

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

DIVISION OF FISH & WILDLIFE / MARINE FISHERIES Three Fort Wetherill Road Jamestown, Rhode Island 02835

August 16, 2023

Atlantic Coastal Cooperative Statistics Program 1050 N. Highland St. Ste. 200 A-N Arlington, VA 22201

Dear ACCSP,

The Rhode Island Department of Environmental Management is pleased to submit the following proposal for the FY24 ACCSP Request for Proposals titled "The Economic Impact of Rhode Island's Fishing Industry". Please note that substantial effort was made to reduce the overall amount requested for this proposal compared to its initial submission. Project PIs were successfully able to acquire data and files from Dr. Tom Sproul (formerly at URI) who worked on Sproul & Michaud (2018), the basis for this proposal. Additionally, PIs were able to negotiate the URI overhead rate from 57.5% to 25%. As a result, the total requested amount was reduced by \$45,507.93.

Other additions to this proposal include a letter of support for the proposed project from the Rhode Island Emergency Management Agency (RI EMA), and a University of Rhode Island letter of intent.

Thank you for your consideration of this proposal.

Regards,

Nicole Lengyel Costa

Nicole Lengyel Costa

<u>Proposal for funding made to the</u> <u>Atlantic Coastal Cooperative Statistics Program</u> <u>1050 N. Highland Street, Suite 200A-N</u> <u>Arlington, VA 22201</u>

FY24: The Economic Impact of Rhode Island's Fishing Industry

Total Cost: **\$114,282.52**

Submitted By: Nicole Lengyel Costa Rhode Island Department of Environmental Management (RIDEM) Division of Marine Fisheries 3 Fort Wetherill Road Jamestown, RI 02835 nicole.lengyel@dem.ri.gov

Dr. Hirotsugu Uchida College of Environmental and Life Sciences (CELS) Department of Environmental and Natural Resource Economics (ENRE) University of Rhode Island (URI) Kingston, RI 02881 huchida@uri.edu

Applicant Name:	Rhode Island Department of Environmental Management (RIDEM) Division of Marine Fisheries
Project Title:	The Economic Impact of Rhode Island's Fishing Industry
Project Type:	New Project
Requested Award Amount:	\$114,282.52
Requested Award Period:	One year after receipt of funds
Program Priority:	Primary: social and economic (100%)
Date Submitted:	August 16, 2023
Principal Investigator:	Nicole Lengyel Costa, Principal Biologist, nicole.lengyel@dem.ri.gov
Project Staff:	Dr. Hirotsugu Uchida, University of Rhode Island (URI) Julia Livermore, RIDEM Dr. David Bethoney, Commercial Fisheries Research Foundation, (CFRF)

Atlantic Coastal Cooperative Statistics Program (ACCSP) Proposal for the State of Rhode Island

Objectives:

- Generate a list of fishing-related businesses within the State of Rhode Island and specific to each fisheries sector and the top five ports in Rhode Island.
- Conduct a public workshop to engage stakeholders and solicit input for an online survey.
- Conduct an online survey to **collect socioeconomic data** from fishing-related businesses.
- Obtain validated fisheries data by sector and port for 2023.
- Perform estimation procedures where economic data are unavailable.
- Use IMPLAN software to calculate economic impact estimates.
- Update economic multipliers from Sproul & Michaud (2018) for the State of Rhode Island and develop port and sector-specific multipliers.
- Create an economic multiplier protocol for ACCSP partners.

Need:

The state of Rhode Island landed \$100.6 million of seafood commercially in 2022 and had over 2.7 million recreational fishing trips (Rhode Island Department of Environmental Management Division of Marine Fisheries, 2023). The fishing industry is part of an intricate supply and demand network where many fishing-related businesses are generating jobs and income solely from the operation of fishing in RI. Sproul & Michaud (2018) estimated the overall economic impact of the fishing industry in RI to be 4,381 jobs, and \$419 million. The RIDEM has used these estimates routinely to convey the importance of fishing in RI and specifically to advocate for continued ownership and operation of the state's largest commercial fishing port in Galilee, RI. In 2021, Galilee landed 70.15% by value of all of the seafood landed in RI (Rhode Island Department of Environmental Management Division of Marine Fisheries, 2022). Additionally, Galilee ranked 18 by value and 17 by quantity landed among all the ports in the United States (*2020 Fisheries of the United States*, n.d.). Maintaining Galilee as a commercial working waterfront is at the forefront of RIDEMs goals for the Port but is often met with opposition and criticism.

