

Biographical Sketch: Jenny SUN, Ph.D.

Personal

Senior Marine Resource Economist
Gulf of Maine Research Institute, <http://www.gmri.org/>
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A. Professional Preparation

National Chung-Hsing University, Applied Economics, B.S., 1987
National Taiwan University, Agricultural Economics, M.S., 1989
Cornell University, Agricultural, Resource, and Managerial Economics, Ph.D., 1994

B. Appointments

2012 – present Senior Marine Resource Economist, Gulf of Maine Research Institute
2013 - present Graduate Faculty of the Interdisciplinary Doctor of Philosophy, Univ. of Maine
2012 - present Adjunct Associate Research Professor, School of Marine Sciences, Univ. of Maine
2009-2011 Research Scholar, Inter-American Tropical Tuna Commission (IATTC), La Jolla, CA
2008-2011 Visiting Scholar, Southwest Fishery Science Center, NOAA Fishery
2008-2009 Visiting Professor, Dept. of Economics, Univ. of California, San Diego
1994-2011 Associate Professor and Professor, Institute of Fisheries Economics; Professor and Director (2003-2006), Institute of Applied Economics, National Taiwan Ocean University

C. Products

(C1). Products most closely related to the NSF Coastal SEE proposed project

1. Mills, K., Pershing, A.J., C. Brown, Y. Chen, F. Chiang, D.S. Holland, S. Lehuta, J. Nye, J.C. Sun, A. Thomas, and R. Wahle 2013. Fisheries management in a changing climate: lessons from the 2012 ocean heat wave in the Northwest Atlantic. *Oceanography* 26(2):60-64.
2. Pershing, Andrew J. John H. Annala, Steve Eayrs, Lisa A. Kerr, Jonathan Labaree, Jennifer Levin, Katherine E. Mills1, Jeffrey A. Runge1, Graham D. Sherwood, Jenny C. Sun, and Shelly Tallack Capoross. 2013. The Future of Cod in the Gulf of Maine, Gulf of Maine Research Institute, Portland, ME. <http://gmri.org/upload/files/GMRI%20-%20The%20Future%20of%20Cod%20in%20the%20Gulf%20of%20Maine.pdf>
3. Dayton, Alexa M., Jenny Sun, 2012. An Independent Evaluation of the Maine Limited Entry Licensing System for Lobster and Crab, Prepared for Maine Department of Marine Resources by Gulf of Maine Research Institute, <http://www.maine.gov/dmr/GMRIReportRelease.htm>.
4. Chiang, Fu-Sung and Chin-Hwa Sun, 2010, Influence of Global Warming on Seafood Availability, in *Environmental Effects on Seafood Availability, Safety and Quality Issues*, Editor: Elzbieta, G. Daczowska-Kozon and Bonnie Sun Pan, CRC Press LLC., pp. 261-273.
5. Sun, Chin-Hwa, 2007, Effectiveness of Vessel Buyback Programs on the Offshore Fishery in Taiwan, in *Fisheries Buybacks*, Edited by Rita Curtis and Dale Squires, 2007, Blackwell Publishing, Inc, Iowa.
6. Sun, Chin-Hwa, Fu-Sung Chiang, Min-Hsiang Chen and Eugene Tsoa, 2006, The Effects of El Niño on the Mackerel Purse-Seine Fishery Harvests in Taiwan: An Analysis Integrating the Barometric Readings and Sea Surface Temperature, *Ecological Economics*, 56(2): 268-279. (SSCI, SCI)
7. Sun, Chin-Hwa, 2007, Potential Economic Benefits of El Niño/Southern Oscillation (ENSO) Forecast on the Fishery Sector, GLOBEC-CLIOTOP Working Group 5 (WG5) - *Socioeconomic Aspects and Management Strategies Workshop: The Challenge of Change - Managing for Sustainability of Oceanic Top Predator Species*, Marine Science Institute, University of California, Santa Barbara, April 12-14, supported by US National Science Foundation Grant 0524073.

