

# Coastal Fund Application

## Seafood Literacy Project

Dan O'Shea - Total Words: 1,653

### I. Application Basics

#### 1. Please provide a 1-paragraph summary of your funding proposal (<150 words)

*According to the Commercial Fishermen of Santa Barbara, over 120 species of seafood are brought by over 100 fishermen to Santa Barbara Harbor every year. Most of these species are responsibly sourced and highly nutritious. But the United States still imports up to 65% of its seafood every year, providing an opportunity for unregulated seafood to be sold in the U.S. The Seafood Literacy Project's goal is to boost awareness of local delicacies and responsible fishing practices to support the growing Blue Economy of Santa Barbara and UCSB. The SLP aims to increase ocean literacy and celebrate our coastal ecosystems through food, art, and science by providing students with a report and seasonal zine on where to get local and sustainable seafood, how those species are being managed, and what recipes make them taste the best.*

### II. Application Details

#### 1. How does your proposal fit within the Coastal Fund's mission to "connect people and the environment by allocating funds to programs that celebrate, explore, and protect the coastal ecosystems in and around the University of California, Santa Barbara"? (<250 words)

*The Seafood Literacy Project directly aligns with the Coastal Fund's mission. By educating, enabling, and empowering students to cook more sustainably and locally, we help celebrate the ocean that is at the doorstep of UCSB. This knowledge will aid in ocean literacy and confidence to explore the Santa Barbara coast. This project will create a deeper understanding of how the ocean's resources are managed to maximize benefits to all ocean users. Through this deeper understanding of seafood processes, students and faculty will be called to protect coastal ecosystems in Santa Barbara County by making responsible choices from a local seafood purveyor.*

#### 2. Please provide any necessary background information and your proposal's importance in a broader context. Your response should be written for a scientifically literate but non-technical audience. For many proposals, this section will be much shorter. Be sure to include a references section at the bottom of this application to cite any sources used (does not count towards words). (<750 words)

*Aquaculture and wild-caught fisheries are essential for food security, employment, and healthy diets throughout the world. Seafood provides more than 4.5 billion people with at least 15% of their intake of animal protein, and fish's unique nutritional properties make it an essential part of complete diets (Béné et al., 2015). It is estimated that between 660 million and 820 million people rely on fish-related activities for the majority of their income (Allison et al. 2013). Seafood also has a significantly lower carbon footprint than its terrestrial counterparts, like*

beef and pork (Hall et al. 2011). Globally, seafood is at the core of human survival and is a highly traded commodity.

The international seafood supply chain has a long history of illegal actors exploiting complex international trade. According to Professor Froehlich at UCSB, 62-65% of seafood consumed in the United States is imported despite the U.S. being one of the top seafood producers. Globalized seafood supply chains are commonplace, with many seafood products crossing international borders multiple times, allowing for nefarious actors to take advantage. Different international trade partners with the U.S. generally have lower environmental regulations, higher vulnerability to slavery, and increased risk of illicit trade in their supply chains (Dominguez-Martinez et al., 2025). U.S. reliance on imported seafood is projected to continue to increase by 2050 (Froehlich et al. 2021). This means that as we import more seafood, we inherently support Illegal, Unreported, and Unregulated (IUU) fishing practices.

Certifications can help in sustainable seafood markets and have made great strides in providing frameworks for countries that do not have the resources to regulate fisheries. However, it has been observed that as increased volumes of fish are marketed under sustainability certifications, it could result in weaker sustainability claims. It is possible that every fishery or aquaculture producer entering the global supply chain can identify an NGO partner willing to vouch for their product's sustainability. Thus, the volume of 'sustainable' fish entering markets will increase but decline in the actual level of sustainability, ultimately weakening or providing no ocean conservation benefits (Roheim et al., 2018).

There is an opportunity for embracing what we produce right here in America and in Santa Barbara. In 2022, NOAA reported that the U.S. produced 8.4 billion pounds of seafood valued at \$5.9 billion USD. As of 2025, more than 90% of NOAA-monitored wild-caught fisheries are not subject to overfishing. Yet, locally sourced seafood is not easy to find or equitable in its access. A case study in San Diego studying local seafood availability revealed that only 8% of San Diego's 86 seafood markets consistently carried San Diego-sourced seafood (Talley et al., 2016). Another study analyzed barriers to seafood in South Central L.A. They found that the "most commonly mentioned barriers were affordability, and the amount of time required to source, prepare, and cook seafood, particularly with unfamiliar species or preparation styles" (Almada et al., 2025).

