SEAFOOD HUB DEVELOPMENT ON THE U.S. WEST COAST

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Introduction

Coastal states in the U.S. are home to some of the most productive and sustainably managed fisheries in the world, and boast rich cultural histories of bustling waterfront seafood trade activity. Despite this, the U.S. seafood trade deficit reached $20.3 billion in 2023, with the U.S. importing $30 billion of seafood products annually while exporting $5.1 billion of seafood products annually (USDA, 2024). Global import and export markets have changed the way Americans trade and eat seafood over time, leading to cascading effects throughout seafood supply chains. U.S. fishermen must compete with a flood of cheap commodity seafood imports, making it challenging to sell their catch locally and regionally. Fishermen, in turn, sell seafood to large distributors that transport seafood to be processed and packaged elsewhere. The focus on sales to export markets has led to a decrease in local demand for small and mid-scale processing, perpetuating the loss of seafood storage and processing infrastructure along U.S. waterfronts. This has only made U.S. fishermen further reliant on international export markets to sell their seafood products, even in situations where consumer demand exists for fresh, local seafood.

Recent disruptions to global supply chains, such as the Covid-19 pandemic, have illustrated that complex international food systems can fail, risking food insecurity and pointing to the need for more localized food systems. Importing the majority of our seafood can also result in the externalization of environmental burdens and potential human rights violations in countries with less stringent regulations (Duong, 2018). In addition, the carbon emissions produced by importing seafood from thousands of miles away will not be compatible with achieving national climate goals in the future. Transitioning to retaining more domestically produced fisheries products within local and regional food systems can lead to increased economic opportunities for coastal fishermen and more resilient coastal communities, along with other benefits such as increased seafood safety and sustainability.

Understanding the current domestic seafood system at local scales and identifying the barriers and opportunities to keeping seafood within local food systems are important first steps in driving change in this sector. A concept known as the “seafood hub” has emerged to help address storage, processing, and distribution gaps in local and regional seafood supply chains. This report will explore the definitions, functions, and examples of seafood hubs and similar models in development on the west coast of the United States.

Food Hub Definitions and Functions

Defining Food Hubs

The seafood hub is an evolving concept, and the literature surrounding seafood hubs is nascent. Although many of the functions performed by a seafood hub have been an integral part of seafood supply chains for hundreds of years, the aggregation of various parts of the supply chain and the characterization of that amalgamation is not yet a part of the common nomenclature of seafood system studies. In order to understand the meaning and potential functions of a seafood hub, we can look to the agricultural sector, where food hubs are a more common part of supply chain and food system discussions. Different entities define food hubs in different ways, as illustrated by the variety of explanations put forth by agricultural agencies and organizations. The following excerpts show some common definitions of food hubs:

1. The USDA defines a regional food hub as: A business or organization that actively manages the aggregation, distribution, and marketing of source-identified food products primarily from local and regional producers to strengthen their ability to satisfy wholesale, retail, and institutional demand. *Regional Food Hub Resource Guide* (Barham et al., 2021).
2. Food hubs are, or intend to be, financially viable businesses that demonstrate a significant commitment to place through aggregation and marketing of regional food. *Food Hubs: Definitions, Expectations, and Realities* (Fischer et al., 2015)
3. A food hub serves as a coordinating intermediary between regional producers and suppliers and customers, including institutions, foodservice firms, retail outlets, and end consumers. Food hubs embrace a spectrum of functions, purposes, organizational structures, and types, each of which can be tailored to achieve specific community-established objectives. […] Food hubs contribute to strengthening local and regional food systems as well as to broader community goals of sustainability and health. *Toward a More Expansive Understanding of Food Hubs* (Horst et al., 2011)

To further define the characteristics of a food hub, the *San Diego County Food Hubs Needs Assessment Report* clarifies that "*Source-identified* and *commitment to place* are important nuances that distinguish hubs from other food businesses similar in function. Specifically, the distinction of *source-identified* indicates that, to some extent, the stories of the food, the producer, the production methods—or simply the location—stay with the product as it moves through the supply chain." (Desai & Mazaroli, 2018)

The USDA Regional Food Hub Resource Guide distinguishes food hubs from traditional wholesale and processing companies in pointing out that "regional food hubs are defined less by a particular business or legal structure, and more by how their functions and outcomes affect producers and the wider communities they serve" (Barham et al., 2021) and provide examples of defining features as listed below:

Defining characteristics of a regional food hub include:

- Carries out or coordinates the aggregation, distribution, and marketing of primarily locally/regionally produced foods from multiple producers to multiple markets.
- Considers producers as valued business partners instead of interchangeable suppliers and is committed to buying from small to mid-sized local producers whenever possible.
- Works closely with producers, particularly small-scale operations, to ensure they can meet buyer requirements by either providing technical assistance or finding partners that can provide this technical assistance.
- Uses product differentiation strategies to ensure that producers get a good price for their products. Examples of product differentiation strategies include identity preservation (knowing who produced it and where it comes from), group branding, specialty product attributes (such as heirloom or unusual varieties), and sustainable production practices (such as certified organic, minimum pesticides, or "naturally" grown or raised).
- Aims to be financially viable while also having positive economic, social, and environmental impacts within their communities, as demonstrated by carrying out certain production, community, or environmental services and activities.

