2026 Multi-state Hatch Project Meeting Report
W1197: Advancing Aquatic Food Products, Sustainability, Quality, Utilization, and Safety

Date: May 19, 2026
Location: Jones Beach Energy and Nature Center
Host/Facilitator: Michael Ciaramella

In-Person Participants: Brian Himelbloom, Yan Zhang, Christina DeWitt, Angee Hunt, Ombaka Owade, Razieh Farzad, Gulsun Akdemir Evrendilek, Cathy Liu, Karen Swajian, Yiming Feng, Alona Chepiha, Alexander Chouljenko, Kevin Edwards, and Lizhou Cao

Virtual Participants: Evelyn Watts, Theresa Leslie, Darcie Couture, Zach Gordon, and Mingyu Qiao

Primary Focus Areas:

- Aquatic food systems and seafood innovation
- Food safety and regulatory compliance
- Seaweed and aquaculture development
- Seafood byproduct utilization and waste reduction
- Invasive species as food products
- Extension and outreach programs
- Multi-state research collaboration
- Grant and funding opportunities

Summary

This meeting was a multi-state Hatch project focused on advancing the sustainability, quality, and safety of aquatic food products. It was held at the Jones Beach Energy and Nature Center in New York and brought together research and extension professionals from several universities—including the University of Florida, Oregon State University, University of Alaska Fairbanks, University of Maine, North Carolina State University, University of Maryland, and others—as well as representatives from government agencies and industry. The primary goal was to share ongoing work and identify opportunities for collaboration.

The first portion of the meeting focused on participant introductions, during which attendees shared their backgrounds and expertise in areas such as seafood safety, food microbiology, aquaculture production, seaweed utilization, and marine science.

The second portion featured a presentation by Teresa Leslie, Executive Director of Northeast Sustainable Agriculture Research and Education (NESARE) https://northeast.sare.org/, who provided an overview of the organization's grant

programs, funding opportunities, and application processes relevant to aquatic food systems. Discussion included how fishermen and wild-capture operations could better align with SARE programming. Leslie expressed interest in increased engagement from this sector, particularly for projects focused on sustainability and value-added products.

The session concluded with a transition to program and project updates, where participants were invited to share current research, extension, and education activities and seek input on developing new initiatives.

A recurring theme throughout the meeting was the need to move beyond traditional seafood production toward more integrated approaches that enhance sustainability, generate value from byproducts and underutilized species, strengthen food safety systems, and expand economic opportunities for coastal communities.

Participants emphasized the need for:

- Cross-state collaboration
- Shared proposal development
- Regulatory clarity for emerging aquatic food products
- Improved utilization of seafood waste streams
- Greater support for seaweed and shellfish industries
- Applied research with direct industry impact

Northeast SARE Grant Programs Overview and Discussion

Teresa Leslie provided an overview of the NE-SARE grant programs, noting that the program supports seven grant types ranging from smaller awards, such as Graduate Student Grants (up to $15,000), to larger Research and Education Grants. She explained that although SARE is federally authorized, recent budget constraints and an increase in applications have made funding more competitive. She encouraged applicants to align proposals with legislative priorities, including production improvements and sustainable practices.

Leslie highlighted that SARE has become increasingly receptive to aquatic food research, particularly in areas such as oyster and kelp aquaculture, and encouraged participants to use the online Grants Management System to review previously funded projects.

The group discussed opportunities to better incorporate fishermen and wild-capture seafood operations into SARE programming. Leslie clarified that these activities could fit within existing grant categories, especially those focused on sustainability and value-added products. She emphasized her interest, as Regional Director, in seeing more

proposals that support wild-caught seafood and experienced fishermen seeking to expand or innovate their operations.

Additional discussion clarified that SARE grants do not require matching funds and that proposals are evaluated using a standardized rubric by independent technical review committees.

Leslie also outlined the process of becoming a SARE reviewer, noting a preference for reviewers within the region to minimize conflicts of interest, while allowing for out-of-region reviewers when needed. She encouraged interested participants to subscribe to the *Innovations* newsletter for reviewer opportunities and noted that reviewers are compensated.

Key Discussion Themes

1. Seaweed Research, Safety, and Regulation

Seaweed emerged as one of the most discussed topics.