As a commercial working waterfront Galilee, and other fishing ports throughout the state, are subject to harsh environmental conditions from severe storms including flooding, storm surges, and high winds. These conditions can cause deterioration of coastal infrastructure over time and require regular maintenance as well as routine replacement of critical infrastructure. In 2022, the state of RI budgeted 46 million to Galilee for infrastructure improvement projects. This large investment by the state will be used to replace outdated and critical infrastructure such as docks, pilings, and bulkheads. What is not clear however is how the state will pay for damage to the port resulting from severe storms and what economic impact to the state these potential damages and a port closure may have. Having updated economic multipliers for RI and new multipliers that are port and sector-specific is crucial information for truly understanding these impacts. Just recently, RI submitted a proposal to the Federal Emergency Management Agency (FEMA) for hazard mitigation funding and was specifically asked for these economic impact estimates by the funding agency in order to conduct a cost-benefit analysis (CBA) further highlighting the need for these estimates (See attached Letter of Support from the RI Emergency Management Agency (RIEMA)).

The work of Sproul & Michaud (2018) is now 7 years old and their multipliers are not sector or Port specific. Not only is having updated economic multipliers important to RIDEM and the fishing industry

but developing sector and port-specific economic multipliers may become important in the near term as the offshore wind industry continues to develop, ports around the world endure gentrification, and the costs of maintaining ports increase due to threats from global climate change.

Results and Benefits:

This work will expand upon and update the work of Sproul & Michaud (2018). Socioeconomic data collected from fishing-related businesses will be combined with existing datasets and used in the IMPLAN software to estimate economic multipliers for Rhode Island's fishing industry on the state, sector, and port levels. The different sectors within the fishing industry and the top five ports in Rhode Island will be investigated separately to determine if there is a significant difference in the economic multipliers between sectors and ports (Table 1). It is anticipated that economic multipliers may vary by Port due to different species dominating landings in each Port. For example, Galilee lands a high volume of squid and scallops, Warwick lands a high volume of shellfish, and Newport lands a high volume of lobster and Jonah crab. Once estimated, the economic multipliers will then be used to estimate the total economic impact of the fishing industry in Rhode Island in terms of jobs and value. These economic impact estimates will highlight the fishing industry's importance to RI and support RIDEM's continued ownership and operation of its commercial fishing ports. Sector-specific economic impact data will be important for understanding the impact of different regulatory decisions on each sector in Rhode Island and characterizing the impacts of offshore wind development. These multipliers will most crucially be used to estimate the potential impact to the state in the event of damage to critical coastal infrastructure and/or a port closure. These estimates can in turn be used for hazard mitigation projects, the funds of which are available through FEMA but require this data for CBA.

Researchers will document the stepwise process for developing economic multipliers and use the information to develop an Economic Multiplier Protocol that will allow other ACCSP partners to replicate this work and develop their own state or sector-specific economic multipliers. A protocol of this nature will save partners time and money by eliminating the need to hire an economist, detailing the methods for collecting socioeconomic data, and taking advantage of existing datasets.

Data Delivery Plan: Data will be submitted to ACCSP as soon as a platform for submitting social and economic data is made available to state partners. In the interim, non-confidential or aggregated data will be made available upon request and in progress reports.

Approach:

A comprehensive list of fisheries-related business within the State of Rhode Island will be developed. Researchers will utilize existing databases including the RI Secretary of State business portal, A to Z databases, Manta, and RIDEM databases. The Commercial Fisheries research Foundation (CFRF) will assist researchers in developing the list of businesses and also help to coordinate outreach efforts (See attached Letter of Support).

An online survey will be developed by researchers in cooperation with the CFRF and the fishing industry to collect socioeconomic data from fishing-related businesses. At least one public workshop will be held to solicit feedback on the survey from the fishing industry. Economic data collected via the survey may be supplemented with existing data from the aforementioned databases. **To the extent**

possible researchers will follow the priority data elements for socioeconomic data developed by the Committee on Economics and Social Sciences. Recognizing that those data elements are primarily for fishing operations and not businesses, researchers will augment data collection where necessary to collect similar elements from businesses that are not fishing vessels. The CFRF and public workshop will aid in being sensitive to this data collection process and the potential burden to industry it may impose. All survey data will remain confidential, and the survey will be vetted through the URI Institutional Review Board (IRB) for research involving human subjects.

