

*CURRICULUM VITAE*

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**Dr. Eric M. Thunberg**

National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
Northeast Fisheries Science Center  
Social Sciences Branch  
166 Water Street  
Woods Hole, MA 02543-1097

## **CURRICULUM VITAE**

**NAME:** ERIC M. THUNBERG

### **PROFESSIONAL ADDRESS:**

National Marine Fisheries Service,  
Northeast Fisheries Science Center  
Social Sciences Branch  
166 Water Street  
Woods Hole, MA 02543  
Phone: (508) 495-4703  
Email: Eric.Thunberg@noaa.gov

### **CURRENT TITLE:**

Chief, Social Sciences Branch, Supervisory Economist, ZP-110-IV

### **EDUCATIONAL HISTORY:**

#### **Degrees**

1. Ph.D., Agricultural Economics, Virginia Polytechnic Institute and State University, April, 1988; Dissertation Title: "Willingness to Pay for Property and Nonproperty Flood Hazard Reduction Benefits: An Experiment Using the Contingent Value Survey Method." Leonard Shabman, Advisor
2. M.S., Agricultural Economics, Virginia Polytechnic Institute and State University, August, 1985; Thesis Title: "A Decision Model to Evaluate the Cost-Effectiveness of Alternative Virginia Oyster Grounds Management Strategies." Leonard Shabman, Advisor
3. B.S., Resource Economics, University of New Hampshire, 1982.

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## **PROFESSIONAL HISTORY:**

Current: January, 2016 – Present, Chief Social Sciences Branch, Northeast Fisheries Science Center, Woods Hole, MA Duty Station

February, 2011 – December, 2015 National Program Lead, Commercial Fisheries Economics, Office of Science and Technology, Economics and Social Analysis Division, Woods Hole Duty Station

September, 2010 – January, 2011 - Temporary assignment as Acting Division Chief, Economics and Social Analysis Division, NOAA Fisheries Office of Science and Technology, Silver Spring, MD

April, 2009 – August, 2009 Acting Chief, Social Sciences Branch, Northeast Fisheries Science Center, Woods Hole, MA April – October, 2009

August, 1993 - August, 2010 Position Title: Economist  
Social Sciences Branch, Northeast Fisheries Science Center, National Marine Fisheries Service, Woods Hole, Massachusetts.

July, 1988 - July, 1993 Position Title: Assistant Professor, Food and Resource Economics Department, University of Florida, Gainesville, Florida.

## **PUBLICATIONS:**

### **Peer Reviewed Journals**

1. Thunberg, E., and L. Shabman, "Determinants of Landowner's Willingness to Pay for Flood Hazard Reduction." Water Resources Bulletin. 27(4):657-665. 1991.
2. Thunberg, E. M., C. N. Pearson, and J. W. Milon. "Residential Flood Control Benefits of Aquatic Plant Control." Journal of Aquatic Plant Management. 30(2): 66-70. 1992.
3. Crotts, J. C., E. M. Thunberg and D. K. Shifflet. "Consumer Confidence as a Leading Indicator of Change in U. S. Travel Volume." Journal of Travel and Tourism Marketing. 1(2):53-62 1992.
4. Thunberg, E., R. Weldon, H. Thomforde, and D. Vaughan, "Marine Aquaculture Enforcement: Passing the Buck." Journal of Shellfisheries Research. 11(1):177-182. 1992.