(C2). Other Significant Products related to the NSF Coastal SEE proposed project

1. Sun, Jenny, Fu-Sung Chiang, Alexa Dayton. 2013. Impact of the 2012 Gulf of Maine Heatwave: Market Integration of Maine and Canadian Lobster, Regional Association for Research on the Gulf of Maine (RARGOM) Annual Science Meeting, October 8, 2013.
2. Liu, De-Chih, Chin-Hwa Sun, Pei-Chien Lin, 2012, Hysteresis Hypothesis in Unemployment and Labour Force Participation Rates: Evidence from Australian States and Territories, *Australian Economic Paper*, 51(2):71-84.
3. Sun, Chin-Hwa Jenny, 2010, Global Tuna Inverse Demand Estimation and the Economic Tradeoff of the Tuna Longline and Tuna Purse-Seine Fisheries in the Eastern Pacific, Inter-American Tropical Tuna Commission, sponsored by Pacific Islands Fisheries Science Center in Hawaii, NOAA National Marine Fishery Services. http://fisheriesstockassessment.com/files/economics/Comprehensive%20Final%20Report_2010_Jenny%20Sun.pdf
4. Miyake, Peter M., Patrice Guillotreau, Chin-Hwa Sun, Gaku Ishimura, 2010, *Recent Developments in Tuna Industry: Stocks, Fishery, Management, Processing, Trade and Markets*, FAO Fisheries and Aquaculture Technical Paper. No. 543. Rome, FAO. 125p. <http://www.fao.org/docrep/013/i1705e/i1705e.pdf>

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5. Liu, Donald J., Chin-Hwa Sun, and Harry M. Kaiser, 2006, Market Conduct under Government Price Intervention in the U.S. Dairy Industry, in *New Empirical Industrial Organization and the Food System*, Edited by Harry Kaiser and Nobuhiro Suzuki, 2006, Peter Lang Publishing, Inc, New York.
6. Tsay, Ching-Yen, Jau-Ming Chen, and Chin-Hwa Sun, 2001, Interannual Variability of Mackerel Purse Seine Fishery of Taiwan and its Associated Climate Changes, *Atmospheric Sciences*, 29(4): 379-394. (In Chinese)

D. Synergistic Activities

1. Jenny has published 29 journal articles, 8 book chapters, more than 60 conference papers, conducted, coordinated more than 70 projects, serves as advisors for a total of forty master and Ph.D. graduate students, organized and been invited to participate in more than 50 international meetings on the economics of fisheries resource conservation and management.
2. Jenny serves as the lead PI in GMRI for two collaborative NSF (CNH and Coastal SEES) grants (2011-2017) to investigate the human and natural elements of the complex system which includes the oceans, the fish, the fishers, the markets, and the political policies of the lobster and groundfish fisheries in the Northeast US to increasing temperature and to examine fleet dynamics of the Eastern Pacific Tuna Fishery and the global market mechanism to explore a fully integrated, geo-spatial model of the international tuna fleets.
3. Reviewer: Canadian Journal of Fisheries and Aquatic Sciences; Editorial Board: Journal of Aquaculture Economics and Management, International Association of Aquaculture Economics and Management; Taiwanese Agricultural Economic Review, Rural Economics Society of Taiwan. Executive Committee, International Institute of Fisheries Economics & Trade, 2000-2004; Scientific Committee, 2008 Conference in Vietnam and 2010 Conference in Montpellier, France.
4. Jenny serves as chief scientist Delegate from Taiwan to attend the Scientific meeting in Inter-American Tropical Tuna Commission (IATTC) in 2008-2009; Scientist Delegate in Taiwan to attend the Commission, Stock Assessment Group, Scientific Committee, and Management Procedure Meetings for Commission for Conservation of Southern Bluefin Tuna (CCSBT) in Korean, US, Australia, Taiwan, and Japan, 2004-2008.
5. Honors and Invited Speeches
 - Participated in more than 50 international meetings on the economics of fisheries resource conservation and management and invited by IATTC in 2010 as a research scholar to host an international workshop on “Global Tuna Demand, Fisheries Dynamics and Fisheries Management in the Eastern Pacific Ocean” at La Jolla, CA on May 13-14, 2010 to provide considerable economic data to promote right-based management of the tuna purse-seine and longline fleets in the East Pacific Ocean.
 - Invited Panel of experts, “Workshop to Estimate and Assess Capacity in the Pacific Longline Fleet,” NOAA Fisheries, Honolulu, Hawaii, 2008 and 2009.
 - Invited Discussant, “Workshop on Rights-based Management and Buybacks in International Tuna Fisheries”, The IATTC and the World Bank workshop, University of California, San Diego, 2008.
 - Invited Speaker, International Workshop on Fishing Vessel and License Buy-Back Programs, March 22-24, 2004, La Jolla, California, sponsored by Southwest Fisheries Science Center and the Office of Science and Technology, NOAA Fisheries (NMFS); CERUM and Department of Economics, University of California, San Diego, 2004.
 - Research Award, National Science Council, 1994, 1995, Taiwan; The Honor Society of Agriculture, Gamma Sigma Delta, 1993, Cornell University; First Prize, Master’s Thesis Award, The Li-Ching Foundation, 1988.