Food Hub Functions

Food hubs are usually described as having an overall purpose of strengthening regional food systems, but can be further defined by the type of business activities they undertake. The Food Hub Business Assessment Toolkit (Vanderburgh-Wertz & Moraghan, 2014) categorizes food hub functions into 5 major categories:

- **First-mile aggregation**- The food hub works directly with producers to aggregate and store different products from multiple farms to one or more centralized locations.
- **Last-mile distribution**-The food hub stores and transports products to end customers (i.e. restaurants, schools, hospitals, individuals, etc).
- **Retail or diversified markets:** The food hub engages in a variety of activities that can include wholesale, retail, real estate rental, and educational activities. This category also includes "community retail hubs" that sell product to end consumers through retail outlets, online grocery sales, and CSA-style farm share boxes, among others.
- **Processing for convenience**: The food hub processes fruits and vegetables to make them more convenient for the end customer. Often called "light processing," processing for convenience includes washing, peeling, chopping, and/or bagging. This category of activity can also include preparation of meals through a commissary as well as slaughtering and butchering. *Note that meat/ seafood processors have distinct regulatory requirements
- **Processing for preservation**: The food hub processes food to a shelf-stable or frozen condition. Heavy processing for preservation includes canning, pickling, jam-making, among many others. Making charcuterie and other preserved meats also fit into this category of activity.

Figure 1. below shows the Food Hub Business Assessment Toolkit's comparison of conventional produce wholesalers and processors versus characteristics of food hubs as defined by the toolkit (Vanderburgh-Wertz & Moraghan, 2014). According to the assessment, food hubs are considered to be more focused on sustainable produce, smaller in size and sales volume on average, with more transparent pricing that takes producer needs into account.

Figure 1. Conventional versus Food Hub Sectors

	Traditional Produce Wholesaler	Traditional Produce Processors	Food Hubs
SUPPLIER TYPE	• Large • International • Conventional production	• Large • International • Conventional production	• Small and mid-sized • Regional • Diversified, sustainable production
PRICING	• Producer is price taker • Opaque pricing	• Producer is price taker • Opaque pricing	• Producer is favored in pricing or has some input into pricing • Transparent pricing throughout supply chain
SUPPLIER MANAGEMENT/ DEVELOPMENT	• Onus is on producer to meet standards	• Onus is on producer to meet standards	• Producer is supported in meeting standards and growing for wholesale markets
SALES VOLUME PER COMPANY	• $12 million average	• $49 million average	• $3.7 million average[32] • $324,500 median
GROSS MARGIN	• 13-14%	• 22-24%	• Not available[33]
PROFIT MARGIN	• 1%	• 2%	• Not available
WAREHOUSE SIZE	• 10,000-400,000 sq ft	---	• 4,000-50,000 sq ft

Source: Vanderburgh-Wertz, Darrow and Malini Ram Moraghan. Food Hub Business Assessment Toolkit. Wholesome Wave: February 2014. Pg. 20.

Acquiring an understanding of the framework for food hubs, what defines a food hub versus traditional aggregation and processing models, and the functions that food hubs can perform in a local or regional food system can help us begin to apply these ideas to seafood systems, where the concepts are less established.

Literature Review of Seafood Hubs

A targeted literature review was conducted in May 2024 within academic journals to understand the extent of peer-reviewed literature on seafood hubs. The results of this review can help build a working definition of a seafood hub, and identify alternative terms and concepts in peer-reviewed literature that describe potential components or functions of seafood hubs. This can in turn begin to provide a collective language around strategies for securing access to local seafood and integrating sustainable fisheries and aquaculture into coastal food systems.

Peer-reviewed literature relating to seafood hubs was collected using an internet-based keyword search within two databases. “Seafood hub” is a term that takes the concept of a food hub, which usually focuses on land-based agricultural products, and applies it specifically to the seafood sector. Researchers in different disciplines may describe what is referred to here as a seafood hub using different terms, and there is not yet a standard definition of what characterizes a seafood hub. Therefore, it was necessary to expand the keywords used to search for seafood hubs, and additionally gather published literature centered around terms that describe the underlying functions and benefits of seafood hubs in coastal communities.

