

M E M O R A N D U M

TO: Council, SSC and AP Members

FROM: Clarence G. Pautzke
Executive Director



DATE: January 10, 1989

SUBJECT: Fishery Research Priorities

ACTION REQUIRED

- (a) Review recommendations from staff, plan teams, and SSC and forward to NMFS.
- (b) Establish procedure for identifying Council research priorities.

BACKGROUND

- (a) Review research recommendations.

Last October NMFS requested Council input on research priorities for 1989 if NMFS' research effort were to be increased by 50% over 1988. Jim Brennan's request required a quick response and the staff forwarded the list of research topics in item C-6(a). Concurrently we asked the plan teams and SSC to review the topics and provide recommendations. They are in item C-6(b) and (c). The Council may wish to comment on those recommendations as they might apply to research in 1990 or 1991.

- (b) Establish procedure for identifying Council research priorities.

The Council needs a more deliberative process for identifying and prioritizing its research needs, a process that will dovetail nicely with NMFS' program planning. Both the Western Pacific and South Atlantic Councils have such procedures. We've reviewed the annual budget process with NMFS and propose the following schedule for your consideration:

Procedure for Council Development of Fishery Research Priorities

- early September - Plan teams prepare list of research topics. These topics would be influenced by ongoing research programs stock assessment surveys, problems with management of fisheries, industry proposals, and prior Council discussion.
- October - Research topics are more fully developed and costs estimated (this work could be performed by the plan teams, NMFS/NWAFC and ADF&G representatives knowledgeable with the proposed work).
- November - Plan teams review topics, finalize list and make priority recommendations.
- December - Recommended research priorities are presented to the Council, SSC and NMFS Regional Office for review.
- January - Council reviews research topics and comments, and develops their priority recommendations.
- late January - Council recommendations for fishery research are forwarded to the NMFS Regional Director for use in preparing its annual budget.

The long lead time in NMFS budget planning means that major research initiatives approved by the Council in January of one year will not be incorporated by NMFS until two years later. For example, recommendations made at this meeting affect FY 1991 research (beginning October 1, 1990). As we understand the process, the 1990 budget is on its way from the Central Office to Congress now. The 1991 budget will leave the Regions in February for consolidation at the Central Office. We need to keep NMFS' deadlines firmly in mind when establishing our own cycle.

Research Topics of Concern to NPFMC Staff

This list was developed to address future research needs should there be a 50% increase in the NMFS budget. Items are not in any order of priority.

Bering Sea/Aleutian Islands

- Structure, and degrees of mixing, of pollock stocks throughout the Bering Sea.
- Effects of high Pacific cod abundance on other species of commercial importance (e.g., pollock, Tanner crab, and king crab).
- Causes of fluctuating abundance of king and Tanner crab stocks in the eastern Bering Sea.
- Influence of commercial fisheries on marine mammals:
 - a. Fur seal and sea lion dependence on walleye pollock.
 - b. Influence of killer whales and longline fishermen on each other.
 - c. Influence of the yellowfin sole fishery in northern Bristol Bay on walrus.
- Techniques for better assessment of Atka mackerel in the Aleutian Islands.
- Causes of low recruitment and abundance of Greenland turbot in the eastern Bering Sea.

Gulf of Alaska

- Investigate seasonal changes and distribution (area/depth) on flesh quality of sablefish located in the Gulf of Alaska.
- Techniques for better assessment of pollock in the Gulf of Alaska.

EEZ off Alaska

- Economic evaluation of the consequences of various bycatch management alternatives.
- Effective statistical sampling required for domestic observer programs (by fishery, area, season, and other reasonable components).
- Examination of trawl mesh size on catch and size composition of pollock.
- An examination of institutional problems associated with the analysis of limited access.
- Economic impact of Alaska harvests on the World market, including price impacts of changes in foreign and domestic supply and demand.
- Economic studies of total value of fishery products; processing, marketing, and retailing.

Short and Long-term Research Topics of Priority
to the NPFMC's Gulf of Alaska and Bering Sea/Aleutian Islands
Groundfish Plan Teams

During their November 7-10, 1988 meetings, the Groundfish Plan Teams reviewed the list of research topics developed by the Council staff at the request of NMFS and made the following comments.

First of all, the Plan Teams understand that NMFS intends to review this list of research topics as tasks that might be funded should add-on S-K monies be made available to the Alaska Region. Also, the Teams believe strongly that the principal priority for marine fishery research in the North Pacific is to ensure that baseline longline and trawl surveys continue at least at current levels, and that consideration be given to enhancement of these vital stock surveys. With this caveat in mind, the following research areas are also recommended by the Teams.

This list is not in priority order.

- Greatly expand domestic fishery observer coverage to obtain bycatch rates, species composition, effort data, and total catch including discard rates.
- Mortality estimates for bycatch species in each fishery, particularly halibut mortality.
- Bycatch rates by area and species in each fishery.
- Biomass estimates for shelf demersal rockfish in Southeast Alaska.
- Pollock life history information, especially spawning areas, annual stock production, and egg/larval transport dynamics (mechanisms) in the Gulf.
- Techniques for aging pollock.
- Operational cost data for all fisheries.
- Pacific cod aging studies, including funding for reading backlogged samples.
- Net fishing efficiency data, including effectiveness of various trawl operations in terms of area swept versus retained catch, fish avoidance, etc.
- Seasonal variation in the cod-sablefish-pollock fishery incidental catches to enable better assessment of mechanics to avoid bycatch and to set appropriate fishing seasons.

- Economic evaluation of the consequences of various bycatch management measures.
- Effect of pelagic trawl mesh size on catch and size composition of pollock in order to minimize catch of undersize fish.
- Incidental catch rates among rockfish assemblages.

Excerpted from SSC Minutes, December 1988

Research and Data Collection Priority Recommendations of the SSC

The SSC reviewed recommendations of the council staff and the Gulf of Alaska and Bering Sea/Aleutian Islands Groundfish plan teams for research needs. Given the decrease in observer coverage of the fleet and uncertainty about sources of future data necessary for management of the fisheries of both the Bering Sea and Gulf of Alaska, the following priorities are recommended. The SSC also emphasizes that we continue to depend upon the existing research programs of the National Marine Fisheries Service and the Alaska Department of Fish and Game and assume these programs will continue.

The highest priority program:

Provide for the domestic observer programs for the Bering Sea and Gulf of Alaska groundfish fisheries with the intent of providing statistically valid sampling of the commercial groundfish harvests. These data are essential for management of the groundfish species and bycatch of other commercial species.

Other high priority programs for management of North Pacific Fisheries:

Determine stock structure, life history information, population dynamics and other biological data essential for management of Pollock stocks with special emphasis on the stocks of the central Bering Sea and the Shelikof Straits.

Determine the actual age structure of populations of groundfish in the Gulf of Alaska and the Bering Sea through valid aging techniques and sampling programs and provide support for the port sampling programs necessary to collect the data.

Conduct studies of trophic interactions in the Bering Sea ecosystem with particular emphasis on the interrelationships between critical populations of fish, shellfish, and marine mammals.