E. Collaborators and Other Affiliations

- **Collaborators and Co-Editors**
Alexandre Aires-da-Silva (*Inter-American Tropical Tuna Commission*), Fu-Sung Chiang (*National Taiwan Ocean University*), Jordan Fischbach (*RAND*), Theodore Groves (*Department of Economics, University of California, San Diego*), Patrice Guillotreau (*Institut de Recherche pour le Développement, Sète, France; University of Nantes, France*), Samuel F. Herrick Jr. (*Southwest Fisheries Science Center, National Marine Fisheries Service, NOAA*), Michael Hinton (*Inter-American Tropical Tuna Commission*), Gakushi Ishimura (*Center for Sustainability Science, Hokkaido University, Japan*), Dale Kiefer (*USC*), Robert Lempert (*RAND*), Makoto P. Miyake (*National Research Institute of Far Seas Seas Fisheries, Fisheries Research Agency, Shimizu, Japan*), Mark N. Maunder (*Inter-American Tropical Tuna Commission*), Frank O’Brien (*System Science Applications Software Engineer*), Matt Owens (*FishWise*), Minling Pan (*Pacific Island Fisheries Science Center, National marine Fisheries Service, NOAA*), Steve Shanks (*Pacific Islands Forum Fisheries Agency*), Dale Squires (*Southwest Fisheries Science Center, National Marine Fisheries Service, NOAA*), D.G. Webster (*Dartmouth College*)
- **Graduate Advisors and Postdoctoral Sponsors**
Olan D. Forker, Professor Emeritus, Dept. of Applied Economics & Management, Cornell Univ.
Timothy D. Mount, Professor, Dept. of Applied Economics and Management, Cornell Univ.
Pradeep K. Chintagunta, Joseph T. and Bernice S. Lewis Distinguished Service Professor of Marketing, Booth School of Business, University of Chicago
- **Thesis Advisor and Postgraduate-scholar Sponsor since 2007**
Ying-Chih Sun (Best Master Thesis Award, NTOU; Texas A&M Ph.D. student), I-Chien Wu (Best Master’s Thesis Award, Rural Economics Society of Taiwan), Meng-Chi Yeh (Fishery Agency (FA), Taiwan; Master’s Thesis Honor

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Award, Taiwan Fisheries Economic Development Asso.), Tung-Lin Kuo (FA, Taiwan), Sheng-Rou Wang (FA, Taiwan), Chih-Wen Chang (Japanese Tuna Longliner Carrier), Tsung-I Wang (FA, COA, Taiwan), Yuan-Chung Lee (Tuna longline boat owner), Hein-Peing Pu (Taiwan Shipbuilding Corp.), Chia-Chi Fu (Overseas Fisheries Development, Taiwan), Hsiang-Ping Hsieh, De-Chih Liu, (Ph.D., Univ. of Newcastle, Australia, Current: Assistant Professor, Industrial Economics, Tamkang University), current Ph.D. Advisors: Miao-Fang Wu (NTOU), Alexa Dayton (Univ. of Maine).