The following keywords were searched in Google Scholar and Scopus: “seafood hub”, “seafood infrastructure”, “seafood supply chain”, and “alternative food networks + seafood”. The main term “seafood hub” returned very few results that pertained to this research focus. Seafood hubs can operate as a crucial step in the seafood supply chain, so searching for terms related to supply chain successfully returned more results related to our research interests. In researching published literature on seafood hubs, the following themes emerged:

1) Seafood hubs, or various functions of seafood hubs, can play a role in shifting from traditional seafood supply chains to alternative seafood networks (ASNs).
2) Seafood hubs, or various functions of seafood hubs, have emerged with the motivation of increasing participation and access to seafood for diverse and low-income communities.
3) Seafood hubs may contribute to socio-ecological resilience of fishing and producer communities.

Dominant seafood supply chains in the U.S. often involve large processing and distribution companies that provide access to economies of scale and a convenient buyer for small-scale fishers, but do not allow fishers to retain the full economic value of their catch. Alternative seafood networks (ASNs) provide an alternative to traditional models where fishermen can “sell their catch directly to consumers or via fewer intermediaries than in the dominant supply chain” (Pomeroy et al., 2020). ASNs can operate at various steps in the supply chain in many forms, from processing collectives to direct marketing. Excerpts and main points from peer-reviewed literature central to the three themes outlined above will be highlighted in the following paragraphs.

In the West Central Gulf of Guinea, the Fish Trade Project developed an initiative called the West Central Gulf of Guinea Fish Traders and Processors Network (FCWC FishNET), to

support small scale fisheries in the region. The initiative was a “platform composed of small-scale traders and processors, with the objective of informing policy gaps and designing market-driven incentives to leverage the collective power of its members to facilitate regional trade.” (Ayilu & Appiah, 2020). Activities included promoting quality smoked fish products, reducing post-harvest losses, promoting better fish handling, and developing processing and packaging techniques to add value and diversify trading channels for fish products. These interventions at the processing level helped small scale processors gain leverage and collective bargaining power within the industry.

In California and Alaska, a program led by advisors affiliated with Sea Grant Extension Programs developed best practices for seafood direct marketing strategies for small scale fishers in the two states. The authors recognized that direct marketing is attractive in the promise of capturing the full value of seafood catch, but it is not feasible or practical in all situations or communities. Sea Grant Extension Programs specialize in local, context-based assistance for small-scale fishing communities, so were positioned to understand and incorporate this knowledge. The reports recommendations for applying direct marketing strategies in practice include “recognizing and working with fishing community members as experts and co-educators (partners); collaborating to identify and address needs by sharing and building information; refraining from advocacy; recognizing that seafood direct marketing is not an “all or nothing” strategy; developing contextually grounded outreach materials; and using multiple information delivery methods and dissemination channels. (Pomeroy et al., 2020).

Seafood hubs or alternative seafood networks can be beneficial not only to producer communities, but additionally to increase access to diverse consumers. Specific strategies can be employed to target communities who may not otherwise be able to access fresh, high-quality seafood. A case study authored by Talia Young, founder of a community supported fishery program called Fishadelphia, based in Philadelphia, PA, USA, highlights the organizations strategies and lessons learned when trying to reach beyond a primarily white and affluent customer base. Authors identified seven strategies including “discounting prices, accepting payment in multiple forms and schedules, offering a range of product types, communicating and recruiting through a variety of media (especially in person), and choosing local institutions and people of color (POC) as pickup location hosts” (Young et al., 2023). Specific strategies were found to increase participation for different ethnic groups, for example, “For Asian customers, accepting cash, offering whole fish, recruiting in-person, and POC-hosted pickup locations were key factors. For Black customers, discounted price, accepting cash, offering fillets, and communicating through means other than email were most important” (Young et al., 2023).

Along the U.S. west coast, many locally abundant seafood species are underutilized in the dominant seafood supply chain. In their study “Making seafood accessible to low-income and nutritionally vulnerable populations on the U.S. West Coast”, Koehn and colleagues identified organizations and programs that have created interventions in seafood supply chains to supply low-cost, nutritious fish to low-income communities, partially by utilizing these undervalued fish sources. They found that creating diversity in the species and sources of fish, as well as a diverse end-customer base were essential. In addition, “a key factor facilitating success was the ability to negotiate a price point that was both profitable and reasonable for organizations supplying nutritionally vulnerable or low-income consumers. Furthermore, securing access to grants overcame initial costs of establishing new supply channels. All cases

highlighted the importance of individual champions who encouraged development and cultural connections between the initiative and the nearby community. Organizations overcame key challenges by establishing regulations governing these new channels and either using partnerships or vertically integrating to reduce costs associated with processing and transport " (Koehn et al., 2020).