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5. Thunberg, E., C. Adams, T. Taylor, and D. Brannan. "Estimating Commercial Fishing Revenue Losses Under Harvest Restrictions: The Case of the Florida Red Drum." Society and Natural Resources. 6(2):181-194. 1993.
6. Thunberg, E. M. and J. C. Crofts. "Factors Affecting Traveler's Overnight Stay Behavior." Journal of Travel and Tourism Marketing. 3(1):1-17. 1994.
7. Thunberg, E. M. and C. N. Pearson Jr. "Flood Control Benefits of Aquatic Plant Control Benefits of Aquatic Plant Control in Florida's Citrus Groves." Journal of Aquatic Plant Management. 31:248-254. 1993.
8. Thunberg, E. M., S. D. Smith, and M. Jepson. "Social and Economic Issues in Marine Fisheries Allocations: A Florida Perspective." Trends. 31(1):31-36. 1994.
9. Thunberg, E. M., Charles M. Adams, and Charles E. Cichra. "Economic, Regulatory, and Technological Barriers to Entry Into the Florida Aquaculture Industry." Journal of Applied Aquaculture. 4(2):3-14. 1994.
10. Covington, B., E. Thunberg, and C. Jauriega. "International Demand for the United States as a Travel Destination." Journal of Travel and Tourism Marketing. 3(4):39-50. 1994.
11. Thunberg, E. M., E. Bresnayan, and C. M. Adams. "Economic Analysis of Technical Interdependencies and the Value of Effort in a Multi-Species Fishery." Marine Resource Economics. 10(1):59-76. 1995.
12. Helser, T.E., E.M. Thunberg, and R. K. Mayo. "An Age-Structured Bioeconomic Simulation of the United States Silver Hake Fisheries." North American Journal of Fisheries Management. 16:783:794. 1996.
13. Chapman, F. A., S. A. Fitz-Coy, E. M. Thunberg, and C. M. Adams. "United States of America Trade in Ornamental Fish." Journal of the World Aquaculture Society. 28(1):1-10. 1997.
14. Thunberg, E. M., T. E. Helser, and R. K. Mayo. "Bioeconomic Analysis of Alternative Selection Patterns in the United States Atlantic Silver Hake Fishery." Marine Resource Economics. 13:51-74. 1998. Reprinted in Fisheries Economics Volumes I and II Collected Essays. Vol. II Lee G. Anderson Ed. Series: The International Library of Environmental Economics and Policy. Ashgate 2002.
15. A. Kitts, E. Thunberg, and J. Robertson. "Willingness to Participate and Bids in a Fishing Vessel Buyout Program: A Case Study of New England Groundfish" Marine Resource Economics. 15:221-232. 2001.

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16. Di Jin, E. Thunberg, H. Kite-Powell, and K. Blake. "Total Factor Productivity Change in the New England Groundfish Fishery: 1964-1993." Journal of Environmental Economics and Management 2002.
17. R. K. Mayo, E. M. Thunberg, S. E. Wigley, and S. X. Cadrin. "The 2001 Assessment of the Gulf of Maine Atlantic Cod Stock." Northeast Fisheries Science Center Reference Document 02-02. Northeast Fisheries Science Center, Woods Hole, MA. 2002.
18. D. Jin, H. L. Kite-Powell, E.M. Thunberg, A. R. Solow, W. K. Talley. "A Model of Fishing Vessel Accident Probability." Journal of Safety Research. 33:497-510. 2002.
19. Ward, John, P. Mace, and E. Thunberg. "The Relationship of Fish Harvesting Capacity to Excess and Overcapacity." Marine Resource Economics 19:525-529. 2005.
20. Di Jin and E.M. Thunberg. "An Analysis of Fishing Vessel Accidents in Fishing Areas off the Northeastern United States." Safety Science. 2005.
21. Di Jin, P. Hoagland, and E. Thunberg. "An Analysis of the Relationship Between Fish Harvesting and Processing Sectors in New England." Marine Resource Economics. 21:47-62. 2006.
22. Thunberg, E.M. and C. M. Fulcher. "Testing the Stability of Recreational Fishing Participation Probabilities." North American Journal of Fisheries Management. 26:636-644. 2006.
23. Steinback, S. E.M. Thunberg, and R.B. Allen. "The Benefits of Rationalization: The Case of the American Lobster Fishery." Marine Resource Economics. 23(1):37-63. 2008.
24. Di Jin, E. M. Thunberg, and P. Hoagland. "Economic Impact of the 2005 Red Tide Event on Commercial Shellfish Fisheries in New England." Ocean and Coastal Management. 51:420-429. 2008.
25. Portman, M. E., Di Jin, and E. M. Thunberg "Waterfront Land Use Change and Marine Resource Conditions: The Case of New Bedford and Fairhaven Massachusetts." Ecological Economics 68:2354-2362. 2009.
26. Portman, M. E., Di Jin, and E. M. Thunberg "The Connection Between Fisheries Resources and Spatial Land Use Change Along Two New England Fishing Ports." Land Use Policy. 28(3):523-533. 2010.
27. Di Jin, P. Hoagland, T. Dalton, E. Thunberg. "Development of an Integrated Economic and Ecological Framework for Ecosystem-Based Fisheries Management in New England" Progress in Oceanography. 102:93-101, 2012.

