

**Pacific States Marine Fisheries Commission Work Plan
for a Project to Determine Fishing Effort in State and Federal Waters off the West Coast**

Background

The ad hoc Groundfish Habitat Technical Review Committee (TRC), was created by the Pacific Fishery Management Council (Council) to oversee the scientific assessment process for the Pacific Groundfish Essential Fish Habitat Environmental Impact Statement (EIS). The TRC, at their February 19-20, 2003 meeting, reviewed the results of a fishing effort model that was produced by Ecotrust. The TRC noted concern with the results of the model and recommended that experience-based information from fishermen be compiled for comparison with the Ecotrust product.

Fishing effort data is one of several components necessary to evaluate the status of groundfish habitat. More information on how this data may be utilized, including a description of the GIS database being developed for the EIS and the assessment methodology, is available on the Council's website at <http://www.pcouncil.org/habitat/habback.html>. The fishing effort information is one of several data layers consolidated in a GIS database and being integrated through a risk assessment model under the guidance of the TRC.

Pacific States Marine Fisheries Commission (PSMFC) has developed a response to gathering information from fishermen that is described in the text below. In addition to gathering information on fishing effort, PSMFC will use the opportunity to review the descriptions of west coast fishing gear being used for this project.

Objectives:

- a) Produce a compilation of experienced-based information to indicate fishing effort by gear type for areas off the west coast over time.
- b) Review the description of fishing gears utilized on the west coast.

Although the TRC recommendation focused on developing a product for comparison with the Ecotrust data, the project has been designed to develop a discrete set of qualitative data that could potentially be used independently. The results will be subjected to the scrutiny of the Council system (including the TRC and SSC) and may potentially become part of the universe of available fishing effort data that among other things, includes logbooks, observer data, and the Ecotrust model.

Methodology

This project is based on small focus groups comprising representative, expert fishermen from four geographic regions (Washington, Oregon, northern California and southern California). The first meeting, to be held in early June, 2003, will be used as a pilot project to test the methodology.

For each geographic region, the project will occur in five steps. First, the lead fishermen will select participants based on their representative knowledge. Second, the participants will be given NOAA charts to fill in based on the parameters described in the Data section below. Third, the information from the charts will be digitized in a GIS database. Forth, the GIS data will be presented in focus groups with the participating fishermen for refinement and validation. Appropriate changes to the database will be made during the focus group. And fifth, the data will be compared with the Ecotrust data and subjected to TRC review.

Focus groups are used by social scientists to obtain information about complex topics, discover new research questions, explore a range of perceptions regarding a topic, and generate feedback from others in the group (Agar 1995, Bloore et al. 2001). Westat (2002) notes, “The focus group session is, indeed, an interview—not a discussion group, problem-solving session, or decision-making group. ... The hallmark of focus groups is the explicit use of the group interaction to generate data and insights that would be unlikely to emerge otherwise.”

Such interviews also optimize the limited time and funding available for this project. It would be impossible, under the given constraints, to fully assess all aspects of west coast fishing effort. It should therefore be clearly noted that this project is not based on either random sampling or a census; rather, it is designed to elicit fishermen’s expert, qualitative knowledge about fishing effort in order to compare results with other research findings, as request by the Habitat Technical Review Committee when it recommended the compilation of experience-based information from fishermen.

The maps generated by the fishermen will be digitized and captured as independent GIS datasets. The datasets can then be overlaid with the Ecotrust products and other GIS based sources of fishing effort data for comparison.

Group composition

Each focus group will be led by fishermen who sit on the TRC: Marion Larkin (Washington), Scott McMullen (Oregon), and Tim Athens (California). The fishermen were appointed to the TRC by their respective State fisheries agencies based on their representative knowledge of the fishing industry in their geographic area of expertise. Participants in the focus groups will be chosen by Larkin, McMullen and Athens based on their expertise.

The fishermen will be sent the NOAA nautical charts that are commonly utilized by fishermen to navigate and select fishing spots. They will be asked to describe fishing effort in terms of gear, time, area, and intensity based on their expert knowledge of fleet behavior. The maps will then be returned to TerraLogic GIS, who will enter the information into a GIS database. This database will then be presented at each focus group meeting as a starting point. Refinements and additional information will be captured and entered by TerraLogic GIS in concert with the

fishermen at each meeting

Because of the large project area and diversity of gear types, a project management structure based on “points of responsibility” has been created to divide the project into manageable geographic units, each of which are subject to the same goals and quality control standards. Points of responsibility are as follows:

- The Pacific Fishery Management Council’s ad hoc Groundfish Habitat Technical Review Committee (TRC) provided the impetus for the project through its recommendations at their February 19-20, 2003 meeting, and will review the final products.
- Randy Fisher, Executive Director of the Pacific States Marine Fisheries Commission, is providing project oversight and contracts administration.
- Dave Colpo, Pacific States Marine Fisheries Commission, is providing project oversight and contracts administration.
- Review by NWFSC
- Steve Capps, NOAA Fisheries, is providing project oversight.
- Tim Athens, commercial fishermen appointed by the California Department of Fish and Game to the TRC, is responsible for project administration and data collection in California, including selection of appropriate fishermen to provide data.
- Scott McMullen, commercial fishermen appointed by the Oregon Department of Fish and Wildlife to the TRC, is responsible for project administration and data collection in Oregon, including selection of appropriate fishermen to provide data.
- Marion Larkin, commercial fishermen appointed by the Washington Department of Fish and Wildlife to the TRC, responsible for project administration and data collection in Washington, including selection of appropriate fishermen to provide data.
- Allison Bailey, technical consultant to the Pacific States Marine Fisheries Commission, is responsible for ensuring technical compatibility of the end product with GIS.