In addition to tangible benefits for seafood producers and consumers, seafood hubs and alternative seafood networks can produce other benefits, as described in "Local seafood: rethinking the direct marketing paradigm" which focuses on a case study of the community supported fishery *Walking Fish* in North Carolina. The organization and collective action that was necessary of fishermen to construct the CSF incentivized "cooperation, communication, and information production and organization" (Stoll et al., 2015). Authors posit that "…economic benefits create an incentive to participate [in a CSF], resulting in cooperation among fishers and increased communication skills that foster bonding and bridging capital that put fishers in a position to identify and respond to challenges that threaten the social-ecological resilience of the systems within which they operate" (Stoll et al., 2015). Ultimately, the newly built network that was created from the CSF efforts allowed this community of fishermen to better withstand challenges to socio-ecological resilience of the systems in which they operate.

Existing Seafood Hub Efforts

This project focuses on seafood hub development on the west coast of the U.S., where seafood processing has historically been a part of the coastal culture and infrastructure, but has disintegrated over time. Much of the west coast currently lacks sufficient seafood storage, processing, and distribution infrastructure that is geared toward small and mid-scale commercial fisheries for local and regional consumption. However, efforts are being made to revitalize these industries and support local seafood systems. A goal of this project was to identify a successful seafood hub operating on the west coast that could serve as an example for others interested in developing new seafood hubs. Our initial search was informed by personal communications with individuals engaged in seafood system research, prior knowledge of the project authors at NOAA and UCLA, and internet searches. Search results confirmed that there are various organizations engaged in addressing local gaps in one or more parts of the seafood supply chain, but few that have been successful in fulfilling most of the potential functions of a seafood hub. Table 1. displays information about the seafood hubs, collectives, or organizations that fulfill one or more of the food hub functions described in the previous section. Most are based on the west coast, excepting a few from other geographical areas of the U.S. that were included due to their unique characteristics or foci that could serve as an example for others attempting to start seafood hubs or collectives.