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28. Lee, M-Y., and E. Thunberg. "An Inverse Demand System for New England Groundfish: Welfare Analysis of the Transition to Catch Share Management" American Journal of Agricultural Economics. 1-18; doi: 10.1093/ajae/aat061. 2013.
29. Holland, D, E. Thunberg, J. Agar, S. Crosson, C. Demarest, S. Kasperski, L. Perruso, E. Steiner, J. Stephen, A. Strelcheck, and M. Travis. U.S. Catch Share Markets: A Review of Data Availability and Impediments to Transparent Markets. Marine Policy 57:103-110, 2015.
30. Thunberg, E, and S. Correia. Measures of Fishing Fleet Diversity in the New England Groundfish Fishery. Marine Policy 58:6-14, 2015.
31. Thunberg, E. J. Walden, J. Agar, R. Felthoven, A. Harley, S. Kasperski, J. Lee, T. Lee, A. Mamula, J. Stephens, A. Strelcheck. Measuring changes in multi-factor productivity in U.S. catch share fisheries. Marine Policy 62:294-301, 2015.

### **Book Chapters**

1. Thunberg, E. M. and L. A. Shabman. "Integration of Economic Modeling in Fisheries Management: An Evaluation of Virginia Oyster Grounds Management." East Coast Fisheries Law and Policy. Eds. J. Bubier and A. Rieser. Marine Law Institute, University of Maine School of Law, Portland ME. 1987. pp. 261-80.
2. Thunberg, E.M. and J. W. Milon, "Forecasting Recreational Fishing Participation." In Evaluating Recreational Fisheries: an Ecological, Economic and Social Balance Sheet Eds. T. J. Pitcher and C. Hollingworth. Blackwell Science - Fish and Aquatic Resources Series. 2002.
3. Sutinen, J.G., P. Clay, C.L. Dyer, S.F. Edwards, J. Gates, T. A. Grigalunas, T. M. Hennessey, L. Juda, A.W. Kitts, P.N. Logan, J.J. Poggie, B.P. Rountree, S.R. Steinback, E.M. Thunberg, H.F. Upton, and J.B. Walden. "A Framework for Monitoring and Assessing Socioeconomic and Governance of Large Marine Ecosystems." Sustaining Large Marine Ecosystems: The Human Dimension. T. Hennessey and J. Sutinen Eds. Elsevier, Amsterdam, The Netherlands. 2005. pp.27-81.
4. Hoagland, P., D. Jin, E. Thunberg, and S. Steinback. Economic Activity Associated with the Northeast Shelf Large Marine Ecosystem: An Application of an Input-Output Approach." Sustaining Large Marine Ecosystems: The Human Dimension. T. Hennessey and J. Sutinen Eds. Elsevier, Amsterdam, The Netherlands. 2005. pp.157-179.
5. Thunberg, E. A. Kitts and J. Walden "A Case Study of New England Groundfish Fishing Capacity Reduction" Fishery Buybacks Dale Squires and Rita Curtis Eds. Blackwell Publishing. 2007.

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## Trade Journals

1. Crotts, J. C. and E. M. Thunberg. "Assessing Florida's In-State Resident Travel Market." Hospitality Herald. 2(1) 1992.
2. Crotts, J. C. and E. M. Thunberg. "Assessing the Scope, Size and Trip Characteristics of the In-State Resident Market." Florida Hotel and Motel Journal. 1992
3. Holland, S. and E. Thunberg. "Tourism-What's it Worth?." Explorer. 2(1):1-2. 1996.
4. Thunberg, E. "Lobster Profits Ebbing with Time." Monthly Newsletter of the Maine Lobstermen's Association. 19(2):7. April, 2011.

## Proceedings

1. Thunberg, E. M., "Market Oyster Production In Virginia Under Yield Risk: A Policy Perspective." In Proceedings: Second Annual Conference on the Economics of Chesapeake Bay Management. Ed. Eric Van De Verg, Division of Research, Maryland Department of Economic and Community Development, Annapolis, MD. 1987. pp. 1-19.
2. Bouchelle, E. L., E. Thunberg, C. Adams, and J. Seale. "The North Atlantic Swordfishery, Problems, Trends and The Economics of Management. Proceedings of the Tropical and Subtropical Fisheries Technological Society. Sea Grant Report SGR-105. Florida Sea Grant, Gainesville, FL. 1990. pp. 262-274.
3. Adams, C., E. Thunberg, and D. Pybas Ed.s Proceedings of Waterfront Development and Utilization in Florida: An Issues and Problems Identification Workshop. Technical Paper No. 61, Florida Sea Grant College. Gainesville, FL. 1991. pp. 1-36.
4. Thunberg, E. M. "A Computer Model to Demonstrate Common Property and Open Access Resource Problems." Conference Proceedings: New Technologies and Innovations in Agricultural Economics Instruction. Agricultural Economics Department, University of Kentucky, Lexington, Kentucky. 1992. pp. 103-112.
5. Bouchelle, E. L., E. M. Thunberg, C. M. Adams, and J. L. Seale. "Supply Response to North Atlantic Swordfish Quotas: Implications for Swordfish and Tuna Management." Proceedings of the 45th Annual Meeting of the Gulf and Caribbean Fisheries Institute. Gulf and Caribbean Fisheries Institute, Charleston, SC. (1993).
6. Thunberg, E. "Summary Report on Socio-Economic Data Collection for Saltwater Recreational Fisheries." Proceedings of the Workshop on Socio-Economic Data and Analysis for Recreational Fisheries Management. Special Report No. 45, Atlantic States Marine Fisheries Commission, Washington, D.C. 1994.

