

Stevens Professorship Report

- **Instruction/Program Development**
- **Research Activities**
- **Professional Service Activities**
- **Plan and Budget Proposal for 2009**

Instruction/Program Development

- Time Series (F06, F07, F09)
- Advanced Time Series (Sp08, Sp10)
- **Bioeconomic Modeling** (Sp07)
- **Politics, Law, and Regulation in US Marine Policy** (F07)
- **Quantitative Analysis for Marine Policy** (F08)
- **Current Issues in Marine Policy**—Cruise Ship Impacts in the Marine Environment (F09)
- Integrating Oceanographic, Ecological, & Social Perspectives in Marine Ecosystems (Su09)—MESAS
- **Politics, Law, and Regulation in International Marine Policy** (Sp10)
- North Pacific Fishery Management Council: a case study (Su10)—MESAS

Instruction/Program Development

Committee Chair/Co-Chair

- **Erin Steiner** —MS Fisheries (Sp 2009). Chilean farmed salmon production forecasts and biological consequences of managing Bristol Bay sockeye salmon for economic stability. (Alaska Sea Grant & PCCRC)
- **Alexander Kotlarov** —PhD Fisheries (in progress)—A retrospective analysis of Alaskan fisheries and how they compare to other major world fisheries. (NMFS Advanced Studies)
- **Ellen Martinson** —PhD Fisheries (in progress)—Annual and seasonal growth patterns on salmon scales as indicators of climate events and shifts and indicators for salmon carrying capacity. (NMFS Advanced Studies)
- **James Strong**—MS Fisheries (in progress)—Fishing for pollock in a sea of change. (NMFS Saltonstall-Kennedy).
- **Emilie Springer**—PhD Anthropology (in progress)—Sitka sounds: resilience and adaptation of a community identity (RAP IGERT)

Instruction/Program Development

Committee Member

- **Dean Courtney** —PhD in progress—Ecosystem considerations of Pacific sleeper shark bycatch in commercial fisheries for groundfish in the Northeast Pacific Ocean. (NMFS Advanced Studies)
- **Sara Miller** —PhD in progress—Optimal stability window hypothesis of positive correlation between the size of the North Pacific salmon stocks on decadal time scales and the winter strength of the Aleutian Low pressure system. (Globec)
- **Xinxian Zhang** —PhD in progress—Population dynamics of pink salmon. (ADF&G)
- **Abby Holzinger** —MS Resource Economics (Sp 2007)—An econometric model of world trade in salmon. (Alaska Sea Grant)

Timeline

- **AY 2006-07, 2007-08, 2008-09, 2009-10**
 - Secure grant funding to support Marine Policy students
 - Develop 5 core courses in Marine Policy
- **AY 2009-2010**
 - Request University and Industry support for two additional faculty lines
- **AY 2010-2011**
 - File petition to create MS in Marine Policy

Sponsored Projects—Current

- Fishing for pollock in a sea of change . NMFS 2008-09 (\$145K)
- Integrating oceanographic, ecological, and social perspectives in research and stewardship of marine ecosystems. NSF 2008-14 (\$3M)
- Understanding the impacts of cruise ships to coastal ecosystems and communities: a seminar series. NPS 2009 (\$10K)
- Advancing an Alaskan regional marine research plan. NOSG 2006-11 (\$266K)

- A global analysis of salmon prices: how low can they go? ASG 2006-09 (\$185.5K).
- Fishery bioeconomics, a partnership between Russian and American analytical centers. USAID 2008 (\$20K)

Sponsored Projects—Pending

- Straddling the line: cooperative and non-cooperative strategies for management of Bering Sea pollock. NPRB 2009-12 (\$289K)
- A retrospective analysis of salmon abundance in the Eastern Bering Sea. AKSG 2010-12 (\$176K)
- Regional effects of climate change on natural resource-based industries in Norway: adaptation and challenges. Norwegian Research Council 2009-2012 (NOK 6.3M)

Publications

Journal Articles

- Banik N, B Biswas & KR Criddle. 2009. An optimum currency area in South Asia: a state space approach. *International Review of Economics & Finance* 18: xxx-xxx.
- Criddle KR & M Herrmann. 2008. A state space bioeconomic model of Pacific halibut. *Natural Resource Modeling* 21:29-60.
- Olson TK & KR Criddle. 2008. Industrial evolution: a case study of Chilean salmon aquaculture. *Aquaculture Economics & Management* 12:1-18.
- Herrmann M & KR Criddle. 2006. An econometric market model for the Pacific halibut fishery. *Marine Resource Economics* 21:129-158.

Publications

Book Chapters

- Criddle KR. 2008. Examining the interface between commercial and sport fishing: a property rights perspective. Pages 123-147 in DR Leal & V Maharaj (editors), *Evolving Approaches to Managing Marine Recreational Fisheries*. Lexington Books.
- Criddle KR. 2008. The legal context of US fisheries management and the evolution of rights-based management in Alaska. Pages 369-382 in R Townsend, R Shotton, & H Uchida (editors). *Case Studies in Fisheries Self-Governance*. FAO Fisheries Technical Paper. No. 504. Rome, FAO.