The methods of Sproul & Michaud (2018) will be followed for developing economic multipliers for jobs and revenue using the IMPLAN software. Where necessary, log-linear regression may be used for imputations where data are unavailable. Validated ex-vessel landings values from the ACCSP data warehouse will be used for commercial fishing and MRIP data used for recreational fishing estimates. Economic multipliers will then be used to estimate the economic impact of the fishing industry in Rhode Island as a whole, for the top five Ports in RI, and by sector where possible (Table 1).

Fishing Sectors	Top 5 Ports
Commercial	Galilee (Point Judith)
Recreational	Wickford (North Kingstown)
For-Hire	Newport
Aquaculture	Little Compton
	Warwick

Table 1. Fishing Sectors and Ports:

Researchers will document the stepwise process for developing economic multipliers and develop an Economic Multiplier protocol that can be used by other ACCSP partners to perform this work. This is the second time that economic multipliers for the fishing industry in RI will be developed. Each time an economist from URI has been involved to conduct and oversee the analysis. This can be time intensive and costly. By RIDEM and URI developing a protocol in collaboration with CFRF, other ACCSP partners will have a tool at their disposal that will allow them to complete the same analysis without employing an economist or academic institution, thus saving time and money.

Geographic Location: This project will be conducted by RIDEM DMF staff out of Jamestown, RI and by URI staff out of Kingston, RI. Visits to fishing-related businesses may be conducted throughout the state of Rhode Island.

Milestone Schedule:

Table 2. Milestone Schedule:

Activity		Month										
		2	3	4	5	6	7	8	9	10	11	12
Recruit and Hire Research Assistant	Х	Х										
Obtain IMPLAN License	Х	Х										
Obtain URI IRB Approval	Х	Х	Х									
Compile and Review Existing Data		Х	Х	Х								
Review IMPLAN Data		Х	Х	Х								
Public Workshops				Х	Х							
Develop Survey Questions				Х	Х							
Send out Survey					Χ	Χ						
Analyze Data							Х	Х	Х			
Protocol Writing							Х	X	Х	Х	Х	Х
Report Writing										Χ	Χ	Χ

Project Accomplishments Measurement:

Table 3. Project Accomplishment Metrics:

Goal	Metric
IRB Approval	Develop and submit application
IMPLAN Data Review	Characterize existing data
Public Workshops	Hold at least 1 Workshop
Survey Completed	Socioeconomic data collection
Data Analysis	Analysis and modeling in R
Protocol Writing	Protocol made available
Report Writing	Report submitted to ACCSP

Cost Summary (Budget):

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Budget Category	Federal ACCSP	In-Kind	Total
a. Salary			
RIDEM Deputy Chief (5%)	<mark>\$</mark> -	\$ 5,122.55	\$ 5,122.55
RIDEM Principal Biologist (20%)	\$ 18,682.80	<mark>\$</mark> -	\$ 18,682.80
URI Graduate Research Assistant (GRA) (100%)	\$ 31,987.00	<mark>\$</mark> -	\$ 31,987.00
URI Economics Professor (2%)	\$ 3,937.00	<mark>\$ -</mark>	\$ 3,937.00
RIDEM Seasonal Intern (10%)	<mark>\$</mark> -	\$ 1,200.00	\$ 1,200.00
CFRF Staff	<mark>\$</mark> -	\$ 4,600.00	\$ 4,600.00
b. Fringe			
RIDEM Deputy Chief (5%)	<mark>\$</mark> -	\$ 3,376.05	\$ 3,376.05
RIDEM Principal Biologist (20%)	\$ 8,450.20	<mark>\$ -</mark>	\$ 8,450.20
URI GRA (100%)	\$ 4,791.00	<mark>\$ -</mark>	\$ 4,791.00
c. Travel	\$ 786.00	<mark>\$ -</mark>	<mark>\$ 786.00</mark>
d. Supplies	<mark>\$</mark> -	\$ 500.00	\$ 500.00
e. Software	\$ 6,000.00	<mark>\$ -</mark>	\$ 6,000.00
f. Tuition			
RIDEM Principal Biologist	\$ 6,848.00	<mark>\$ -</mark>	<u>\$ 6,848.00</u>
URI GRA	\$ 17,670.00	<mark>\$ -</mark>	\$ 17,670.00
g. Total Direct	\$ 99,152.00	<u>\$14,798.60</u>	<u>\$113,950.60</u>
h. Indirect/Overhead charges			<mark>\$ -</mark>
RIDEM (18.25%)	\$ 4,951.77	\$ 1,769.99	\$ 6,721.77
URI (25%)	\$ 10,178.75	<mark>\$ -</mark>	\$ 10,178.75
<mark>i. Total</mark>	\$ 114,282.52	<u>\$ 16,568.59</u>	\$ 130,851.12
i. Percentage	<mark>87%</mark>	<mark>13%</mark>	