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7. Thunberg E. "Recreational Fisheries in the Mid-Atlantic Region" Comprehensive Management Workshop. Mid-Atlantic Fishery Management Council, Dover, DE. January, 1995.
8. Thunberg, E. M., T. E. Helsen, and R. K. Mayo. "Bioeconomic Analysis of Alternative Selection Patterns in the United States Silver Hake Fishery." Bioeconomic Modeling in the EU. Concerted Action Coordination of Research in Fishery Economics (AIR CT94 1489), Working Document Nr:7. Agricultural Economics Research Institute, The Hague, The Netherlands. 1996.
9. Kitts, A., E. Thunberg, and J. Robertson. "Modeling Participation and Bids in the Northeast U.S. Groundfish Fishing Vessel Buyout Program." Eide and Vassdal (eds.) Proceedings of the 9th International Conference of the International Institute of Fisheries Economics and Trade, Tromso, Norway. 1998.
10. Thunberg E. "Marine Recreational Fishing Participation in the Northeast, U. S. 2000 - 2025." Evaluating the Benefits of Recreational Fishing. Tony J. Pitcher Ed. Fisheries Centre Research Report, Vol. 7 No. 2, University of British Columbia, Vancouver, Canada. 1999.
11. Thunberg, E. "Latent Fishing Effort and Vessel Ownership Transfer in the Northeast U.S. Groundfish Fishery." Proceedings of the 10<sup>th</sup> International Conference of the International Institute of Fisheries Economics and Trade. Corvallis, OR, 2000
12. Thunberg, E. M. and C. M. Fulcher, 2005 "Testing the Stability of Recreational Fishing Participation Probabilities." pp.165-178" *In* Samaila, U. Rashid and Marsden, A. Dale (eds.) North American Association of Fisheries Economists Forum Proceedings. Fisheries Centre Research Report 14(1). Fisheries Centre, the University of British Columbia, Vancouver, Canada. 2005.
13. Thunberg E. M., C. M. Fulcher, and J. Brodziak. Harvest Strategies for a Transboundary Resource: Georges Bank Haddock. Proceedings of the Thirteenth Biennial Conference of the International Institute of Fisheries Economics and Trade. Department of Agricultural and Resource Economics, Oregon State University, Corvallis, OR. 2006.
14. Thunberg, E. M. and Di Jin, The Changing Northeast United States Marine-Based Economy. Proceedings of the 14<sup>th</sup> Biennial Conference of the International Institute of Fisheries Economics and Trade. Nha Trang, Vietnam. 2008.
15. Georgianna, D. J. M. Kirkley, and E. M. Thunberg. The Effect of Days At Sea Limits on Technical Efficiency. Proceedings of the 14<sup>th</sup> Biennial Conference of the International Institute of Fisheries Economics and Trade. Nha Trang, Vietnam. 2008.

16. Thunberg, E., and S. Correia. From Fishing Capacity to Diversity: Changing Fishery Management Priorities in the New England Groundfish Fishery. Proceedings of the 17<sup>th</sup> Biennial Conference of the International Institute of Fisheries Economics and Trade. Brisbane, Australia. 2014.