Publications

NRC Committee Reports

- Committee on the Effectiveness of International & National Measures to Prevent & Reduce Marine Debris & its Impacts. 2009. *Tackling Marine Debris in the 21st Century*. National Research Council, National Academy Press. Washington DC 206p.
- Committee on the Evaluation of the Sea Grant Program Review Process. 2006. *Evaluation of the Sea Grant Program Review Process*. National Research Council, National Academy Press. Washington DC 195p.

Publications

Manuscripts in Review

- Williams AH, M Herrmann, KR Criddle. The effects of Chilean salmon and trout aquaculture on markets for Alaskan sockeye salmon.
- Steiner E, KR Criddle, MD Adkison. Alternative management strategies of Bristol Bay sockeye salmon for improved economic stability.

Research Activities

Presentations

- Criddle KR. 2009. Straddling the line: cooperative and non-cooperative strategies for management of Bering Sea pollock. INRA—Lessons from Continuity and Change in the Fourth International Polar Year. Fairbanks, AK.
- Criddle KR. 2008. Management of coupled nonstationary dynamic bioeconomic systems. *PICES XVII*. Dalian, China
- Criddle KR. 2008. Fisheries and the evolution of rights-based management in Alaska. *Fifth International Fisheries Congress*, Vladivostok, Russia

Research Activities

Presentations

- Steiner E., KR Criddle & MD Adkison. 2008. Alternative harvest strategies for Bristol Bay sockeye amidst a changing marketplace. *Alaska Marine Science Symposium*, Anchorage, AK.
- Criddle KR. 2007. Optimal strategic behavior in a duopoly model with two markets or what should an 800 lb. gorilla do when it meets King Kong? *Resource Modeling Association*, Cape Cod, MA.
- Criddle KR & M Herrmann. 2007. A state space bioeconomic model of Pacific halibut. *North American Fisheries Economics Forum*, Merida, Mexico.

Research Activities

Presentations

- Holzinger A, M Herrmann & KR Criddle. 2007. Alaskan salmon prices and the Chilean farmed salmon industry. *North American Fisheries Economics Forum*, Merida, Mexico.
- Criddle KR. 2006. Multiple-use fisheries and property rights. *16th Political Economy Forum: Evolving Approaches to Managing Marine Recreational Fisheries*. Political Economy Research Center, Emigrant, MT

Research Activities

Presentations

- Criddle KR. 2008. Fisheries Management in Alaska. Pacific Scientific Research Fisheries Center (TINRO), Vladivostok, Russia
- Criddle KR. 2007. An overview of Alaska's fisheries and their evolution. Workshop on Fisheries Policy & Experimental Economics: Opportunities & Priorities. Anchorage, AK
- Criddle KR & M Herrmann. 2007. A state space bioeconomic model of Pacific halibut. Gulf of Maine Research Institute, Portland, ME.

Professional Service Activities

- Member, National Academies Ocean Studies Board (2007-2009)
 - Fisheries Subcommittee Chair (2008-09).
 - Chair of NRC Committee on the Effectiveness of International and National Measures to Reduce and Prevent Marine Debris and its Impact (2007-08)
 - Member of NRC Committee on the Evaluation of the Sea Grant Program Review Process. (2006)
- Associate Editor, *Natural Resource Modeling* (2007-)
- Board of Directors, Resource Modeling Association (2002-10)
- NPFMC SSC (1993-)
 - Vice-chair (2007-)

Professional Service Activities

- DOD Biosciences fellowship review panel (January 30-31 in DC)
- Inland Northwest Research Alliance Symposium organizing committee (March 4-7 in Fairbanks)
- FL Sea Grant research proposal review panel (April 7-8 and August 11 in Gainesville)
- Resource Modeling Association conference organizing committee (June 17-19 in Juneau)
- NMFS PIFSC external review panel (June 23-26 in Honolulu)

Plan for 2009

Course Development

- Integrating oceanographic, ecological and social perspectives in marine ecosystems—MESAS IGERT
- Politics, Law, and Regulation in International Marine Policy
- North Pacific Fishery Management Council: a case study—MESAS IGERT

Professional Development

- Increased familiarity with North Pacific fisheries—Bristol Bay salmon fisheries, Sitka Sound herring fisheries

Research Projects

- Global analysis of salmon prices
- Aleutian Islands regional marine research plan.
- Fishing for Pollock in a Sea of Change
- New projects?

Budget Request for FY 2009-10

Travel

Anchorage	attend PCCRC mtg	Jan, 2010	\$600
Fairbanks?	attend PCCRC mtg	Aug, 2009	\$750
Dillingham	observe salmon fishery	July, 2009	\$1,800
Sitka	observe herring fishery	March, 2010	\$1,000
Seattle	observe roe auction	May, 2010	\$1,000
Research Asst	stipend and tuition	Spring 2010	\$12,943
Replace computer and renew software licenses		July, 2009	\$4,500
Guest speakers	Current issues course	Fall 2009	\$10,000
Guest speakers	Int'l policy course	Spring 2010	<u>\$15,000</u>
			\$47,593