Name of Seafood Hub/ Infrastructure Project	Food Hub Function Categories								
	First Mile Aggregation	Last Mile Distribution	Retail or Diversified Markets	Processing for Convenience	Processing for Preservation	Notes	Status	Location	URL
	Harvest to start of cold chain	cold chain to wholesale customer	cold-chain to end consumer	fresh prep processing, close to end customer	process to store and preserve, close to producer				
Central Coast Food Web	x	x	x	x	x	processing (both convenience and preservation) equipment available for rental. Yaquina Food Lab. part of oregon seafood cluster initiative	Active	Newport, OR	https://centralcoastfoodweb.org/for-producers
Oregon Ocean Cluster Initiative	x		x			Partnership b/t OCVA, Local Ocean, others. "focuses on enhancing the use of local sustainable seafood in small businesses through infrastructure investments, workforce training, and partnership development.			https://www.oregonseafare.com/oci
Get Hooked			x	x		CSF Focus (connected to SB maritime collective efforts)	Active	Santa Barbara, CA	https://gethookedseafood.com/pages/how-it-works-1
Local Ocean			x	x		Restaurant/ retail fish market focus, dockbox program.	active	Newport, OR	https://www.localocean.net/fish-market
Seafood Producers Co-op	x	x	x	x		Co-op Business Model	Active	Sitka, Alaska; Washingt	https://www.spcsales.com/
South Central LA Sustainable Seafood Hub			x	x		currently focused on mussels from aquaculture (SB Mariculture, Holdfast Aquaculture). underserved community outreach/ focus	Pilot Project/ In- d	Los Angeles, CA	https://dornsife.usc.edu/uscseagrant/south-central-los-
Santa Barbara Maritime Collective	x		x			City has committed $600k to fix city pier's ice house. Collective is looking for property to expand waterfront activities, has applied for USDA grant, working with SBCC	In Development	Santa Barbara, CA	https://www.cfsb.info/ocean-collective-project
Fishadelphia	x		x	x		CSF Focus; underserved community outreach	Active	Philadelphia, PA seafoo	https://fishadelphia.com/pages/our-story
Astoria Food Hub			x	x		Shifted focus from processing to leasing space to restaurants interested in localizing their supply chain. Retail focused.	Active, but focus	Astoria, OR	https://astoriafoodhub.com/astoria-food-hub-to-focus-o
Monterey Bay Fisheries Trust	x	x	x			Started an effort to create a seafood hub in 2018 but did not come to fruition.Umbrella organization that "increases community access to healthy, local, sustainably caught seafood while preserving an integral part of the economy, heritage, and biodiversity of Monterey Bay." Website includes a guide to dock sales for fishermen with permitting	active	Monterey, CA	https://montereybayfisheriestrust.org/
Tre Fin Seafood	x		x	x	x	day-boats/ hook and line focus. Processing facility in-port	Active	Ilwaco, WA	https://trefinfoods.com/
Port of Garibaldi	x	x	x	x	x	businesses within the port process, distribute and serve seafood. Pacific Seafood (also does aquaculture!), The Spot, Captain's Corner, tillamook bay seafoods (direct off the boat fish)	Active, with more	Garibaldi, OR	https://www.portofgaribaldi.org/port-businesses
Port of Port Orford	x		x	x		Several Port infrastructure projects in the works, with a seafood hub planned. USDA AMS is doing preliminary design of the hub.	In development	Port Orford, OR	https://portofportorford.org/port-orford-seafood-hub/
Noyo Harbor	x	x				Community Sustainability Plan based on stakeholder input identified flake ice/ cold storage, fish cleaning station, and encouraging more fish buyers, receivers, and processors as within top 12 priorities for harbor	Recommendation	Fort Bragg, CA	http://www.noyoharbordistrict.org/community-sustainat
Tuna Harbor Dockside Market (Port of San Diego)	x		x	x		Commercial Fishermen-run weekly open air market. Whole fish with option of filleting at per/lb price. Currently 11 vendors participate. Dockside fish n' chips sells ready made food products (ceviche, poke, fish n chips). Didn't see any info about seafood hub being included in port redevelopment	Active	San Diego, CA	https://www.thdocksidemarket.com/
Ventura Port District	x	x	x	x	x	Includes fish offloading and gear storage. Weekly direct to consumer fish market and several brick and mortar fish market/ restaurants. Also supplies to several wholesalers/ exporters (primarily squid). Wild Local Seafood Co runs a daily market, and has direct to consumer shipping and pickup options. Coastal Conservancy provided funds for enhancement of pier and storage facilities	Active	Ventura, CA	https://venturaharbor.com/fish-offload/#
Port of San Francisco (San Francisco Community Fi	x	x	x	x		Offboat crab sales with other species opportunistically. Facebook page serves as the anouncment. Port COmmission enabled permits for direct sales starting in 2018. Pier 45 at Port of SF also has a large concentration of commercial fish processors and distributors, separate from thies direct to consumer program.	Active	San Francisco, CA	https://sfport.com/offboatsales
San Diego Fresh Fish Auction	x	tbd		tbd	yes	San Diego Fishermens' WG got Saltonstall-Kennedy Grant to do feasibility analysis of a local fresh fish auction; partnering w/ NOAA Fisheries, and ReFocus; Some engagement w/ USDA architects for renderings	In development	San Diego, CA	

Table 1:Existing seafood hubs, collectives, and seafood supply chain revitalization effor

Case Study: The Oregon Ocean Cluster Initiative

Background

While researching examples of existing seafood hubs on the west coast, the Oregon Ocean Cluster Initiative (OOCI) stood out as a case study model due to the organization's successful and ongoing efforts to address multiple concerns in the Oregon seafood system. Although still in the early stages of implementation, OOCI has succeeded in acquiring diverse funding, hiring personnel, and implementing strategies that are targeted to pain points in the local seafood supply chain. Information in this case study was gathered from the OOCI website and documentation, and from interviews with co-founders of the organization: Marcus Hinz, Director of the Oregon Coast Visitors Association; Kristen Penner, founder of North Coast Industries; and Joe Sewall, co-executive director of the Central Coast Food Web.

History

The Oregon Ocean Cluster Initiative concept was initiated in 2021 by the Oregon Coast Visitor's Association (OCVA), which is the regional destination management organization for the coast of Oregon, and is recognized as a 501c(6) organization. When questioned why a tourism organization would lead the development of an ocean cluster, Marcus Hinz, director of OCVA, made the link between Oregon as a coastal food destination, and the economic benefits that can come from providing local seafood to visitors. Marcus stated:

> *"Seafood is our unique food proposition as a tourism region. [Visitors] come to the coast, and they want to buy seafood from this place. So if 90% of the seafood we're selling on the Oregon coast is not from Oregon, then we're selling the wrong thing. We are losing massive amounts of new money coming into our economy. We spent all of that money getting the visitor here, and they buy seafood that wasn't from here, and it's called economic leakage. It's gone. It leaves Oregon. So that makes no sense economically. The point is to keep the money in the community. And we're not going to do that unless we can keep local seafood local.''*

This sentiment was supported by research, including a 2018 Oregon Coast tourism stakeholder survey of 611 community leaders which indicated that 64% of those surveyed prioritized providing more opportunities for visitors to experience locally grown and produced foods, and that food activities are the number one activity that visitors participate in, leading to approximately $4B annually in revenue for the region. OCVA taking the lead on this initiative provided unique leverage to access research, funding, and expertise available to the tourism development organization, as well as a regional perspective.