People not feeling comfortable cooking new types of seafood is a common barrier amongst Americans. According to a survey focusing on at-home ocean literacy through seafood, out of 96 respondents, 42% said that they valued freshness, nutritional value, and origin (Alvisi et al., 2022). In the South Central L.A. case study, researchers surveyed what would motivate cooking an unfamiliar seafood product at home. Respondents said that knowing it was environmentally friendly (41%), pricing being comparable to their typically purchased seafood (40 %), and being shown how to cook and prepare a new product (37 %) were priorities (Almada et al., 2025). The Commercial Fishermen of Santa Barbara tout that around 100 fishermen harvest 120 distinct seafood species every year. Santa Barbara Harbor is the second-largest port by total value in the state, behind Los Angeles. This type of seafood diversity, coupled with the proven value consumers have for freshness, nutritional value, origin, sustainability, and knowledge of how to cook and prepare new products, opens up many opportunities for seafood literacy in Santa Barbara County and at UC Santa Barbara.

The Seafood Literacy Project will take an approach similar to Cretella et al's 2023 paper: *Tasting the ocean: How to increase ocean literacy using seafood heritage with a visceral approach*. Cretella outlines how to increase ocean literacy through different 'visceral' workshops. The workshops focus on diaries, cooking, and

*coastal exploration to connect teenagers (15-18) to their coastal identity in Dublin, Ireland. The students who participated in interdisciplinary workshops were found to be more comfortable with seafood, able to connect to their heritage, and have increased confidence in ocean exploration, knowledge of nutritional value, and a desire for sustainable solutions. This study highlights that creating a visceral approach towards ocean literacy is effective, providing support for the impact the SLP can have.*

**3. Describe your planned steps, process or methodology. (~100 words) 293**

*A large portion of the SLP has already been completed by myself, Daniel O'Shea, a graduate student at the Bren School. This will serve as a template for the rest of the report and will expedite the initial stages of the project. The completed portions are fisheries management techniques for 5 different local species and associated recipes.*

*By the beginning of Winter Quarter, two undergraduate interns will be selected through an inclusive interview process.*

*By the end of Winter Quarter, the different components of the SLP Report will be completed. The first stage of the SLP, "Where to buy local seafood?" gathers information from our initial seafood purveyor analysis. Finding information on local seafood purveyors, including price, seafood species, and sustainability. Sustainability is aligned with Monterey Bay Aquarium Seafood Watch standards, on which UCSB Dining Services bases its seafood policy.*

*The second stage is "How is your seafood managed?" This stage will consist of a literature review of local and sustainable seafood identified above, with a focus on the more affordable species.*

*Third, "What should you cook?" consists of creating recipes of species included in the above to stimulate 'visceral' engagement. The goal of this stage is to induce a reaction of seafood from management to purchase to enjoyment.*

*The final two weeks of the quarter will be led by our undergraduate design student, who will lead theme design to increase readability. We plan to contact the AS Food Bank on Campus and the UCSB dining hall throughout the process to align with their goals and inquire about hosting printed and digital copies of our finished report. Finally, a template for a seasonal zine will be created to enhance readership. This zine will consist of seasonal recipes, restaurant highlights, and student-submitted ocean-themed artwork.*

**4. What outcomes do you hope to achieve? (~100 words)**

*The achievable outcomes of the SLP will be to drive ocean and seafood literacy across the UCSB campus, support the growing blue economy of Santa Barbara County by both revenue and employment, and encourage ocean stewardship amongst UCSB students. We will assess these outcomes by measuring downloads of our report throughout the Spring Quarter and seasonal zines. Also, a survey will be included with the zine that will measure how perceptions of local seafood have changed over time.*

**5. Will your project continue to have an impact or evolve beyond this funding cycle? If so, how? (~100 words)**

*The initial Seafood Literacy Project will provide information for students and can accompany future UCSB Sustainable Seafood Days. The report will be available in print to use at tabling sessions as well as digital to avoid printing costs. Furthermore, with the development of a seasonal zine template, ongoing generations of students will be able to foster a community of seafood enthusiasts at UCSB. These resources will also help the Santa Barbara Blue Economy by providing an additional revenue stream through UCSB students, which has previously been untapped due to a lack of knowledge, confidence, and access.*

### **III. Student Involvement**

- 1. Are there any other ways your project will benefit or engage UCSB students or the campus as a whole, either directly or indirectly, that are not captured thus far? (~100 words) 150**

