Sustainable Fishing Communities: Current Research / Research Needs

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Outline of talk:

- Discuss concepts relevant for community sustainability
  - Sources of risk to coastal communities
  - Community sustainability
  - Community resiliency
- NMFS Communities Profiles
- NMFS Economic Research on Fishing Communities
- Economies of Scale / Scope
- Economies of Agglomeration
- Upcoming Work / Research Needs

Risks to Coastal Communities

- Climate Change (ocean acidification, changes in sea surface temperature, changes in species spatial distribution)
- Fuel price change / changes in energy policy (drilling)
- Aquaculture
- Trade / Seafood Markets
- Population Growth

Community Sustainability

MSA Definition:Sustained participation of fishing communities in fishing

- regulations should minimize to extent practicable economic and social impacts on fishing communities

Challenges:

- other than port landings, permit data, and license data, census data, very little data avl at community level
- Sustainability: it’s a long-term concept

Community Resiliency

Factors affecting resiliency:

- lack of economic diversification
- geographic and solial isolation
- poverty
- unemployment
- education
- environmental risks, e.g., natural disasters
- human-induced disasters, e.g., oil spills
- community apathy / lack of participation

NMFS Community Profiling

Step 1: Identifying Communities

Step 2: Tier 1 Community Profiles: landings, recreational licenses, demographics

Step 3: Tier 2 Community Profiles: more detailed info on fishermen, institutions, fishing industry, history

What do the Tier 1 Community Profiles tell us about community resiliency? Quite a bit.

Alaska: communities geographically remote

- Fishing #1 private employer
- Poverty rates
- Unemployment rates

What do the community profiles tell us about sustainability?

Perhaps, not as much. Why not?

Not predictive: unable to predict how fishing industry changed due to BSAI Crab Rationalization

Economies of Agglomeration

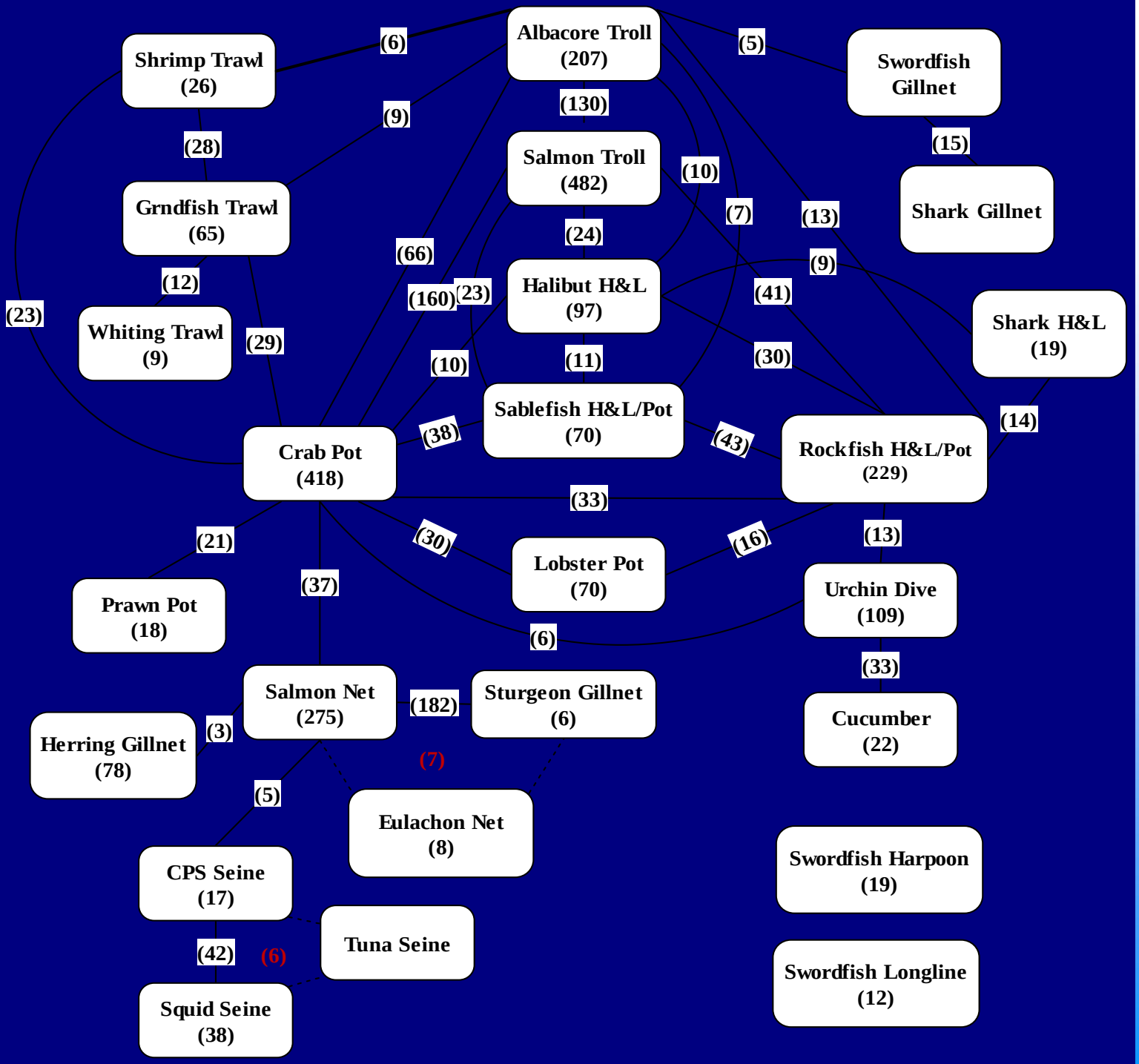
Alaska BSAI Crew Study: Found rationalization had large but proportional effect on crew size