OOCI was established as an umbrella organization led by Marcus Hinz, director of OCVA, Laura Anderson, owner of Local Ocean Seafood, and Kristen Penner, owner of North Coast

Industries. An integral part of OOCI is the Yaquina Food Lab facility, which was originally purchased by co-founder Laura Anderson to supply her restaurant, Local Ocean, with seafood processing space and equipment. The facility also processed and packed seafood for Local Ocean's dock box program, which sold seafood kits directly to consumers during the Covid-19 pandemic. As a co-founder of OOCI, Laura opened the facility to other seafood producers and organizations to create a shared facility supporting the local seafood economy. Utilizing this facility, along with constructing plans to bridge gaps in other parts of the seafood supply chain, OOCI founders have formed a cohesive strategy to keep Oregon seafood in local and regional communities.

Project Objectives and Approach

The Oregon Ocean Cluster Initiative focuses on three broad objectives: 1. Adding value to locally harvested Oregon seafood, 2. Increasing availability of seafood and aquaculture products, and 3. Strengthening capacity of the Oregon food system. In order to achieve these objectives, OOCI is has identified and launched initiatives in three key areas: infrastructure investments, transportation investments, and workforce development.

Availability of seafood storage and processing infrastructure is a key component of local seafood system resilience. OOCI has taken a role in managing the Yaquina Food Lab, which serves as a local seafood storage and processing facility, and is undergoing plans to operate as a commercial kitchen facility for value-added product development. The Yaquina Food Lab is managed by the Central Coast Food Web, which has been staffed in part by funding from OOCI efforts.

In the transportation sector, OOCI is constructing and plans to deploy mobile seafood processing units that can travel throughout coastal Oregon to allow small fishers and harvesters who do not have access to facilities to independently process their seafood and aquaculture products. These units will consist of processing equipment and tools including: a three-sink unit, fileting table, ice, fish grinder for waste, and a vacuum sealer. They have also purchased a mobile freezer storage unit. In addition, OOCI conducted an 8-month long focus group of delivery services partners across the state with the goal of identifying how to distribute Oregon-landed seafood to meet Oregon local market demand.

To address the lack of a local skilled workforce in the seafood processing sector, OOCI has launched a workforce development pilot program in partnership with a group of high schools and colleges in coastal Oregon. The certificate program will train students in seafood butchery and commercial live tank operation. They also created a Capital Access Map, which provides information on securing diverse funding sources for seafood producers and processors in coastal Oregon to grow and scale their businesses.

Partnerships

The Oregon Ocean Cluster Initiative consists of and maintains numerous partnerships that allow for such a broad and inclusive set of objectives and projects. In addition to the

partnerships forged between OOCI's three main co-founders and their respective organizations (Oregon Coast Visitors Association, Local Ocean, and North Coast Industries), OOCI partners with many institutions and other organizations. Port organizations such as the Port of Port Orford help OOCI understand the needs of producers for offloading and storage. Oregon State University's food science laboratory is working with OOCI to develop value added recipes for local seafood. Smaller food hub organizations like the Astoria Food Hub are lending advice and expertise in e-commerce platform development for community supported fishery models. Government agencies like the USDA have provided funding and advice related to food safety and certification requirements for seafood processing. See *Figure 2. Oregon Ocean Cluster Initiative Systems Map* at the end of the case study for a visual representation of the main actors, partnerships, and funders of OOCI. Please note that this is not a full representation of all organizations and individuals involved, but a subset that were mentioned in interviews or found through independent research.

Funding

Leaders of the Oregon Ocean Cluster Initiative have been successful in seeking out diverse funding sources, which has created momentum for the organization to move forward and add capacity as it grows. Initial funding for the concept of the OOCI came from the USDA Farmer's Market and Local Food Promotion Program grant. Leveraging project management time and ongoing related research efforts as match, OOCI secured funding to launch their initiatives in infrastructure, transportation, and workforce development. Additional funding came from the Builders Initiative, a private foundation, which supported positions for co-executive directors at the Central Coast Food Web. The Economic Development Alliance of Lincoln County have supported OOCI's market and e-commerce efforts. A recent bill, HB2909, passed in the Oregon legislature that will distribute $1.9M to the Oregon Coast Visitors Association to continue the work that began with the aforementioned smaller grants. The bill will provide $190,000 to develop geographic information systems tools for food systems, $700,000 for a facility in partnership with the Oregon Kelp Alliance which includes a kitchen, processing center, and cold storage at the Newport Seafood Analytical Lab, and the development of a mobile processing unit. The measure includes $300,000 to support existing businesses connected to projects funded by the bill. OOCI maintains a Capital Access Map on its website, www.oregonseafare.com, which serves as a resource for other organizations or individuals to navigate and access diverse funding sources throughout coastal counties in the state.