Table 4. Project Summary Budget:

Cost Details:

Description of budget categories and expenses for this project Overall in-kind: 13% of the overall budget is being provided as in-kind contribution.

a. Salary:

From ACCSP:

- i. **RIDEM Principal Biologist:** 20% funded position to act as the principal investigator and develop fisheries economic multipliers for the top five landing ports in Rhode Island; 20% of salary (\$93,414) for one year = \$18,682.80.
- **ii.** Graduate Research Assistant: 100% funded position (through URI) to update fisheries economic multiplier for Rhode Island; 20 hours/week for academic year (\$23,030) and 20 hours/week during the summer (\$8,957) = \$31,987.
- iii. URI Economics Professor: 2% of their time, or 1 week during the summer, to supervise graduate research assistant = \$3,937.

In-Kind:

- i. **RIDEM Deputy Chief:** 5% funded to provide project oversight and staff management; 5% salary (\$102,451) for one year = \$5,122.55.
- **ii.** Intern: 10% funded seasonal intern to assist on the project. Approximately 10% of six-month salary = \$1,200.
- **iii. CFRF staff:** outreach and collaborative support estimated at \$4,600. See attached letter of support.

b. Fringe:

Annual fringe benefit rates for employees vary depending upon the employee's pay rate and what the employee chooses for health care. This may include the following:

Retirement 24% Deferred Compensation 0.4% FICA 6.2% Medicare 1.45% Health care \$21,937/year Dental \$1,132/year Vision \$165/year Assessed Fringe 4.25% Retiree Health 6.75%

From ACCSP:

- i. **RIDEM Principal Biologist:** Total annual fringe benefits for the Principal Biologist (project PI) are \$42,251. Fringe benefits for 20% of their time are \$8,450.
- ii. Graduate Research Assistant: Total fringe benefits for the GRA are \$4,791 (\$4,106 for academic year and \$685 for summer).

In-Kind:

- i. **RIDEM Deputy Chief:** Total annual fringe benefits for the Deputy Chief are \$67,521. Fringe benefits for 5% of their time are \$3,376.
- c. Travel: Travel for this grant includes mileage for travel roundtrip from the DMF Office located in Jamestown, RI, or the URI campus located in Kingston, RI, to various ports throughout RI. The RIDEM mileage rate of 0.655/mile was used to estimate travel expenses. Approximately five trips to each of the top five major ports was calculated at being 1,200 miles total (1,200 * 0.655 = 786).
- **d.** Supplies: General office supplies include Rite in the Rain paper, printer paper, copier toner, pens, pencils, clipboards, notebooks, and a digital voice recorder.
- e. Software: An IMPLAN software license at the state region level for project staff to perform the economic analysis. IMPLAN has offered RI a 20% discount off their annual state-level plan due to the small size of RI.

f. Tuition: Tuition includes costs for eight research credits at the University of Rhode Island for the RIDEM FTE (four credits per semester). The per-credit cost for in-state part-time graduate students is \$856.00 (\$856 * 8 = \$6,848). Tuition also includes \$17,670 per year for the URI graduate research assistant. Tuition is considered a benefit for all hired research assistants at URI.

h. Indirect/Overhead Charges:

The RIDEM indirect rate for FY24 is 18.25%.

The URI Overhead rate for FY24 is 25%. This overhead rate is a URI policy that cannot be negotiated.

From ACCSP:

- i. **RIDEM Principal Biologist:** 18.25% of the salary (\$18,682.80) and fringe (\$8,450.20) is \$4,952 per year.
- **ii.** URI Research Assistant: 25% of the 100% (\$31,987) and fringe (\$4,791) is \$10,179 per year. This equals 8.9% of ACCSP requested funds and meets the ACCSP RFP overhead requirements.

In-Kind:

- i. **RIDEM Deputy Chief:** 18.25% of the salary (\$5,122.55) and fringe (\$3,376) is \$1,770 per year.
- ii. Intern: 18.25% of the salary (\$1,200) is \$219.00 per year.

SUMMARY OF PROPOSAL FOR RANKING

Proposal Type: New

Primary Program Priority: Economic and Sociological Data (100%)

Data Delivery Plan: Data will be submitted to ACCSP as soon as a platform for submitting economic and sociological data is made available to state partners. Data will be made available to any state partner upon request.