Key areas included:

- Food safety considerations for edible seaweed
- Regulatory pathways for commercialization
- Seaweed as human food
- Seaweed as livestock feed ingredients
- Seaweed-derived biostimulants
- Standardization and compliance challenges

Participants described ongoing efforts to understand how seaweed is regulated and how those regulations affect commercialization and industry growth.

Opportunities Identified

- Multi-state regulatory review
- Development of best-practice guidance
- Safety validation studies
- Industry education and extension materials

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2. Seafood Byproducts and Waste Reduction

Several participants discussed recovering value from seafood processing waste streams.

Examples included:

- Seafood processing byproducts

- Salmon skin product development
- Crab-processing residues
- Shellfish waste streams
- Nutritional ingredient recovery

The group viewed byproduct utilization as both:

- A sustainability opportunity
- A revenue-generation opportunity

Common Objectives

- Reduce disposal costs
- Improve processor profitability
- Develop novel food products
- Create feed and agricultural applications

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3. Aquaculture and Shellfish Development

Aquaculture discussions focused heavily on:

- Oyster production
- Shellfish industry support
- Permitting challenges
- Farm development
- Production enhancement technologies

Participants highlighted the importance of:

- Supporting growers through technical assistance
- Simplifying permitting processes
- Improving industry education

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4. Invasive Species as Food Products

The group discussed challenges associated with commercializing invasive species, particularly Asian carp and European green crab. Efforts in Maine to utilize green crab were highlighted, including collaborations with organizations such as www.Greencrab.org to develop value-added products. The discussion underscored a key tension between goals of eradication and the potential development of commercial markets for invasive species, raising questions about how to balance ecological management with economic opportunities.

The group discussed:

- Harvest opportunities
- Regulatory barriers
- Market development challenges
- Research needs

A legal research effort examining green crab regulations across coastal states was highlighted.

Broader Questions Raised

- When does invasive-species control become a fishery?
- How should regulations adapt?
- What market opportunities exist for underutilized species?

This topic was identified as a strong opportunity for future collaborative projects.

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5. Food Safety and Regulatory Compliance

Food safety remained a cross-cutting, foundational theme throughout the meeting. Participants explored legal and regulatory aspects of seafood and aquaculture, including input from Cathy Janasie of the National Sea Grant Law Center https://nsglc.olemiss.edu/, to identify opportunities for future collaboration on aquatic food policy and legal issues.

The group discussed challenges related to defining "characterizing ingredients" in seafood products under FDA regulations, noting inconsistencies in how these definitions are interpreted and applied across agencies and states.

Discussion areas included:

- Seafood HACCP https://www.afdo.org/training/sha/ and https://seafoodhaccp.cornell.edu/
- Seaweed Food Safety Guidance https://www.nyseagrant.org/Images/Uploads/PDFs/Seafood-Seaweed-FoodSafetyGuidance.pdf
- Seafood processing guidance
- Regulatory compliance
- Extension education, especially to assist with interpretation of regulations
- Technical assistance for processors

Participants emphasized the need to balance innovation with regulatory requirements.

6. AI, Data Science, and Technology Applications

Emerging technology applications were discussed, including:

- Species identification
- Image-based classification systems
- AI-assisted education and extension
- Data-driven seafood systems

Several participants expressed interest in future projects that integrate:

- Food science
- Aquaculture
- Engineering
- Computer science

Accomplishments

Short-Term (0–6 Months)

1. Develop Collaborative Project Concepts

- Identify shared research priorities.
- Form multi-state working groups.
- Match expertise across institutions.

2. Pursue Funding Opportunities

- Review Northeast SARE programs.
- Identify NIFA and Sea Grant opportunities.
- Develop proposal timelines.

3. Expand Regulatory Research

- Continue green crab regulatory review.
- Compile seaweed regulatory information.
- Identify policy gaps affecting commercialization.

4. Create Research Inventory

- Catalog ongoing projects.
- Identify overlapping interests.
- Reduce duplication of effort.