Best Practices

During interviews with OOCI founders, several strategies emerged that were deemed critical to the success of the initiative. The first strategy is centered around connecting resources and filling in supply chain gaps. Kristen Penner emphasized thinking of a seafood hub

as a network of decentralized spaces and resources, avoiding duplication of services, and making sure all parties are aware of the existence of services in the local seafood system so that collaboration can occur. Marcus Hinz explained the role of OOCI in this context by saying “if you believe a food system is an actual system, then you can't just fix one part of it and ignore the rest. It just doesn't work that way. There are parts and pieces of our food system […] playing different roles. But there's really no one doing the shuttle diplomacy. Creating the cohesiveness and the dialogue between all of these partners, so things just function a little better. And that's kind of the role that we're playing.”

The second strategy centered around adding capacity and leveraging organizational expertise. Much of the capacity of the OOCI has come from the skillsets and personal determination of the founding members and their organizations. Kristen Penner spoke about necessary skills, saying it takes "partners who are leaders in the industry and have the operational knowledge of everything from understanding and paying attention to what's happening in our ocean, […] to the people that can really help turn ideas into something that you can touch in your hand and put on a plate and eat, like food scientists." When approaching seafood producers and potential partners to participate in the initiative, it has been important to come with something to offer. In the context of approaching a port organization to partner with the Initiative, Marcus Hinz stated “We actually do show up with capacity. And that's a really really important thing. Because just pointing the finger and saying, ‘You need to do this’ isn't going to help.” The organization offers help with grant writing, planning, and fundraising to ports and other organizations, if the visions and goals of the two organizations align.

The third strategy is community co-creation. There was agreement among OOCI founders that working directly with producer communities to understand needs on the ground is paramount to success. Kristen Penner said: “The producer experience is so huge to really understand. Like what it takes to like handle the fish and get your boat out into the water. So I'm a big fan of finding ways to pay the people that are doing the work." and, “We need the buy-in of the fishing community. I mean, why are we doing this work if it's not deeply rooted and being done with this community, not for them, but *with* the community, so that it really responds in real time". Fishermen and other seafood producers can give valuable feedback on the necessity and utility of potential infrastructure and services. Joe Sewall said, “In terms of iterating and improving on things, and especially on the facility, truly our best partners are the fishers themselves who are early adopters and who are willing to work with us on things.”