Multi-Partner/Regional Impact: Although the geographical scope of this proposal is confined to Rhode Island, one expected benefit of this project is to create a standard protocol for other state partners to easily follow that will allow them to develop their own state-specific economic multipliers for the fishing industry. These data can in turn be used to estimate economic impacts and apply for federal hazard mitigation funding.

Contains Funding Transition Plan: This is a one-year project with the expected benefit of creating an automated process for updating economic multipliers in future years at a lower expense eliminating the need for yearly funding.

In-Kind Contribution: In-kind contribution for this project is 13% as stated in the budget table.

Improvement in Data Quality/Quantity/Timeliness: This project will be improving data quantity and quality by collecting socioeconomic data from RI fishing related businesses that has not previously been collected or is outdated. This project data has also recently been requested by FEMA for conducting CBAs required as part of the federal funding process.

Innovative: This project is collecting new fisheries related socioeconomic data and utilizing existing data collection streams (ACCSP warehouse) to estimate the value of the fishing industry to RI. Researchers are developing a protocol to allow other ACCSP to complete the same works at a substantial cost saving in the future. Additionally, these estimates can be used for hazard mitigation projects in the future to protect important coastal assets and prevent economic loss.

Impact on Stock Assessment: Stock assessment results often dictate changes in management to recreational and commercial fisheries. Little to no information on the socioeconomic impact of these stock assessment induced regulatory changes is available. The data collected in this project will be extremely useful and allow managers to consider the socioeconomic impacts of regulatory changes following a stock assessment.

Properly Prepared: This proposal followed the guidelines of the FY24 Request for Proposals and Funding Decision document.

References:

2020 Fisheries of the United States. (n.d.).

- Rhode Island Department of Environmental Management Division of Marine Fisheries. (2022). *Rhode Island Annual Fisheries Report: 2021* (p. 41). RI Department of Environmental Management. https://dem.ri.gov/sites/g/files/xkgbur861/files/2022-08/AnnualRpt_2021.pdf
- Rhode Island Department of Environmental Management Division of Marine Fisheries. (2023). 2022 Rhode Island Annual Fisheries Report (p. 45). Rhode Island Department of Environmental Management Division of Marine Fisheries.

https://dem.ecms.ri.gov/sites/g/files/xkgbur861/files/2023-07/AnnualRpt_2022.pdf

Sproul, T., & Michaud, C. (2018). *The Economic Impact of Rhode Island's Fisheries and Seafood Sector:* University of Rhode Island.

Appendix A: Curriculum Vitae for Principal Investigators

Nicole Lengyel Costa

nicole.lengyel@dem.ri.gov

PROFESSIONAL EXPERIENCE

RI Department of Environmental Management, Jamestown, RI, 05/10/09 - Present

Principal Biologist (Marine)

Duties:

- Principal Investigator (PI) for the finfish age and growth study responsible for overseeing the program and staff including a principal biologist, a fisheries technician, and seasonal interns
- PI for the Narragansett Bay Atlantic Menhaden monitoring survey responsible for management of the commercial menhaden fishery within RI state waters
- Write grant narratives and create grant budgets for marine fisheries projects and programs •
- Review grant proposals and rank proposals to receive federal funding through Atlantic Coastal Cooperative Statistics Program (ACCSP) and NOAA Fisheries
- Former lead on offshore renewable energy projects. Played a vital role in all aspects of the RI • Ocean SAMP and the permitting and construction of the Block Island Wind Farm
- Support Deputy Chief on matters pertaining to the New England Fishery Management Council (NEFMC) small mesh multispecies (whiting) plan
- Current Membership on various technical committees/panels: Atlantic States Marine Fisheries Commission (ASMFC) Striped Bass Technical Committee (TC) (former chair), ASMFC Striped Bass Plan Development Team (PDT), ASMFC Striped Bass Plan Review Team (PRT), ASMFC Menhaden PRT, ASMFC Menhaden PDT, ASMFC Ageing committee, ASMFC Northeast Area Monitoring and Assessment Program (NEAMAP) Operations committee (chair), ASMFC Bluefish TC, ASMFC Bluefish PRT, Mid-Atlantic Fishery Management Council (MAFMC) Bluefish monitoring committee (MC), ACCSP Operations committee (chair), ACCSP Biological Review Panel (former chair), ACCSP Bycatch Prioritization committee (former chair), NEFMC Whiting PDT
- Previous Membership on various technical committees/panels: ASMFC Weakfish TC, ASMFC • Bluefish Benchmark Stock Assessment Working Group, ASMFC Artificial Reefs committee, NOAA Fisheries Red hake Stock Structure Working Group
- Participate in benchmark stock assessments and stock assessment updates including complex analysis and/or modeling, and writing of technical/scientific reports for peer-review
- Previously in charge of RI quota monitoring tracking via SAFIS dealer reports and RI seafood • dealer compliance tracking including creation of an automated process through the statistical software R
- Prepare and submit annual fishery compliance reports •
- Present annual reports including fisheries data and analytical results to Rhode Island stakeholders (RIDEM public workshops) and Board members at ASMFC Board Meetings
- Marine Fisheries information management team leader in charge of promulgation of RI marine fisheries regulations and all storage/IT related issues including running public meetings inperson and virtually
- Serve as professional reviewer for peer-reviewed journal articles as requested •

