What’s the catch?

Bringing safe, sustainable wild-caught fish to your dish

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California Sea Grant, UCSD
Institute of Marine Sciences, UCSC
Marine Science Institute, UCSB
California Sea Grant Program

Sea Grant Extension Program
- 8 Specialists, UCSD academics
- diverse expertise
- based in coastal communities
- housed at UCs/CSUs

Focus Areas
- Healthy Coastal Ecosystems
- Sustainable Fisheries and Aquaculture
- Resilient Coastal Communities and Economies

*USC Sea Grant Program
Session Overview

- California capture fisheries
- Getting that fish to your dish
- Challenges and opportunities
California Capture Fisheries

Integrated system
- biophysical
- human
- management
Many species...

- Albacore
- Coastal pelagic species (anchovy, sardine, mackerel)
- Crab (Dungeness, rock, spider)
- Groundfish (flatfish, rockfish, roundfish)
- Spiny lobster
- Salmon
- Spot prawn
- Squid

Photo credits: D. Pleshner-Steele. C. Pomeroy, C. Culver, picsearch.com
...and gear types

- Pot/trap
- Purse seine
- Trawl
- Troll
- Gillnet
- Dive
- Longline

Credit: ca-seafood.ucdavis.edu/facts
## California Commercial Fishery Activity

### California commercial fishery landings and ex-vessel value

<table>
<thead>
<tr>
<th></th>
<th>1981-2014 Average</th>
<th>2010-2014 Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landings (lbs)</td>
<td>415,050,104</td>
<td>383,946,912</td>
</tr>
<tr>
<td>Ex-vessel value ($)</td>
<td>160,636,820</td>
<td>220,330,628</td>
</tr>
</tbody>
</table>

### Top 5 California commercial fisheries (2010-14 means)

<table>
<thead>
<tr>
<th></th>
<th>Landings (lbs)</th>
<th>Ex-vessel value ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Squid seine</td>
<td>Squid seine</td>
</tr>
<tr>
<td>2</td>
<td>Coastal pelagic spp seine</td>
<td>Dungeness crab pot</td>
</tr>
<tr>
<td>3</td>
<td>Dungeness crab pot</td>
<td>Lobster trap</td>
</tr>
<tr>
<td>4</td>
<td>Sea urchin dive</td>
<td>Salmon troll</td>
</tr>
<tr>
<td>5</td>
<td>Non-whiting groundfish trawl</td>
<td>Sea urchin dive</td>
</tr>
</tbody>
</table>
Variety Within and Across Regions
Diverse Factors Affect Fisheries

- Environmental
- Regulatory
- Economic
- Social

M. Upton, ROFFS data, NASA Ocean Biology, OB DAAC
Diverse Factors Affect Fisheries

Regulatory

- Where, when, how and how much fishing is allowed

- Area/seasonal closures
- Specified seasons
- Gear limitations
- Minimum sizes
- Restricted access (limited entry)
- Quotas
Diverse Factors Affect Fisheries

**Economic**
- buyers
- demand, prices
- costs

**Social**
- public perceptions and attitudes
- other interests, needs, uses on and off the water
The Market Squid Fishery

- 2 fisheries
- 3 fleets & processor groups
- 3 regional centers of activity

Crescent City, Eureka, Ft Bragg, Bodega Bay, San Francisco, Half Moon Bay, Monterey, Morro Bay, Santa Barbara, Los Angeles, San Diego
California Market Squid Fishery

Landings (lbs) and ex-vessel value (US$), in millions

- Ex-vessel value
- Landings

- El Niño
- La Niña
- Limited entry
- Weekend closures extended
- Gear/equipment restrictions
- MPAs
- Market Development
- Environmental variability

How is seafood marketed in California?
Where do you obtain your seafood?
Seafood Supply Chains

Traditional Supply Chain

AMA Supply Chain

Fisherman

Buyer/Processor

Wholesaler/Distributor

Retailer/Restaurant

Consumer

$ $$ $$$

$ $$ $$$

$ $$ $$$

$ $$ $$$

$ $$ $$$
MARKET YOUR CATCH

IS IT FOR YOU?  ALTERNATIVE MARKET TYPES  START + EXPAND  LEARN MORE  FEATURE STORY

Alternative Marketing of Your Catch

What is it and could it be for you?

What are some market types to consider?

How do you get started or expand?

Information from Fishermen for Fishermen

marketyourcatch.msi.ucsb.edu
Seafood Alternative Market Types

Direct to Food Vendors
- Restaurants
- Retail Markets
- Institutions

Direct to Consumers
- Off the Boat
- Fishermen's/Farmers' Markets
- Community Supported Fisheries (CSFs)
- Food Buying Club
- eMarkets
- Your Own Market
Community Supported Fishery

Fisherman
- catch seafood
- deliver
  - 1. licenses/permits
  - 2. vessel/gear/equipment
  - 3. crew
  - 4. infrastructure/human capital

CSF
- purchase
- process
- sell
- deliver
  - 1. licenses/permits
  - 2. vessel/gear/equipment
  - 3. crew
  - 4. infrastructure/human capital

Consumer
- purchase
- consume
  - 1. demand
  - 2. willingness to pay

Processor
- wholsaler/distributor
- retailer/restaurant
- deliver
  - 1. licenses/permits
  - 2. vessel/gear/equipment
  - 3. infrastructure
  - 4. foodstuffs/packaging
  - 5. licenses/permits
  - 6. customers/consumers
  - 7. infrastructure/human capital
A Range of Products and Practices

- **Products**
  - live
  - whole
  - cut/processed

- **Practices**
  - handling
  - processing
  - storage
  - transport
  - points of sale
What has been your experience with seafood AMAs?

Challenges and Opportunities
Seafood AMAs: Challenges & Opportunities

Permitting

 Authorities

- CDFW
- CDFA
- CDPH
- City, County
- Harbor/Port

Considerations

- Seafood product type/form
- Market type
- Market location
Seafood AMAs: Challenges & Opportunities

Handling and Processing

Pacific to Plate (AB 226)

- Raw
- Whole or eviscerated
- Processing and packaging services
- Equipment and training
Seafood AMAs: Challenges & Opportunities

Biotoxins: Harmful Algal Blooms (HABs)
Amnesic Shellfish Poisoning (ASP), Domoic Acid (DA)

Exposure risk from consumption of crustaceans

Highly variable

• Timing and geographic distribution
• Among and within species
• Consumption patterns

Tissue consumed (type, preparation, amount)
Marketing and Handling Crabs in the Context of HABs

Options

- Advisories
- Eviscerating (remove internal organs/guts)
  Affects seafood quality and marketability
- Consumer education (handling information)
Seafood AMAs: Challenges & Opportunities

Next Steps

• Guidance to enable effective AMAs
• Checklists for permitting, handling, processing, etc.
• Trainings on seafood safety
• Working group to address HABs and seafood handling

Working together to provide nutritious, safe seafood from ocean to table
Thank You!

Sea Grant
California