

# UNEVENNESS IN AMERICA'S BLUE ECONOMY: socio-spatial juxtapositions in global and local seafood chains

Stephanie Webb, ABD, MA, MURP, Environmental Studies Department at University of California, Santa Cruz, swebb1@ucsc.edu

**Introduction:** Advancements in logistical capacity and technology have resulted in unprecedented levels of seafood trade<sup>1</sup>, which is now the world's most traded food commodity, valued greater than coffee, cocoa, and sugar combined<sup>2</sup>. Blue economy initiatives attempt to balance sustainable use of ocean resources and economic growth<sup>3</sup>, but little discussion has occurred regarding the political economic arrangements in seafood exchange and distribution that can foster or stifle idealist aims of the blue economy.

## Case Study Background

The Pacific herring fishery is the 8<sup>th</sup> largest fishery by volume on the Pacific Coast<sup>4</sup>. Paradoxically, Pacific herring are rarely, if ever, seen in local or regional marketplaces and are primarily harvested for export<sup>5</sup>.

Figure 1. Study Area and Site Visits

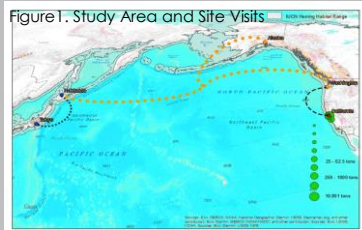


Image by E., Goldbeck

## Theoretical Approaches & Methodology

- Commodity systems analysis<sup>6</sup>
- "Follow the fish" approach<sup>7</sup>
- Multi-sited ethnography
- Snowball sampling
- Semi-structured interviews
  - (2016 – 2017)
  - ✓ 10 Early-chain actors: fishers, first receivers, exporters (California, Alaska, USA)
  - ✓ 12 late mid-chain: traders, wholesalers (Hokkaido, Japan, Hong Kong, China)
  - ✓ 7 Formal and informal governance representatives (California, Alaska, USA, Hokkaido, Japan)
  - ✓ 1 Manufacturer (Hokkaido, Japan)
  - ✓ 16 Market vendors in (Hokkaido & Tokyo, Japan)

## Research Questions

- Who are the key actors and what are crucial activities in global seafood commerce?
- How are local and global markets connected?
- How is informal governance or authority created and exerted through seafood distribution and exchange?

Figure 2: Pacific herring supply chain .

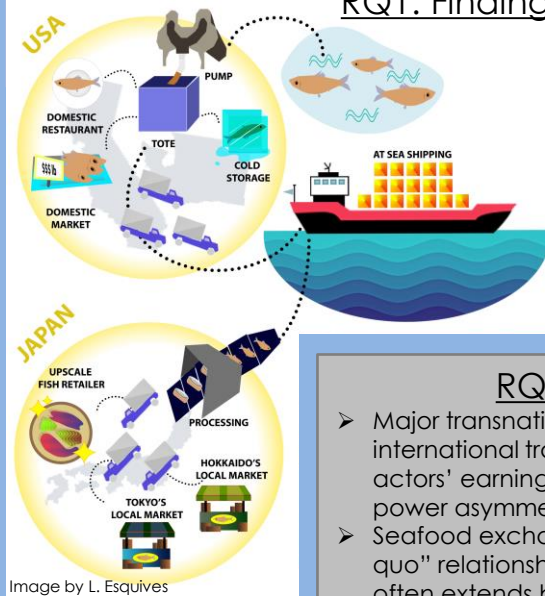


Image by L. Esquives

## RQ1: Findings

## RQ2: Findings

- Reliance on export markets reduces stability in "fish-as-food" systems and can create socio-ecological crises at local levels.
- Cash incentives provided by global markets facilitate local seafood production and in its absence, fishers and first receivers have little interest participating in the fishery for local markets.

"There is no future in herring roe in Japan. We must find a new way of making and marketing the carcasses."  
- U.S.-Japan Transnational first receivers – exporter

"The fishery is dying. Permits are rendered worthless..."  
- U.S. Fishery Management consultant

## RQ3: Findings

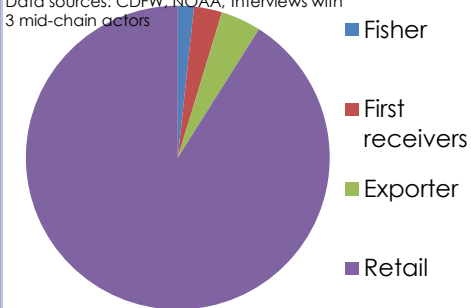
- Major transnational exporters and international traders influence early chain actors' earning potential and generate power asymmetry.
- Seafood exchange relies on "quid-pro-quo" relationships (or reciprocity) and often extends beyond one commodity.
- Large amounts of capital are required for innovations and upgrading. This is turn, encourages vertical integration and consolidation of middlemen roles.

"[Business B] is a newcomer in the market. They sell faster, earlier and at a fixed price. No one will get into a [sales] contract until Business B has established a price."  
- U.S.-Japan Transnational First Receiver & Exporter

"I'm not making any money on herring, but [by participating] I can keep my tenders working all year round, so they don't go elsewhere during salmon season."  
- U.S. First Receiver -Wholesaler

"No one is going to spend \$17M on a fish smoking facility for herring; for salmon, but not herring."  
- U.S. Wholesaler – Distributor

Data sources: CDFW, NOAA, Interviews with 3 mid-chain actors



**Proportional value of gross earnings to average retail sales price<sup>8</sup>**

**Citations:** 1) Stoll, J. S., et al. (2018). Seafood trade routes for lobster obscure teleconnected vulnerabilities. *Frontiers in Marine Science*. 2) Smith, M. D., et al. (2010). Sustainability and global seafood. *Science*. 3) Silver, J., et al. (2015). Blue economy and competing discourses in international oceans governance. *The Journal of Environment & Development*. 4) Owtner, A., & Uddel, M. (2020). Fisheries of the United States 2018: Current fishery statistics No. 2013. NMFIS, Silver Spring, Maryland. 5) CDFW (2019). California Pacific Herring Fishery Management Plan. 6) Friedland, W. H. (2001). Reprise on commodity systems methodology. *International Journal of Sociology of Agriculture and Food*. 7) Bevilacqua, et al. (2019). Following the fish: The role of subsistence in a fish-based value chain. *Ecological Economics*: Grateful, et al. (2017). Follow that fish: Uncovering the hidden blue economy in coral reef fisheries. *PLoS one*. 8) Purcell, S et al. (2017). Distribution of economic returns in small-scale fisheries for international markets: a value-chain analysis. *Marine Policy*.



Figures 2-7: Participant Observations from U.S. & Japan