.5.8.3 Total work force, all industries (including fisheries) by industrial classification
Number employed, unemployed
Total payroll and other labor income

2.5.9 Impact of all subject fishing

2.5.9.1 On bio-mass (other marine resources and environment)
2.5.9.2 On communities
2.5.9.3 On economies of States within Region

2.6 Interaction between and among user groups

2.6.1 Impact of foreign fishery on domestic fishing activities

2.7 Impact of fishery on other living marine resources

2.8 Federal and State revenues derived from fishery

3.0 Biological descriptors

3.1 Life history features

3.2 Stock units

3.3 Catch effort data

3.4 Survey and sampling data

3.5 Other

3.6 Quality of data

3.7 Current status of stocks

3.7.1 Maximum Sustainable Yield (MSY)

3.7.2 Equilibrium Yield (EY)

3.7.3 Acceptable biological catch (ABC)

3.8 Estimate of future stock condition

4.0 Catch and Capacity Descriptors

4.1 Data and analytical approaches

4.1.1 Domestic

4.1.1 Foreign

4.2 Domestic Annual Capacity (DAC)

4.3 Historical domestic capacity (HDC)

4.4 Adjusted capacity (AC)

4.5 Expected harvest (EH)

4.6 Effectiveness of management measures (foreign and domestic)

5.0 Optimum Yield Concept

5.1 Departure from MSY to ABC for biological reasons

5.2 Departure from ABC for socio-economic reasons

5.3 Optimum Yield (OY)

6.0 The Management Regime

6.1 Management Objectives

6.2 Areas, fisheries and stocks involved

6.3 Total Allowable Level of Foreign Fishery (FAC)

6.4 Management Measures

6.4.1 Domestic

6.4.1.1 Season, gear, and area restrictions

6.4.1.2 Size and sex restrictions

6.4.1.3 Quotas

6.4.1.4 Other

6.4.2 Foreign

6.4.2.1 Season, gear, and area restrictions

6.4.2.2 Size and sex restrictions

6.4.2.3 Other

6.5 Reporting Requirements

6.5.1 Data standards

NPFC/SSC - Preliminary Draft Jan. 27, 1977

Report of the Scientific and Statistical Committee on Working Definitions for Use in Management Plans

A. Determinants of Catch Levels

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Where sufficient scientific data as to the biological characteristics of the stock do not exist or the period of exploitation or investigation has not been long enough for adequate understanding of stock dynamics, the MSY will be estimated from the best information available.

2. Equilibrium Yield (EY) The annual or seasonal harvest which at a given fishing intensity maintains the resource at approximately the same level of abundance (apart from the effects of environmental variation) in succeeding seasons or years.

3. Acceptable biological catch (ABC) is a seasonally determined catch that may differ from MSY for biological reasons. It may be lower or higher than MSY in some years for species with fluctuating recruitment. It may be set lower than MSY

in order to rebuild overfished stocks.

4. Optimum Yield (OY) may be obtained by a plus or minus deviation from ABC for purposes of promoting economic, social or ecological objectives as established by law and public participation processes. Ecological objectives, where they primarily relate to biological purposes and facts are included in the determinate of ABC. Where ecological objectives relate to resolving conflicts and accommodating competing uses and values, they are included as appropriate with economic and/or social objectives. Adjustments also may be made for defined scientific purposes.

OY may be set higher than ABC in order to produce higher yields from other more desirable species in a multi-species fishery. It might be set lower than ABC in order to provide larger sized individuals or a higher average catch per unit effort.

Attachment #6

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest and Alaska Fisheries Center
2725 Montlake Boulevard East
Seattle, Washington 98112

Reply to Attn. of:

Date : February 15, 1977

To : Dr. Frank Fukuhara
Director, REFM

From : Dr. Murray Hayes
Coordinator, Energy-Related Research

Subject: Changes in FEIS/PFMP from DEIS/PFMP

A new chapter was added to each FEIS/PFMP, Consultation and Coordination with Others, which contains the comments received and responses made to the DEIS. A few additional comments (not included) were received late. The State Department letters, however, were included.

The following substantive changes in the FEIS/PFMP's were made:

Trawl and Herring Gillnet Fishery of the Bering Sea and Aleutian Islands

1. Pollock TAC revised from 850 to 950,000 metric tons. Change in table 18 and in text on page 104 indicates that this level of catch should arrest the downward trend but not allow significant rebuilding of the stock.