F. Recent Research Projects (2009-2017)

1. **Sun, Chin-Hwa**, Minling Pan, Dale Squires, 2009, Structural Breaks and Price Linkage between Hawaii and Japanese Tuna Sashimi Markets, Joint Institute for Marine and Atmospheric Research, University of Hawaii, USA.
2. **Sun, Chin-Hwa**, 2009-2010, Global Tuna Inverse Demand Estimation and the Economic Tradeoff of the Tuna Longline and Tuna Purse-Seine Fisheries in the Eastern Pacific Ocean, Inter-American Tropical Tuna Commission, sponsored by Pacific Islands Fisheries Science Center in Hawaii, NOAA National Marine Fishery Services, USA.
3. **Sun, Chin-Hwa**, 2010, Integrated Bioeconomic Modeling and Management of the Tuna Fisheries of the Eastern Tropical Pacific, sponsored by Southwest Fishery Science Center (SWFSC), La Jolla, CA, USA.
4. **Sun, Chin-Hwa** and Samuel F. Jr., Herrick, 2010, Economic and Ecological Considerations in Ecosystem-based Fishery Conservation and Management, Inter-American Tropical Tuna Commission, subcontracted from Oak Management, Incorporated and Southwest Fisheries Science Center, National Marine Fishery Services, La Jolla, CA.
5. **Sun, Chin-Hwa**, 2010, Western and Central Pacific Vessel Day Scheme: Simulate Vessel Day Scheme (VDS) Market, Inter-American Tropical Tuna Commission, subcontracted from Ocean Associate, Inc., sponsored by Southwest Fisheries Science Center, NOAA National Marine Fishery Services, USA.
6. **Sun, Chin-Hwa** and Minling Pan, 2010, Dynamics of Supply Response of Hawaiian Longline Fisheries and its Implications on Fishers Behavior, Inter-American Tropical Tuna Commission, IATTC, subcontracted from Joint Institute for Marine and Atmospheric Research, University of Hawaii, USA.
7. **Sun, Chin-Hwa**, Dale Squires, Stephen Stohs, and Mark Helvey, 2010, The Welfare Impact of Production and Trade Leakages Due to Unilateral Harvest Regulation of U.S. Swordfish Landings, Inter-American Tropical Tuna Commission (IATTC), subcontracted from Ocean Associate, Incorporated, sponsored by Southwest Fisheries Science Center, NOAA National Marine Fishery Services, USA. <http://www.swr.noaa.gov/sfws/>
8. Webster, DG, Dale A Kiefer, Robert J Lempert, **Chin-Hwa Sun** and Dale E Squires, 2010-2014, Dynamics of Coupled Natural and Human Systems (CNH) Fishscape: Complex Dynamics of the Eastern Pacific Tuna Fishery, Inter-American Tropical Tuna Commission (IATTC), sponsored by National Science Foundation.
9. Joyce, Jessica and **Jenny Sun**, 2012, Research and Identify Options that Can Assist the Evolution of Groundfish Sectors as Viable Business Organizations, sponsored by SSB, NEFSC (1/1/2012-3/31/2013).
10. Jonathon Labaree, Jessica Joyce, and **Jenny Sun**. 2012. Analysis of the At-sea Monitoring Program for New England Groundfish Sectors in Fishing Year 2010 NEFSC (5/1/2011-4/30/2012)
11. Dayton, Alexa, and **Jenny Sun**, 2012, An Independent Analysis of the Limited Entry System for the Issuance of Commercial Lobster Licenses in the State of Maine Dept. of Marine Res., State of Maine (7/10/2011-10/15/2012). <http://www.maine.gov/dmr/GMRIReportRelease.htm>
12. **Sun, Jenny**, 2012, Evolution of Groundfish Sector Business Model, sponsored by Social Science Branch, Northeast Fisheries Science Center, National Marine Fisheries Service (7/1/2011-6/31/2013).
13. Brown, Nicholas, Stephen Eddy, and **Jenny Sun**. 2012, From Capture to Culture: Adding Value to the Sea Urchin Fishery, Sea Grant (9/1/2012-8/31/2014).
14. **Sun, Jenny**, Frank Chiang, Tom Farmer, and Dan Holland. 2013-2017. Collaborative Research: Resilience and Adaptation of a Coastal Ecological-Economic System in Response to Increasing Temperature, sponsored by National Science Foundation Coastal SEES grant.

G. Teaching (1994-present)

I have over 17 years of experience in teaching econometrics and resource economics, and international marine affair and management since 1994 and serve as major graduate advisor for more than 40 M.S. and Ph.D. students.

- **Sabbatical in the Department of Economics, University of California, San Diego during 2008-09**
I was invited to teach three Econometrics courses for over 500 students
- **Special Intensive Course taught in Institute of Applied Economics, National Taiwan Ocean University, 2004-05**
International Market Analysis of Fisheries Products, Fall 2004, with Prof. Henry W. Kinnucan, Auburn Univ.
International Perspective of Fisheries Resource Management, Fall 2005. Collaborated with: Prof. John Pope as Advisory Panel, CCSBT; Prof. Doug Butterworth, University of Cape Town, South Africa and Japanese CCSBT Delegate; Dr. Talbot MURRAY as International Scientist in New Zealand, and Dr. Trevor Branch, University of Cape Town, South Africa and CCSBT Consultant.
- **Special Intensive Course taught in the Centers for Disease Control, Department of Health, Taiwan, 2007-08**