*Student involvement and engagement is key to the Seafood Literacy Project. The first step in developing student engagement for the SLP is to put out a call to students in the EEMB, ENVST, Sociology, Economics, and Arts for an internship. By the end of Fall Quarter 2025, we would like to select two students: One with a background or interest in graphic design and another with a background or interest in seafood, ocean science, or fisheries. Over the course of the Winter Quarter, these students will aid in project development and research, designing our deliverable report and subsequent zines, and interviewing local seafood experts. After the project has been completed by the end of Winter Quarter 2026, students can benefit from further engagement by organizing seasonal seafood zines. Here, we will try to incorporate more student involvement through student-developed recipes, fisheries management highlights, creative expression, and artistic depictions of seafood.*

## Citations

Almada, A. A., Kim, A. J., Fenney, H., Kim, D. Y., Churches, N., Chilton, L., Madrigal, M., Quintanilla, M., & Campbell-Árvai, V. (2025). Improving equitable access to seafood: A case study of a community-driven effort in South Central Los Angeles, California. *Marine Policy*, 173, 106562. <https://doi.org/10.1016/j.marpol.2024.106562>

Alvisi, F., Baldriighi, E., Merlini, S., Locritani, M., Panfili, M., Colella, S., Bronco, S., Cicogna, F., Coiai, S., & King, E. H. (2022). Walking on the Sea Traces: Developing a platform to bring Ocean Literacy and Citizen Science at Home. *Mediterranean Marine Science*, 23(2), 389–404. <https://doi.org/10.12681/mms.26931>

Béné, C., Barange, M., Subasinghe, R., Pinstrup-Andersen, P., Merino, G., Hemre, G.-I., & Williams, M. (2015). Feeding 9 billion by 2050 – Putting fish back on the menu. *Food Security*, 7(2), 261–274. <https://doi.org/10.1007/s12571-015-0427-z>

Cretella, A., Scherer, C., & Holm, P. (2023). Tasting the ocean: How to increase ocean literacy using seafood heritage with a visceral approach. *Marine Policy*, 149, 105476. <https://doi.org/10.1016/j.marpol.2023.105476>

Dominguez-Martinez, R. M., Klein, C. J., Blanchard, J. L., Farmery, A., Kuempel, C. D., Roberson, L., Spillias, S., & Cottrell, R. S. (2025). Seafood Sustainability Challenges for Import-Dependent Nations. *Reviews in Fisheries Science & Aquaculture*, 1–16. <https://doi.org/10.1080/23308249.2025.2555853>

Fisheries, N. (n.d.). *Understanding Sustainable Seafood: Common Questions about Sustainable Seafood* | NOAA Fisheries (National). Retrieved October 23, 2025, from <https://www.fisheries.noaa.gov/topic/sustainable-seafood/understanding-sustainable-seafood>

Froehlich, H. E., Couture, J., Falconer, L., Krause, G., Morris, J. A., Perez, M., Stentiford, G. D., Vehviläinen, H., & Halpern, B. S. (2021). Mind the gap between ICES nations' future seafood consumption and aquaculture production. *ICES Journal of Marine Science*, 78(1), 468–477. <https://doi.org/10.1093/icesjms/fsaa066>

Gephart, J. A., Froehlich, H. E., & Branch, T. A. (2019). To create sustainable seafood industries, the United States needs a better accounting of imports and exports. *Proceedings of the National Academy of Sciences*, 116(19), 9142–9146. <https://doi.org/10.1073/pnas.1905650116>

Roheim, C. A., Bush, S. R., Asche, F., Sanchirico, J. N., & Uchida, H. (2018). Evolution and future of the sustainable seafood market. *Nature Sustainability*, 1(8), 392–398. <https://doi.org/10.1038/s41893-018-0115-z>

Talley, T. S., Warde, H., & Venuti, N. (2016). Local Seafood Availability in San Diego, California Seafood Markets. *Future of Food: Journal on Food, Agriculture and Society*, 4(2). <https://escholarship.org/uc/item/9r48b0mk>

Tlusty, M. F., Tyedmers, P., Bailey, M., Ziegler, F., Henriksson, P. J. G., Béné, C., Bush, S., Newton, R., Asche, F., Little, D. C., Troell, M., & Jonell, M. (2019). Reframing the sustainable seafood narrative. *Global Environmental Change*, 59, 101991. <https://doi.org/10.1016/j.gloenvcha.2019.101991>