2. U.S. capacity estimate reduced to zero except for herring (1000 metric tons) and halibut (trace). The U.S. capacity estimates in the draft plan ranged from 0.9 to 4.8 percent of the TAC. Since these percentages are small and since U.S. effort in 1977 is questionable (re-canvas of U.S. industry in December) they were deleted. Consequently, there were small changes in maximum foreign allocations.

3. Squid was added to plan and TAC was set at 10,000 metric tons.

4. MSY and EY figures were revised for yellowfin sole based on re-analysis of the data. MSY estimates for halibut, herring, and squid were provided.

5. Sablefish TAC for Aleutian area revised from 2,500 to 2,400 metric tons to conform to the Sablefish plan.

6. In Section 2.4.1.2, Time-Area Closures, a new Item C was added -- No fishing for herring year-round east of 168°W, north of 58°N (to prevent overexploitation of specific herring stocks important to the well-being of native Eskimo fishermen and villages).

Other changes were made to incorporate the substance of the above changes in the text to make corrections of errors and editorial changes noted in the review process.

Sablefish of the Bering Sea and Northeastern Pacific Ocean

1. U.S. capacity for sablefish in the Gulf of Alaska was reduced from 4,500 to 2,500 metric tons and 2,000 metric tons were added to the TAC for foreign longline/trap vessels.

2. Foreign catch in SE area limited to 3,750 metric tons to prevent foreign fishery for targeting in an area of possible U.S. expansion (3,750 metric tons is the part of the allowable foreign catch that is proportionate to recent catches taken in SE area).

3. Effort limitation for foreign longline/trap vessels in the Bering Sea was changed from two vessels/year to 750 vessel days.

4. Addendum was made to the plan which states that the U.S. will reconsider its capacity in November 1977 based on catches of sablefish up to that date (in response to State Department letter dated January 14, 1977).

King and Tanner Crabs of the Eastern Bering Sea

1. Data from the 1976 resource assessment cruise was added to the analysis for blue king crabs, table 7 (page 33), and appropriate text, and for Tanner (snow) crabs, table 8 (page 34), and appropriate text.

2. MSY for blue king crab recalculated (Section 2.2.2.2, page 37) based on an exploitation rate of 0.40 for crabs over 150 mm resulting in a new estimate of seven million pounds (as compared to 16 million in the DEIS).

3. MSYs for Tanner crab have been recalculated based on 1976 survey data which was both more intensive and extensive than earlier years. For C. bairdi an exploitation rate of 0.40 for crabs over 140 mm was applied to yield 108 million pounds (compared to 95 million in the DEIS). For C. opilio an exploitation rate of 0.15 for crabs over 75 mm was applied to yield 333 million pounds (compared to 128 million in the DEIS for a much smaller part of the Bering Sea).

4. Figure 8, page 40, showing latitudinal distribution of the two species of Tanner (snow) crabs was added. Note that about one half of the C. opilio stock is north of 58°N whereas 98 percent of C. bairdi is south of 58°N.

5. Section 2.3 revised extensively (pages 41-44d).
   a. OY for snow (Tanner) crabs is set below MSY based on set of six socio-economic-ecological rationales.
   b. OY for C. opilio: 7,400 metric tons (page 44)
      OY for C. bairdi: 30,000 metric tons (page 44)
   c. U.S. capacity recalculated based on catch rates of 1976 season and twice the effort: 22,700 to 25,000 metric tons (page 44 and table 11, page 44c).
   d. Total allowable level of foreign fishing increased from 10,200 to 12,500 metric tons (page 44b). Species composition for foreign fishery estimated at 5,100 metric tons of C. bairdi and 7,400 metric tons of C. opilio.

6. New section c added to Area Quotas (2.4.1.3, page 46) that limits foreign catch east of 173°W and south of 58°N to 8,100 metric tons (in effect requiring that

increment to earlier TALFF be taken north and west of that point, 2,400 metric tons of C. opilio).

7. Other changes made in text, summary, and appendix to conform to above.

Shrimp, Snail, High Seas Salmon, and Troll Salmon are essentially unchanged, although there were many comments and editorial changes in response to comments in the two salmon plans.

cc: Dr. Alverson
Bert Larkins
FAK Attn. Bob Simon

Agenda 7

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