Transferability

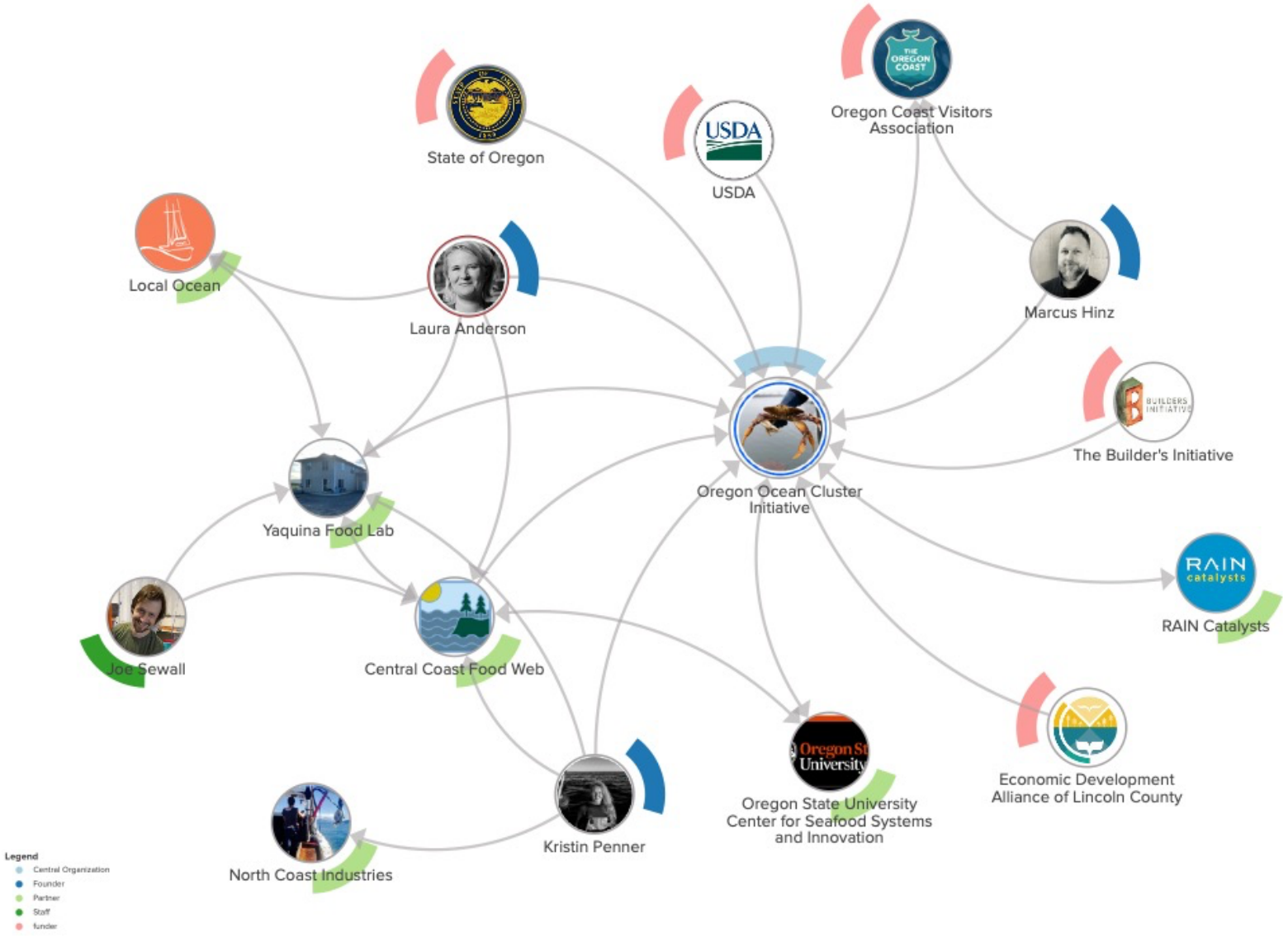
OOCI is a unique initiative and partnership built by a group of passionate individuals who each had a distinct viewpoint and experience of the seafood system in Oregon. While many aspects and strategies of the organization are novel and may not apply to other places, others were borrowed from existing efforts and may be replicated by organizations in other states who are interested in revitalizing local seafood systems. Inspiration was taken from international seafood hubs like the Iceland Ocean Cluster Initiative, community supported fishery models in the U.S. were consulted, and concepts were borrowed from the agricultural sector where they did not exist for seafood. OOCI has made information sharing a priority with

its Oregon seafood prospector map, Oregon capital access map, and additional resources on their website to aid in transferability. However, one characteristic that leaders point to as being especially important for this specific model is the ability to work across jurisdictions and to have a regional perspective. Marcus Hinz stated, “This may not be possible in other places if you don’t have an organization that is built the way that we are built, because we are built to have a regional perspective. So we have [jurisdiction over] all 7 coastal counties which encompasses 14 ports, 28 cities, 20 chambers. So we see what's happening in the entire system.” The Oregon Coast Visitors Association has a multi-jurisdictional position in the state of Oregon. This may not be the case for others, so positionality and jurisdictional oversight should be strongly considered before adopting a similar model.

Challenges

Keeping more seafood in the local community involves adjusting seafood supply chains at various steps of the process, which can be challenging for producers and seafood hub organizations. Joe Sewall said, “I think one of our biggest challenges has been making the [Yaquina Food Lab] facility useful to people, because running a fish processing facility is a big thing. There's a lot of specialized knowledge involved in managing the equipment, adhering to the regulations. And for seafood producers, their volumes need to be meaningful, basically need to be wholesale volumes, and I think that's a bottleneck for us is getting to a point where people can do large scale wholesaling out of what they cut at our place. It’s easy to say, Oh, well, let's bypass this massive supply chain, but we're competing against these massive economies of scale where a plant that does just crab, and does thousands of pounds a day still only has to clean once, and the person who's doing 10 crabs and is followed by the person doing 10 tuna has to clean the same number of times and about the same amount, you know it's just not quite as efficient in a lot of ways for the people doing the processing.” Finding a middle ground where small scale fishers can locally process their catch and distribute seafood regionally, while still making economic sense and maintaining efficiency is a challenge for many food hub operations and efforts including OOCI. This may look different in different communities, and will likely take trial and error as well as perseverance to reach a scale that satisfies producer and consumer needs.

Oregon Ocean Cluster Initiative System Map



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