Skills developed: 15 years of Marine Fisheries experience working for the state of Rhode Island, Strong teamwork and leadership skills as chair of many committees; Experience in giving public presentations and fielding questions; Supervisory experience though overseeing age and growth project staff and Bold comments intended to help with ranking

Highlighted reflects changes from original submission

seasonal interns as well as training new staff; Fisheries Management experience by attending and participating in ASMFC Board meetings, ASMFC and ACCSP technical committees and panels, RI promulgation of regulations process, and Rhode Island Marine Fisheries Council (RIMFC) meetings; Computer and statistical skills (R, SPSS, Microsoft software, ASAP, NOAA Fisheries Toolbox); Field work experience on a variety of fisheries surveys.

<u>University of Rhode Island Graduate School of Oceanography, Narragansett, RI, Feb. 2004 – 05/09/09</u> Laboratory Technician/Marine Research Assistant I Duties:

- Managed all aspects of the benthic ecology laboratory including analyszing Naturalist dredge samples and bottom photos taken on annual benthic habitat surveys
- Managed study database using MS Excel and Access; Performed statistical analysis of Naturalist dredge data
- Supervised, trained, and delegated tasks to undergraduate student help
- Performed genetic analyses on colonial ascidian tissue samples including DNA extraction, primer design, polymerase chain reaction (PCR), PCR clean-up, gel electrophoresis, and DNA sequence analysis

Scientist: Georges Bank Benthic Habitat Survey Duties:

• Participated in and helped organize four benthic habitat research cruises spanning 10-14 days on board NOAA fisheries research vessels (R/V Delaware II and FSV Henry B. Bigelow).

<u>RI Department of Environmental Management, Providence, RI, June 2005</u> -August 2005 Seasonal Policy Intern Duties:

• Participated in many aspects of the Greenwich Bay restoration project; Daily tasks included: gathered tax parcel data for restoration sites; managed data in MS excel; created project maps in Arcmap; performed field site investigations

EDUCATION

University of Rhode Island, Kingston, RI PhD, Marine Affairs – September 2022 - Present

University of Rhode Island, Graduate School of Oceanography, Narragansett, RI Master of Science Degree, Biological Oceanography - May 2013

University of Rhode Island, Kingston, RI Bachelor of Science Degree, Biological Sciences - December 2005

The School for Field Studies (Boston University), Queensland, Australia Rainforest Studies – September 2004 – December 2004

Curriculum Vitae

HIROTSUGU UCHIDA	212 Coastal Institute
Professor	1 Greenhouse Road
Department of Environmental and Natural Resource Economics	Kingston, RI 02881
University of Rhode Island	401-874-2238
[Citizenship: Japan / U.S. Permanent Resident]	<u>huchida@uri.edu</u>

EDUCATION

Ph.D.	2007	Agricultural and Resource Economics, University of California, Davis
M.S.	2003	Agricultural and Resource Economics, University of California, Davis
Diploma	2001	International Development, Institute of Developing Economies Advanced School (Japan)
B.A.	1996	Economics, Keio Gijuku University (Japan)

PROFESSIONAL EXPERIENCE

2023-	Professor, Department of Environmental and Natural Resource Economics, University of
present	Rhode Island
2020-2023	Professor and Chair, Department of Environmental and Natural Resource Economics, University of Rhode Island
2018-2020	Associate Professor and Chair, Department of Environmental and Natural Resource Economics, University of Rhode Island
2016-2017	Short-term consultant, Environmental Defense Fund
2016-2017	Abe Fellow/Visiting Scholar, Graduate School of Agricultural and Life Science, University of Tokyo (on sabbatical)
2014-2018	Associate Professor, Department of Environmental and Natural Resource Economics, University of Rhode Island
2008-2014	Assistant Professor, Department of Environmental and Natural Resource Economics, University of Rhode Island
2006-2008	Assistant Research Professor, Department of Environmental and Natural Resource Economics, University of Rhode Island
2007-2008	Short-term Consultant, The World Bank (World Development Report 2009)
2006	Short-term Consultant, The World Bank
2001-2006	Research Assistant / Teaching Assistant, Department of Agricultural and Resource
	Economics, University of California, Davis
1996-2000	Loan Officer, Industrial Bank of Japan (now Mizuho Corporate Bank)