## Reports

1. Shabman, L. A. and E. M. Thunberg. An Evaluation of Alternative Strategies for Virginia Oyster Grounds Management: Economic Considerations in Policy Design. Virginia Experiment Station Bulletin 88-4, Virginia Polytechnic Institute and State University, Blacksburg, VA. 1988. pp. 1-105.
2. Kerns, W., J. Luna, J. May, D. Relf, E. Thunberg, and M. Weaver. Groundwater Quality and the Use of Lawn and Garden Chemicals by Homeowners. Virginia Cooperative Extension Service Publication 426-059, Virginia Polytechnic Institute and State University, Blacksburg, VA. 1988. pp. 1-20.
3. Thunberg, E. M., Economic Valuation of Wetland Services: Residential Housing Development. Technical Note, US Army Corps of Engineers Waterways Experiment Station, Vicksburg, MI. 1989. pp. 1-37.
4. Thunberg, E. M., Economic Valuation of Wetland Services: Commercial Fishing. Technical Note, US Army Corps of Engineers Waterways Experiment Station, Vicksburg, MI. 1989. pp. 1-19.
5. Thunberg, E. M., Economic Valuation of Wetland Services: Agriculture. Technical Note, US Army Corps of Engineers Waterways Experiment Station, Vicksburg, MI. 1989. 1-17.
6. Thunberg, E. M. Literature Review of Economic Valuation of Aquatic Plant Control. Literature Review. US Army Corps of Engineers Waterways Experiment Station, Vicksburg MI. 1990. pp. 1-29.
7. Zimet, D. J., E. M. Thunberg, and C. Clancy. "Market Analysis for Selected Current and Potential Florida Aquaculture Species." Final Reports for the 1988-89 Aquaculture Market Development Aid Program. Florida Department of Agriculture and Consumer Services, Tallahassee, Florida. 1990. pp. 8-56.
8. Adams, C., J. Cato, J. Easley, S. Kemp, B. Mahan, J. Manzi, M. Oesterling, B. Pomeroy, E. Thunberg, D. Vaughan, R. Walker. Investing in Commercial Hard Clam Culture: A Comprehensive Guide to the South Atlantic States. Florida Sea Grant Report SGR-104. 1991. pp. 1-128.

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9. Thunberg, E. M., C. N. Pearson, and J. W. Milon. Economic Benefits of Aquatic Plant Control in the Old Plantation Water Control District. Economics Report ER91-03. Food and Resource Economics Department, University of Florida, Gainesville, Florida. 1991. pp. 1-18.
10. Thunberg, E. M., C. M. Adams, and C. E. Cichra. Economic, Regulatory, and Technical Barriers to Entry Into the Florida Aquaculture Industry. Economic Information Report EI-91-8. Food and Resource Economics Department, University of Florida, Gainesville, Florida. 1991.
11. Crotts, J. C., and E. M. Thunberg. Travel Patterns of Florida Residents. Center for Tourism Research and Development, Department of Recreation, Parks, and Tourism, University of Florida, Gainesville, Florida. 1991.
12. Thunberg, E. M. and L. A. Shabman, Estimation of Property and Nonproperty Flood Control Benefits: An Experiment in Contingent Value Survey Methods. Research Report. US Army Corps of Engineers Institute for Water Resources, Fort Belvoir, VA. 1992. pp. 1-78.
13. Milon, J. W., E. M. Thunberg, C. M. Adams, J. C. Crotts, S. M. Holland, and C. T. J. Lin. A Regional Analysis of Current and Future Florida Resident Participation in Marine Recreational Fishing. Florida Sea Grant Report Number 112. Florida Sea Grant College, University of Florida, Gainesville, Florida. 1993.
14. Thunberg, E. M., and J. E. Reynolds, Eds. Urbanization and Development Effects on the Use of Natural Resources, Proceedings of a Regional Workshop. SRIEG-10 Publication No. 31, SRDC Publication No. 169. Southern Rural Development Center, Mississippi State University, Mississippi State, Mississippi. 1993. pp. 1-157
15. Milon, J. W., E. M. Thunberg, C. M. Adams, and C. T. Jordan Lin. Recreational Anglers' Valuation of Near-Shore Marine Fisheries in Florida. Technical Paper TP-73. Florida Sea Grant College, University of Florida, Gainesville, Florida. 1994.
16. Holiman, S. G., R. N. Weldon, E. M. Thunberg, C. M. Adams, T. H. Spreen. Bioeconomic Modelling of Hard Clam Growout in Florida: The Replacement Decision. Technical Paper TP-78. Florida Sea Grant College, University of Florida, Gainesville, Florida. 1995.
17. Adams, C. M., E. M. Thunberg, and W. R. Keithly. "Resource Economics Issues Concerning Molluscan Shellfish Resources of the United States." In. The History, Present Condition, and Future of the Molluscan Fisheries of North and Central America and Europe: Volume 2, Pacific Coast and Supplemental Topics. U.S. Department of Commerce, NOAA Technical Report NMFS 128. 1997.
18. Shabman, L. K. Stephenson, E. Thunberg, B. Dietz, P. Driscoll, and K. O'Grady. "Comparing Benefit Estimation Techniques: Residential Flood Hazard Reduction Benefits in Roanoke, Virginia." IWR Report 98-R-2. U. S. Army Corps of Engineers, Institute for Water Resources, Alexandria, Virginia. 1998.

