

**Prepared Statement of Barton Seaver, Director, Sustainable Seafood and Health Initiative
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Good afternoon Chairman Thune, Ranking Member Nelson and all other members of the committee. I am honored to be here speaking on behalf of my neighbors in coastal communities throughout America. We have very good reason to consider the promising future of aquaculture.

I began my career as a chef here in Washington, D. C. I used that platform to espouse a negative view of aquaculture. My opinion was based on a limited scope of information I gathered from environmental advocacy groups concerning the state of the aquaculture industry at that point in time 15 years ago. As my career progressed, I gained an understanding of the full context of aquaculture's impact, both positive and negative.

I left the restaurant industry 8 years ago and took an assignment as a National Geographic Explorer. My mission focused on marine ecosystems, discovering strategies to minimize human impact upon them. I came to understand that the whole concept of environmental sustainability hinges on thriving coastal communities. Certainly, the coastal way of life depends on a resilient underlying marine ecosystem to which we must be good stewards. But I believe that in aquaculture, we can sustainably capitalize on the positive impact marine ecosystems have on these communities and the wider population.

I now live in a Maine coastal community where I am raising my son. His ability to thrive depends on the well-being of the entire community. As such, this topic has become a deeply personal issue.

In Maine we honor the legacy of the lobster fishery that supports working waterfronts, a sophisticated cold chain system, bait suppliers, individual boat owners, and a strong apprentice program. We view lobstering as a noble profession, one essential to the state's identity. But this genuflection to the men and women harvesting seafood is not widespread beyond Maine.

When we as citizens envision an agricultural scene, we see amber waves of grain, the fruited plains, stoic white farm houses and picturesque red barns; a conjuring that renders farming the best possible use of fertile land. We value land for our presence there. But when we think of the ocean, it's the wildness that captures our imaginations. We value the open sea because the hand of man is not present. I argue that just as we emotionally embrace farming the land, so must we embrace fisheries and aquaculture.

The diesel engine pushed Americans westward to manifest destiny. But we've hit hard limitations – depleted aquifers, soil erosion, and changing weather events -- to further increasing agriculture production on land. We need to look to the oceans for long-term food security. More of America sits under the ocean than above it. We have the longest coastline in the world and the largest exclusive economic zone. In a study mapping the global potential for marine aquaculture conducted by a group of University of California at Santa Barbara scientists concludes that in an area of the ocean the size of Lake Michigan that is ripe for aquaculture, we could sustainably farm fish equal to the amount of seafood currently caught globally in the wild today. ¹

As railroads facilitated westward expansion, aquaculture will pioneer a path into an ocean geography that will become Blue America. In eras past, the rally cry was "Go west, young man!" And the means to

settlement and prosperity was 40 acres and a mule. Today, that same sentiment comes in the declaration “Go wet, young person!” It will be 20 acres of marine lease and an outboard motor that will get us there.

In a paper on the political economics of marine aquaculture in the United States², scientist Gunner Knapp, recently retired from the University of Alaska, and Michael Rubino, Director of the Office of Aquaculture at NOAA's Fisheries Service, say the biggest impediment to developing American aquaculture today is the industry's lack of social license. An industry gains social license when the general public understands the benefits it brings to the table. For aquaculture, those include a healthier citizenry as Americans will have better access to more seafood; economic opportunity by way of new jobs, and, a chance to maintain our leadership on the world stage as a consistent model for responsible and ecologically sustainable aquaculture practices.

Seafood is an important ingredient in a healthy diet. Fish – compared to cows, sheep, pigs and chickens—levy the least environmental impact to produce, and their protein is healthier for the human diet. If Americans followed our own government's recommendation to eat omega-3 rich seafood just two times a week, 55,000 lives would be saved annually from heart disease and stroke annually.³ And yet, only 1 in 10 Americans follow these guidelines.⁴ It is not a stretch to say that developing the United State aquaculture industry as a trusted source for seafood would lead to increased consumer confidence and consumption.

This nation was founded on cod and the backs of the men and woman who fished them. The ocean economy spurred the economic and political freedoms we enjoy today and we have watched as it atrophied before our eyes. The once mighty North Atlantic fishery struggles mightily now. While we manage our wild fisheries well, the bounty is a fraction of what it once was.

The average age of fishermen is increasing and few new participants join their ranks. A lack of wild fishing jobs drives young people in coastal communities to seek work elsewhere. Aquaculture could provide that missing opportunity in an exciting and innovative industry. It could offer a fishing family's son or daughter an opportunity, a step towards to owning a small business and a chance to remain in their coastal community and contribute to its evolving maritime heritage. This is already happening in Maine where sons and daughters of fishermen operate dozens of oyster, mussel, seaweed, and fish farms.

I cannot stress enough that for all of the opportunity aquaculture presents, it exists in parallel with our storied wild fisheries. Aquaculture is not a replacement for wild fisheries but an augmentation to their culture and economy that will raise the profile and value of all American seafood.

I want to touch briefly on the assertion that an investment in American aquaculture will level the trade imbalance between domestic and foreign seafood. We should not seek to decrease imports of healthy seafood but work to increase overall seafood consumption to drive demand seafood raised in our own waters. As the goal is to get more people eating more seafood for a healthier America, we cannot vilify responsibly sourced seafood imported from other parts of the world. Doing so would diminish consumer confidence in all seafood.

The committee holds this hearing at a unique moment because we have the opportunity to be architects of a substantial new economy. A thoughtful and inclusive approach to regulating aquaculture will set in

motion a compelling American success story. I ask this committee to set regulations that are oriented to and governed by regional knowledge. While we need overarching guidelines, one size will not fit all as aquaculture is a product of a community and is unique to the environment in which it is executed. Likewise, we must move forward with the understanding that not all forms of aquaculture are culturally or ecologically appropriate for all places. Please consider giving residents of those places -- especially First Nations People and those with a significant heritage in fishing – the chance to decide what aquaculture means for them and let them design regionally specific methods in pursuit of the seemingly inexhaustible potential of America’s Blue Economy.

It is my hope that my son grows up surrounded by opportunity, thriving neighbors, and a dream to nobly provide food for America’s tables. Again, I thank you for the honor of appearing before you today. And I stand ready to answer any questions you or your staff may have now or in the future.

¹ Mapping the global potential for marine aquaculture <http://www.nature.com/articles/s41559-017-0257-9>

² The Political Economics of Marine Aquaculture in the United States <http://www.tandfonline.com/doi/abs/10.1080/23308249.2015.1121202?journalCode=brfs21>

³ Association between Dietary Factors and Mortality from Heart Disease, Stroke, and Type 2 Diabetes in the United States <https://jamanetwork.com/journals/jama/article-abstract/2608221>

⁴ Scientific Report of the 2015 Dietary Guidelines Advisory Committee <https://health.gov/dietaryguidelines/2015-scientific-report/PDFs/Scientific-Report-of-the-2015-Dietary-Guidelines-Advisory-Committee.pdf>