SELECTED PUBLICATIONS

Peer-reviewed journal articles

- Uchida, H., V. Mazzocco, M.J. Weir, and D. Bidwell (forthcoming). Risky Business: Can Oyster Farmers Defend Themselves Against Foodborne Illness-related Demand Shocks? *Marine Resource Economics*.
- Collie, J., S. Schumann, K. Masury, H. Uchida, and C. Collie. 2022. Balancing ecosystems, harvests, and seafood markets. Fisheries 47(10), 446-450. DOI: 10.1002/fsh.10818.
- Wakamatsu, M., H. Uchida, and C.M. Anderson. 2021. Revenue-sharing and social capital in communitybased resource management: Empirical evidence from Japanese surf clam fisheries. Land Economics 97(2), 455-474.

- Refulio, S., S. Basu, T. Dalton, A. Humphries, K. Lacasse, **H. Uchida**, and E. Uchida. 2021. Coastal and Marine Socio-Ecological Systems: A Systematic Review of the Literature. *Frontiers in Marine Science* 8. doi.org/10.3389/fmars.2021.648006.
- Sudhakaran, P., G. Puggioni, **H. Uchida**, and J. Opaluch. 2021. Do oyster farms actually reduce the property value? Empirical evidence from Rhode Island. *Aquaculture Economics and Management* 25(2), 202-222. doi.org/10.1080/13657305.2020.1869857.
- Ishihara, H., K. Tokunaga, and **H. Uchida**. 2021. Institutional fit and collective fishery management: The case of spiny lobster fishery in Mie, Japan. *Ecological Economics* 181, 106911.
- Weir, M.J., **H. Uchida**, and Maya Vadiveloo. 2021. Quantifying the effect of market information and demand for genetically modified salmon. *Aquaculture Economics and Management* 25(1), 1-26.
- Smith, Sarah L., Rachel Karasik, Aristoteles Stavrinaky, Hirotsugu Uchida, and Merrik Burden. 2019. Fishery Socioeconomic Outcomes Tool: A Rapid Assessment Tool for Evaluating Socioeconomic Performance of Fisheries Management. *Marine Policy* 105, 20-29. https://doi.org/10.1016/j.marpol.2019.03.009
- Roheim, C.A., S.R. Bush, F. Asche, J.N. Sanchirico, and **H. Uchida**. 2018. Evolution and future of the sustainable seafood market. *Nature Sustainability* 1(8), 392-398.
- Uchida, H., C.A. Roheim, and R.J. Johnston. 2017. Balancing the Health Risks and Benefits of Seafood: How Does Available Guidance Affect Consumer Choices? *American Journal of Agricultural Economics* 99(4), 1056-1077.
- Uchida, H. 2017. TURFs and collective fishery management. *Bulletin of Marine Science* 93(1), 83-100.
- Uchida, H., and D. Manning. 2016. Are Two Rents Better than None? When Monopolies Correct Illdefined Property Rights. *Marine Resource Economics* 31(2), 141-164.

Books

Townsend, R., R. Shotton, and **H. Uchida** (eds.) 2008. *Case Studies in Fisheries Self-governance*. FAO Fisheries Technical Paper No. 604. Rome, Italy.

SELECTED GRANTS

- PI, Saltonstall-Kennedy Grant Program (NOAA), \$299,954 "Exploring the creation of a new seafood market segment that would enhance the resiliency of small-scale commercial fishing industry in Rhode Island." 2023-25.
- PI, USDA-HEC Grant Food Systems Faculty Research Fellow Program, \$15,000 "Introducing ikejime method to the culinary professionals," in collaboration with Johnson & Wales University. 2023-24.
- Co-PI, Saltonstall-Kennedy Grant Program (NOAA), \$300,000 "Realizing the Full Potential of Rhode Island Seafood in Rhode Island." 2021-23.
- PI, NOAA Coastal and Ocean Climate Applications (COCA), \$299,945 "Supporting Resilient Fishing Communities in the Northeast Region." 2019-21.
- Co-PI, Saltonstall-Kennedy Grant Program (NOAA), \$155,026. "The Other EBFM: Designing Ecosystem-Based Fisheries Marketing Strategies to Complement Ecosystem-Based Fisheries Management." 2016-19.