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19. Kitts, A. and E. Thunberg. "Description and Impacts of Northeast Groundfish Fishery Buyout Programs." Northeast Fisheries Science Center Reference Document 98-12. Northeast Fisheries Science Center, Woods Hole, MA. 1998.
20. Edwards, S. F., S. A. Murawski, and E. Thunberg. "Bycatch of Yellowtail Flounder in the Southern New England Trawl Fishery". Managing the Nations Bycatch. National Oceanic and Atmospheric Administration, Department of Commerce, Washington D.C., June 1998. P 159-169.
21. Steinback, Scott, Jon O'neil, Eric Thunberg, Amy Gautam, and Maury Osborn. Volume I: Summary Report of Methods and Descriptive Statistics for the 1994 Northeast Region Marine Recreational Economics Survey. NOAA Technical Memorandum NMFS- F/SPO-37. August 1999.
22. Hicks, Rob, Scott Steinback, Amy Gautam, and Eric Thunberg. Volume II: The Economic Value of New England and Mid-Atlantic Sportfishing in 1994. NOAA Technical Memorandum NMFS-F/SPO-38. August 1999
23. Thunberg, E. M., S. Steinback, G. Gray, A. Gautam, and M. Osborn. "Volume III: Summary Report of Methods and Descriptive Statistics for the 1994 Northeast Region Marine Recreational Fishing Participation Survey." U. S. Department of Commerce, NOAA Technical Memorandum No. NMFS-F/SPO-39. 1999.
24. Steinback, S.R. and E.M. Thunberg. "A Method for Analyzing Trip Limits in Northeast Fisheries: A Case Study of the Spiny Dogfish Fishery." Northeast Fisheries Science Center Reference Document 00-06. Northeast Fisheries Science Center, Woods Hole, MA. May, 2000.
25. Clay, P., C.L. Dyer, S.F. Edwards, J. Gates, T.A. Grigalunas, T. Hennessey, L. Juda, A. W. Kitts, P.N. Logan, J.J. Poggie, Jr, B. Pollard Rountree, S. R. Steinback, E.M. Thunberg, H.F. Upton, and J.B. Walden. "A Framework for Monitoring and Assessing Socioeconomics and Governance of Large Marine Ecosystems." Jon G. Sutinen Ed. NOAA Technical Memorandum NMFS-NE-158.US Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, Northeast Fisheries Science Center, Woods Hole, MA. August, 2000.
26. Ward, J.M., T. Brainerd, M. Milazzo, Thunberg, E. A. Kitts, J. Walden, M. Travis, J. Terry, T. Lee, D. Holland, J. Hastie, D. Squires, S. Herrick, M. Hamilton, K. Brewster-Geisz, and R. Lent. "Identifying Harvest Capacity and Over-Capacity in Federally Managed Fisheries: A Preliminary Qualitative Report." Office of Science and Technology and Office of Sustainable Resources, Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service. March 2001.