- Stories of support industries shutting down across Alaska fishing communities, which could have long-term effects upon participation

- Lack baseline information on support industries

Economies of Scope

- community profiles do not track fishing effort across ports



Major 1-, 2- & 3-way interactions in WA/OR/CA fisheries, 2002-2006 average

Distribution Of Boats Within Each Region Among Spatial Movement Categories, 2002-2006 Average

Major Region*	# Boats	One Port	One Regn	2Adj. Regns	All Else
PugetSnd	415	47%	44%	4%	4%
WACoast	250	54%	8%	27%	11%
ColRiver	359	64%	10%	12%	13%
NoORCoast	696	66%	8%	15%	12%
SoORCoast	220	61%	16%	13%	10%
NoCA	367	59%	11%	16%	15%
NoCenCA	343	56%	23%	12%	9%
CenCA	528	63%	13%	16%	18%
SoCenCA	296	55%	16%	20%	9%
SoCA	550	51%	32%	8%	9%
Total	4024	57%	20%	14%	9%

*** Region where vessel earned plurality of annual revenue.**

Distribution Of Boats Within Each Region Among Fishery Diversification Categories 2002-2006 Average

Major Region*	# Boats	One Fshry	Two Fshries	>2 Fshries
PugetSnd	415	80%	17%	2%
WACoast	250	60%	29%	11%
ColRiver	359	43%	44%	13%
NoORCoast	696	43%	30%	27%
SoORCoast	220	46%	27%	26%
NoCA	367	45%	36%	19%
NoCenCA	343	57%	28%	15%
CenCA	528	57%	25%	19%
SoCenCA	296	42%	29%	29%
SoCA	550	44%	27%	29%
Total	4024	54%	29%	18%

*** Region where vessel earned plurality of annual revenue.**

Economies of Agglomeration

NE Study on Industry Concentrations

- Tracks fishing-related industries over a 15-year period
- Demonstrates differences in concentrations across counties (not communities)
- Demonstrates changing patterns of concentration over time
- But cannot explain why.

Upcoming Research

- Economic Surveys of Fishing-Related Businesses in Gulf, AK; pilot in WA & OR
- West Coast port study and NE agglomeration study are well-positioned to be extended
- AFSC: effects of climate on ports, fisher location choice
- Limited ethnographic studies in AK, HI, NE

Research Needs

- Expand data collections on fishing communities (shoreside firms, crew, etc.)
- Establish research program priorities
  - Develop community resiliency indicators
  - Develop agenda for undertaking research to address impact of climate/growth/energy/trade/regulation/etc. on fishing communities