The following people reviewed the study design:

- Flaxen D.L. Conway, Extension Sea Grant Oregon; Oregon State University, Department of Sociology;
- Guy Fleischer, Northwest Fisheries Science Center;
- Ginny Goblirsch, Oregon Sea Grant;
- Jennifer Gilden, Pacific Fishery Management Council;
- Jamie Goen, NOAA Fisheries, Northwest Region;
- Jennifer Langdon Pollock, Pacific States Marine Fisheries Commission.

Project Tasks and Milestones

Task 1 Marion Larkin, with technical support from Allison Bailey, will administer the

project on a **pilot basis** for the areas north of Destruction Island for trawl gear only (large footrope, small footrope, and mid-water). Draft milestones follow:

- May 12 - PSMFC to distribute charts;
- May 23 - Charts to be returned to TerraLogic;
- June 6 - Focus group meeting to refine charts; and,
- June 16 - Briefing to SSC and Council.

Task 2 Incorporate lessons learned into project design.

Task 3 Implement project for remaining geographical areas and gear types. Marion Larkin, with technical support from Allison Bailey, will administer project for northern coast (roughly for waters off Washington - specific breakdown to be determined). Scott McMullen, with technical support from Allison Bailey, will administer project for mid-coast (roughly for waters off Oregon - specific breakdown to be determined). Tim Athens, with technical support from Allison Bailey, will administer the project for southern coast (roughly for waters off California - specific breakdown to be determined). Dates for milestones to be determined.

Data

Gear types

- Gear types will be limited to trawl for the pilot project and subsequently expanded in consultation with reviewers.
- Gear types for the EFH EIS are being defined in a document titled *Description of Fishing Gears Used on the Pacific Coast*. It is important that the maps be referenced back to that document.

Intensity of Fishing Effort

- Maps should display the relative intensity of fishing effort by gear type. Because of practical limitations on this project, and the fact that it is not a census of all fishermen, it is unrealistic to expect precise quantified results (i.e. tows per year for a given area). However, a relative index consistently applied is crucial in adherence to the overall goals of the project. Effort should be displayed as:

| | |
|-----------------|---|
| High | concentrated and intense fishing effort throughout the year |
| Seasonally High | concentrated and intense effort within specified seasons |
| Medium | fishing effort occurs regularly throughout the year |

| | |
|-------------------|--|
| Seasonally Medium | fishing effort occurs regularly within specified seasons |
| Low | occasional to rare fishing effort |
| None | no known fishing |

Time

- Time periods will be limited to the following categories trawl for the pilot project and subsequently expanded in consultation with reviewers. These time periods were developed in discussion with Larkin, McMullen and Athens.

| | |
|-------------|---|
| 1986 - 2000 | no footrope restrictions |
| 2001 - 2002 | implementation of footrope restrictions |
| present day | Area management and rebuilding overfished stocks. |

Area

- Areas should be chosen based on fishermen's knowledge of where fishing effort has occurred. It should not be limited to statistical area grids, but rather may coincide with depth contours or bottom types based on real experience and observation.

Technical Specifications (necessary standards to ensure data can be converted to GIS)

- One set of charts per gear type and time period
- Areas need to be completely outlined as a polygon (not limited to isolated points or lines)
- Fishing intensity should be indicated by shading each polygon with a color that corresponds to an intensity as follows:
 - high = red
 - seasonally high = orange
 - medium = yellow
 - seasonally medium = blue
 - low = green

References

Agar, M. and MacDonald, J. 1995. "Focus groups and ethnography." *Human Organization* 54 : 78-86.

Bloor, M. et al. 2001. *Focus Groups in Social Research*. London: Sage Publications.

Frechtling Westat, J. 2002. *The 2002 User Friendly Handbook for Project Evaluation*. National Science Foundation, Directorate for Education and Human Resources, Division of Research, Evaluation and Communication.

Budget

Task 1 (Pilot Project)

Project Administration: \$500 (Larkin)

Fishermen: \$250 per fisherman x 5 fishermen = \$1250

Technical Support, Data Entry, and Logistical Costs: \$3,000

sub total = \$4750

Task 2

base funded

Task 3

a) Northern Coast

Project Administration: \$500 x 1 (Larkin) = \$500

Fishermen: \$250 per fisherman x 10 fishermen = \$2500

Technical Support, Data Entry, and Logistical Costs = \$3750

sub total = \$6750

b) Mid Coast

Project Administration: \$500 x 1 (McMullen) = \$500

Fishermen: \$250 per fisherman x 20 fishermen = \$5000

Technical Support, Data Entry, and Logistical Costs = \$3750

sub total = \$9250

c) Southern Coast

Project Administration: \$500 x 1 (Athens) = \$500

Fishermen: \$250 per fisherman x 20 fishermen = \$5000

Technical Support, Data Entry, and Logistical Costs = \$3750

sub total = \$9250

Project Total = \$30,000