Medium-Term (6–18 Months)

5. Launch Multi-State Pilot Projects

Potential pilots:

- Byproduct utilization
- Seaweed safety
- Invasive species products
- Aquaculture sustainability

6. Develop Extension Resources

- Regulatory guidance documents
- Industry fact sheets
- Food-safety training materials
- Commercialization toolkits

7. Build Data-Sharing Networks

- Share methodologies
- Exchange datasets
- Coordinate outreach efforts

Long-Term (18+ Months)

8. Establish an Aquatic Foods Collaboration Network

Goals:

- Ongoing proposal development
- Shared stakeholder engagement
- Coordinated extension programming
- Regional impact measurement

9. Translate Research into Commercial Products

Focus on:

- Underutilized species
- Byproduct ingredients
- Seaweed products
- Sustainable aquaculture innovations

Overall Conclusion

The meeting demonstrated strong momentum toward building a coordinated, multi-state aquatic foods network focused on sustainability, food safety, value-added product development, regulatory solutions, and stakeholder engagement. Participants identified numerous opportunities to integrate extension, research, industry, legal, and agency expertise in ways that can accelerate innovation and enhance the overall impact of aquatic food systems across the United States.

Impacts

Proposals Submitted:

- Catalyzing A Thriving Chesapeake Catfish Hub for U.S. Seafood Resilience (VT lead Institution with multiple VA based outreach and higher education, Maryland and Louisiana submitted to USDA NIFA AFRI
- BLUE VALUE: Establishing a Blue Innovation Center to Advance Aquaculture Systems, Transform Seafood By-Products, and Build the Workforce for a Thriving U.S. Blue Economy (GA lead Institution, Kevin Mis Solval, collaborators NC, MS, FL, LA and Industry Jellyco USA. Submitted to USDA NIFA SAS
- The Mid-Atlantic K-12 AI for Seafood Sciences Hub: A Comprehensive Multi-Institutional, Multi-State Initiative to Build AI-Literate Next-Generation Agriculturalists Through Full-Spectrum Seafood Industry Applications Across the Chesapeake Bay Region and Beyond (VT lead institution, Florida State, NC, Delaware, LSU, MD).
- Fish Dry Aging Validation to Ensure Food Safety and Create New Market Opportunities (Purdue, Katheryn Parraga, VA, NC, LA) Granted NOAA SK
- Unlocking Value Added Opportunities for Louisiana Seafood Producers Through Shared Use Processing Infrastructure and Technical Assistance (LSU), submitted to USDA AMS LFPP
- Developing a Hazards and Controls Guide to Support Safe Seaweed Production and Marketing (Cornell/NYSG Michael Ciaramella, University of Maine, Farmingdale State, University of Connecticut/CT Sea Grant, National Sea Grant Law Center), Funded through 2023 USDA FSOP
- Seaweed Food Safety in the United States: Risk-Based Assessment and Mitigation of Heavy Metals and Environmental Contaminants (University of Florda/ FL Sea Grant Razieh Farzad, NYSG/Cornell), Submitted to USDA NIFA AFRI

- Seaweed Food Safety Under FSMA: Training and Tools for Safe Production and Processing (Cornell/NYSG Michael Ciaramella, University of Florida, Oregon State University), Being submitted to USDA FSOP Collaborative Education and Training

Other Impacts:

Discussions during the 2025 W1197 meeting highlighted that commercial seafood processors may qualify as "producers" under Sustainable Agriculture Research and Education (SARE) program eligibility, prompting Oregon State University to reevaluate funding opportunities that had previously been assumed to be unavailable to seafood research programs. As a result, OSU closely monitored the 2026 Western SARE Graduate Student Grant solicitation and submitted a proposal entitled Functional Mince Project: Evaluating Shelf Life and Protein Functionality in Alkaline pH-Adjusted Fish Mince, which was subsequently awarded $30,000 (Project GW26-007). The 2025 discussion also identified the need for greater clarity regarding SARE program structure and eligibility for aquatic food systems research. In response, the W1197 committee invited a Northeast SARE representative to participate in the 2026 meeting, providing members with a comprehensive overview of grant programs, proposal expectations, and eligibility considerations. These discussions strengthened understanding of SARE opportunities across the committee and provided valuable two-way communication, improving participants' understanding of SARE funding opportunities while increasing SARE leadership's awareness of how terminology and program language can create uncertainty for aquatic food researchers.