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27. Thunberg, E. M., D. S. K. Liew, C. F. Fulcher, and J. T. K. Brodziak. "Economic Analysis of Alternative Harvest Strategies for Eastern Georges Bank Haddock [5Zjm; 551, 552, 561, 562]." U.S. Department of Commerce, Northeast Fisheries Science Center Reference Document 05-15. Available from National Marine Fisheries Service, 166 Water Street, Woods Hole, MA 02543. 2005.
28. Steinback, S. and E. Thunberg. Northeast Regional Commercial Fishing Input-Output Model. NOAA Technical Memorandum NMFS-NE-188, National Marine Fisheries Service, Woods Hole Lab., 166 Water St., Woods Hole, MA 02543. 2006.
29. Kirkley, James E., John M. Ward, James Nance, Frank Patella, Karyl Brewster-Geisz, Chris Rogers, Eric Thunberg, John Walden, Will Dasplit, Brad Stenberg, Steve Freese, Jim Hastie, Stephen Holiman, and, Mike Travis. Reducing Capacity in U.S. Managed Fisheries. U.S. Dep. Commerce, NOAA Tech. Memo. NMFS-F/SPO-76, 45p. 2006.
30. Thunberg, E. M. Demographic and Economic Trends in the Northeastern United States Lobster (*Homarus americanus*) Fishery, 1970-2005. US Department of Commerce, Northeast Fisheries Science Center Reference Document 07-17. National Marine Fisheries Service, Woods Hole, MA. 2007.
31. Thunberg, E. M. Trends in Selected Northeast Region Marine Industries. NOAA Technical Memorandum NMFS NE 211; 107 p. 2009.
32. Georgianna, Daniel, Eric Thunberg, Emily Keily, Brant.McAfee, and Story Reed. Break-Even Analysis of the New England Groundfish Fishery for FY2009 and FY2010. Commonwealth of Massachusetts, Division of Marine Fisheries, 42p. 2011.
33. Brinson, A.A. and E. M. Thunberg. The Economic Performance of U.S. Catch Share Programs. U.S. Dept. of Commerce., NOAA Technical Memorandum NMFS-F/SPO-133. 2013, 160 p.
34. Holland, D., E. Thunberg, J. Agar, S. Crosson, C. Demarest, S. Kasperski, L. Perruso, E. Steiner, J. Stephen, A. Strelcheck, and M. Travis. U.S. Catch Share Markets: A Review of Characteristics and Data Availability. U.S. Dept. of Commer., NOAA Technical Memorandum NMFS-F/SPO-145, 67 p. 2014.
35. Brinson, A.A., E. M. Thunberg, and K. Farrow. The Economic Performance of Non-Catch Share Programs. U.S. Dept. of Commer., NOAA Technical Memorandum NMFS-F/SPO-150, 189 p. 2014.
36. Walden, J., J. Agar, R. Felthoven, A. Harley, S. Kasperski, J. Lee, T. Lee A. Mamula, , J. Stephen, A. Strelcheck, and E. Thunberg. Productivity Change in U.S. Catch Shares Fisheries. U.S. Dept. of Commer., NOAA Technical Memorandum NMFS-F/SPO-146 p. 137. 2014.

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37. Thunberg, E. and M-Y. Lee. The Effort Control Program in the Northeast United States Groundfish Fishery Chapter 15 in Squires, D., M. Maunder, N. Vestergaard, V. Restrepo, R. Metzner, S.Herrick, R. Hannesson, I. del Valle, and P. Anderson, editors. 2015a. *Effort Rights in Fisheries Management: General Principles and Case Studies from Around the World. 2014. FAO Fisheries and Aquaculture Proceedings P34*. Rome: Food and Agriculture Organization of the United Nations. 2015.
38. Thunberg, E. M. Tradable Traps in the Northeast U.S. American Lobster Fishery. Chapter 16 in Squires, D., M. Maunder, N. Vestergaard, V. Restrepo, R. Metzner, S.Herrick, R. Hannesson, I. del Valle, and P. Anderson, editors. *Effort Rights in Fisheries Management: General Principles and Case Studies from Around the World. FAO Fisheries and Aquaculture Proceedings P34*. Rome: Food and Agriculture Organization of the United Nations. 2015.
39. Thunberg, E., J. Agar, S. Crosson, B. Garber-Yonts, A. Harley, A. Kitts, T. Lee., C. Lian, C. Liese, M. Pan, L. Perruso, G. Silva, D. Squires, E. Steiner, and S. Stohs. 2015. A Snapshot of NOAA Fisheries Data Collection of Commercial Fishery Costs. U.S. Dept of Commer., NOAA Technical Memorandum NMFS-F/SPO-154, 331 p., August, 2015
40. Lambert, D.M., E.M. Thunberg, R.G. Felthoven. J.M. Lincoln, and W.S. Patrick. Guidance on Fishing Vessel Risk Assessments and Accounting for Safety at Sea in Fishery Management Design. U.S. Department of Commerce. NOAA Technical Memorandum NMFS-OSF-2, 56 p. August, 2015

## **AWARDS:**

1. Faculty Appreciation Award, Food and Resource Economics Department Graduate Student Organization, University of Florida, 1993
2. Unit Citation, National Oceanic and Atmospheric Administration, National Marine Fisheries Service, 1997
3. NOAA Administrators Award, 2004
4. Bronze Medal, 2004
5. NOAA General Council Award, 2004
6. Best Paper Award for Policy Analysis, National NMFS Social Sciences Workshop, San Francisco, CA, 2006
7. NOAA Administrator's Award, 2007
8. Letter of Appreciation, New England Fishery Management Council, 2011
9. First Place, Best Research Paper, NOAA Fisheries Economics and Social Sciences 2014 Best Paper Awards.