SELECTED PROFESSIONAL AFFILIATIONS

- 2022-24 President-Elect, International Institute of Fisheries Economics and Trade
- 2018- Member, Scientific and Statistical Committee, New England Fisheries Management Council (appointed)
- 2011- Advisory Council member, Rhode Island Seafood Marketing Collaborative (appointed)



Project Title: The Economic Impact of Rhode Island's Fishing Industry Funding Opportunity Title: Atlantic Coastal Cooperative Statistics Program FY2023 Funding

Dear Ms. Lengyel Costa,

The Commercial Fisheries Research Foundation (CFRF) supports the proposal "*The Economic Impact of Rhode Island's Fishing Industry*". CFRF is a non-profit institution established by commercial fishermen to conduct collaborative research and education projects that improve fishery sustainability. We have directly involved over 150 fishermen and fishing businesses in our research. Understanding and communicating the economic importance of fishing in Rhode Island helps us direct and justify many of our research initiatives. This is exemplified by our 2017 project in collaboration with the University of Rhode Island to create the <u>Sproul & Michaud (2018) report</u> that estimated the overall economic impact of the fishing industry. The data from this report is now 7 years old and the report does not provide port or sector specific economic multiples. Therefore, we highly support this project to update the work of Sproul & Michaud (2018) and fill these gaps. We especially support that this project directly works with the fishing community, highlighting and communicating to a broad audience the benefits and value inherent in this type of collaborative data collection.

To support this project CFRF will work directly with project investigators to help recruit industry participants and aid with the dissemination of project results. CFRF will develop, host, and maintain a webpage that describes the purpose, approaches, and results of the project. In addition, the CFRF will publish newsletter articles highlighting the proposed project at least twice. The CFRF newsletter reaches over 1,500 individuals involved in the fisheries/seafood system. The CFRF will highlight project progress on its social media pages (Twitter and Facebook), which regularly reach hundreds of individuals involved in fisheries and ocean sciences. CFRF staff will also help organize and recruit participants for initial and final project workshops and will host one of these workshops if requested. The time and materials associated with this in-kind support can be valued at \$4,600.

Sincerely, N. David Bethoney

Executive Director, Commercial Fisheries Research Foundation



Daniel J. McKee, Governor Marc R. Pappas, Director

July 31, 2023

Atlantic Coastal Cooperative Statistics Program 1050 N. Highland Street, Suite 200A-N Arlington, VA 22201

RE: Proposal - The Economic Impact of Rhode Island's Fishing Industry

To Whom it May Concern:

Please accept this letter as my written support for the application of the Atlantic Coastal Cooperative Statistics Program for the proposal entitled The Economic Impact of Rhode Island's Fishing Industry.

This economic data that this proposal is looking to complete, would be extremely useful when conducting cost-benefit analyses for port infrastructure grants, and mitigation grants. It can also be used to estimate the economic impact that severe storm events would have on The Port of Galilee, which is a crucial port to commercial fisherman and business owners in the area.

Again, I urge you to approve The Economic Impact of Rhode Island's Fishing Industry Proposal as this will have great and numerous benefits for the State of Rhode Island. Please contact me at 462-7141 or Melinda.hopkins@ema.ri.gov if you have any questions. Thank you for your consideration.

This proposal has my strongest support for the strategic direction and shared future of our region.

Regards,

Melinda Hopkins

Melinda Hopkins Planning Branch Chief Rhode Island EMA





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 <u>https://web.uri.edu/research-admin/</u>

LETTER OF INTENT TO ESTABLISH A SUBAWARD AGREEMENT TO URI

APPLICATION TITLE:	FY24: The Economic Impact of Rhode Island's Fishing Industry
FUNDING AGENCY:	Atlantic Coastal Cooperative Statistics Program/NOAA
Cooperating Institution:	Rhode Island Department of Environmental Management (RIDEM)
URI Investigator:	Hirotsugu Uchida
Direct Costs:	\$58,385
Indirect Costs:	\$10,179
Total Costs:	\$68,564
Indirect Cost rate:	25%
Budget Period Dates:	9/1/2024 - 8/31/2025

The appropriate program and administrative personnel of each institution involved in this grant application are prepared to establish and administer the necessary subaward agreement consistent with the prime sponsor policies.

UNIVERSITY OF RHODE ISLAND

Franca Cirelli Associate Director of Sponsored Projects, Post Award