

Instruction in Fisheries Management



POLLOCK CONSERVATION
COOPERATIVE RESEARCH CENTER

Project Synopsis



Students apply computer analysis techniques in fisheries management decision-making.

CREDIT: PEGGY MERRITT, UAF/SFOS

FUNDING SUMMARY

PRINCIPAL INVESTIGATOR

Margaret F. Merritt
University of Alaska Fairbanks
School of Fisheries and
Ocean Sciences

YEAR FUNDED

2001, 2003, 2006

RESEARCH PERIOD

2001, 2003, 2006

BUDGET

\$17,750

Enhancing fisheries education at the University of Alaska Fairbanks

Fisheries management is a decision-making process where there is often incomplete or suspect information, and managers must choose among risks and benefits to address conflicting goals. However, most tasked with addressing this need lack training in the techniques that would allow simultaneous consideration of multiple and conflicting viewpoints.

WHY IS PCCRC INTERESTED?

Policy-makers need training to integrate scientific, economic, social, and political components to create comprehensive approaches for finding solutions to fisheries research and management problems.

WHAT SCIENTISTS DID

The researcher taught a two-credit, upper-division course called Decision-Making Techniques in Resource Management: Focus on Quota-Based Management. Class time was divided between lectures and computer lab. Lectures included guest speakers and had two parts. In part 1, students developed an understanding of the history and rationale for implementing Individual Fisheries Quota (IFQ) management, overviews of the science, economics and social issues associated with IFQ management, and case studies. In part 2, students were introduced to prominent philosophies of planning, group decision-making techniques, stakeholders and their combinations, and a systems approach to planning—the Analytic Hierarchy Process—and associated software. Readings from a textbook and selected articles were assigned. Students selected a current IFQ problem anywhere in the world, and applied principles learned in lectures and reading material to structure and prioritize components of the problem during lab, and propose a ranked list of options to address the problem.

OBJECTIVES

Launch a college level course on decision-making techniques with an emphasis on a systems approach to solving fisheries-related problems. The course would provide instruction in fisheries management and address issues related to the science, socioeconomics, politics, and ethics of Individual Fisheries Quota (IFQ) programs.

BOTTOM LINE

This course provided instruction in group decision analysis techniques to existing and future participants in fisheries management to (1) ensure stakeholder participation in the management process; (2) develop long-term strategies with measurable objectives; (3) blend various sources of information; (4) make explicit the decision-making process; and (5) increase the likelihood of finding an optimal solution to a management problem.

WHAT SCIENTISTS LEARNED

Graduate and undergraduate students in the fisheries program at the University of Alaska Fairbanks, and fisheries professionals with the Alaska Department of Fish and Game, interested in continuing education, have been the primary students in this course.



UAF professor of fisheries, Peggy Merritt, and fisheries doctoral student, Jodi Pirtle, applied the Analytic Hierarchy Process in a workshop with stakeholders in Anchorage to help prioritize marine and coastal issues that should be studied in the Aleutian Islands.

CREDIT: KURT BYERS, ALASKA SEA GRANT

Student Projects

- Mitigating impacts of fishing area closures
- Chignik area cooperative salmon fishery
- Strategic plan for Maori customary fish harvest in New Zealand
- Strategic plan to manage Newfoundland's northern cod fishery
- BSAI crab rationalization
- Strategic plan for the Norton Sound sac-roe herring fishery
- Outcomes and effects of Community Development Quotas
- Management of the charter halibut fishery
- Atlantic surf clam/ocean quahog fishery strategic plan
- Improving fish stock assessment models for quota management
- Examination of IFQs for the Kenai River chinook salmon fishery

17

Students pursued a wide variety of topics in this upper level, two-credit fisheries education class at the University of Alaska Fairbanks, aimed at helping them gain the knowledge, skills, and perspective necessary for solving fishery management problems.

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