## **PROFESSIONAL AFFILIATIONS, ACTIVITIES AND SERVICE**

### **Membership in Professional Associations and Service**

1. International Institute of Fisheries Economics and Trade
  - Best Student Paper Selection Committee, International Institute of Fisheries Economics and Trade, 2010
  - Scientific Committee, International Institute of Fisheries Economics and Trade, 2011
2. North American Association of Fishery Economists
  - Scientific Committee, North American Association of Fishery Economists, 2010, 2012
  - President-Elect, North American Association of Fishery Economists, 2010-2013
  - President, North American Association of Fishery Economists, 2013-Present
  - Co-Chair, Scientific Committee, North American Association of Fishery Economists 2014-Present
  - Co-Chair NAAFE Best Student Presentation Award Selection Committee

Eric M. Thunberg

## **Academic Affiliations**

1. Adjunct Faculty, University of Massachusetts School of Marine Sciences and Technology, 2013-present
2. External Faculty, Graduate Faculty, University of Maine, 2011-present

## **Professional Service**

1. NMFS National Fishing Capacity Working Group, 2000-2004
2. NMFS, National Working Group to Revise NMFS Guidance on Economic Analysis of Regulatory Actions, 2000-2001
3. NMFS National Working Group on Excessive Shares Guidance, 2002-2004
4. Co-Chair, NMFS National Working Group for Social Science Cumulative Effects Guidance under NEPA, 2004-2005
5. Chair, NMFS National Working Group on Market Failure Guidance for Regulatory Programs Under revised E.O. 12866, 2008
6. Organizing Committee, Social Science Symposium, Northeast Consortium and New Hampshire Sea Grant, 2009
7. Technical Advisory Board, Living Marine Resources Cooperative Sciences Center, 2010
8. Steering Committee, Workshop on the Contribution of the Social Sciences to Ecosystem-Based Fishery Management, Cooperative Institute for the North Atlantic Region, 2010
9. Co-Chair, Working Group on Integration of Economics, Stock Assessment, and Fisheries Management (WGIMM), International Committee for the Exploration of the Seas, 2010-present
10. Science and Statistical Committee, New England Fishery Management Council 2010-2014
11. Steering Committee, Social Sciences Section, National Science and Statistical Committee Workshop, 2011
12. National Catch Shares Working Group, NOAA Fisheries, Office of Sustainable Fisheries, 2011-present
13. National Working Group to revise National Standard 10 guidelines, NOAA Fisheries, Office of Sustainable Fisheries, 2011-present

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14. Co-Chair, Steering Committee, New England Fishery Management Council Workshop on Risk Policy 2012.
15. Chair, Joint Mid-Atlantic New England Council SSC Review of Recreational Fisheries Management Decision Tool, 2012
16. NMFS Climate Strategy National Working Group 2013-2014
17. Chair, MAFMC Expert Panel Review of Examining Allocations in the Scup Fishery, 2013
18. Panel Chair, Center for Independent Experts Review of Accumulation Limits in Northeast Multispecies Fishery, 2014
19. Guest Editor, Marine Policy Special Issue on productivity change in commercial fisheries, 2015
20. Editorial Board, Marine Policy 2015-present.

## **REFERENCES:**

Dr. Rita Curtis, Chief  
Economics and Social Analysis Division  
NMFS, Office of Science and Technology  
1315 East West Highway  
Silver Spring, MD 20910-3282  
(301) 427-8122  
Rita.Curtis@noaa.gov

Dr. Richard Merrick, NMFS Chief Science Advisor  
Director of Science Programs  
1315 East West Highway  
Silver Spring, MD 20910-3282  
(301) 427-8000  
Richard.Merrick@noaa.gov

Dr. Di Jin, Senior Scientist  
Marine Policy Center  
Woods Hole Oceanographic Institute  
Woods Hole, MA 02543  
(508) 289-2874  
djin@whoi.edu

Mr. Tom Nies, Executive Director  
New England Fishery Management Council  
50 Water Street  
The Tannery - Mill 2  
Newburyport, MA 01950  
(978) 465-0492  
tnies@nefmc.org

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