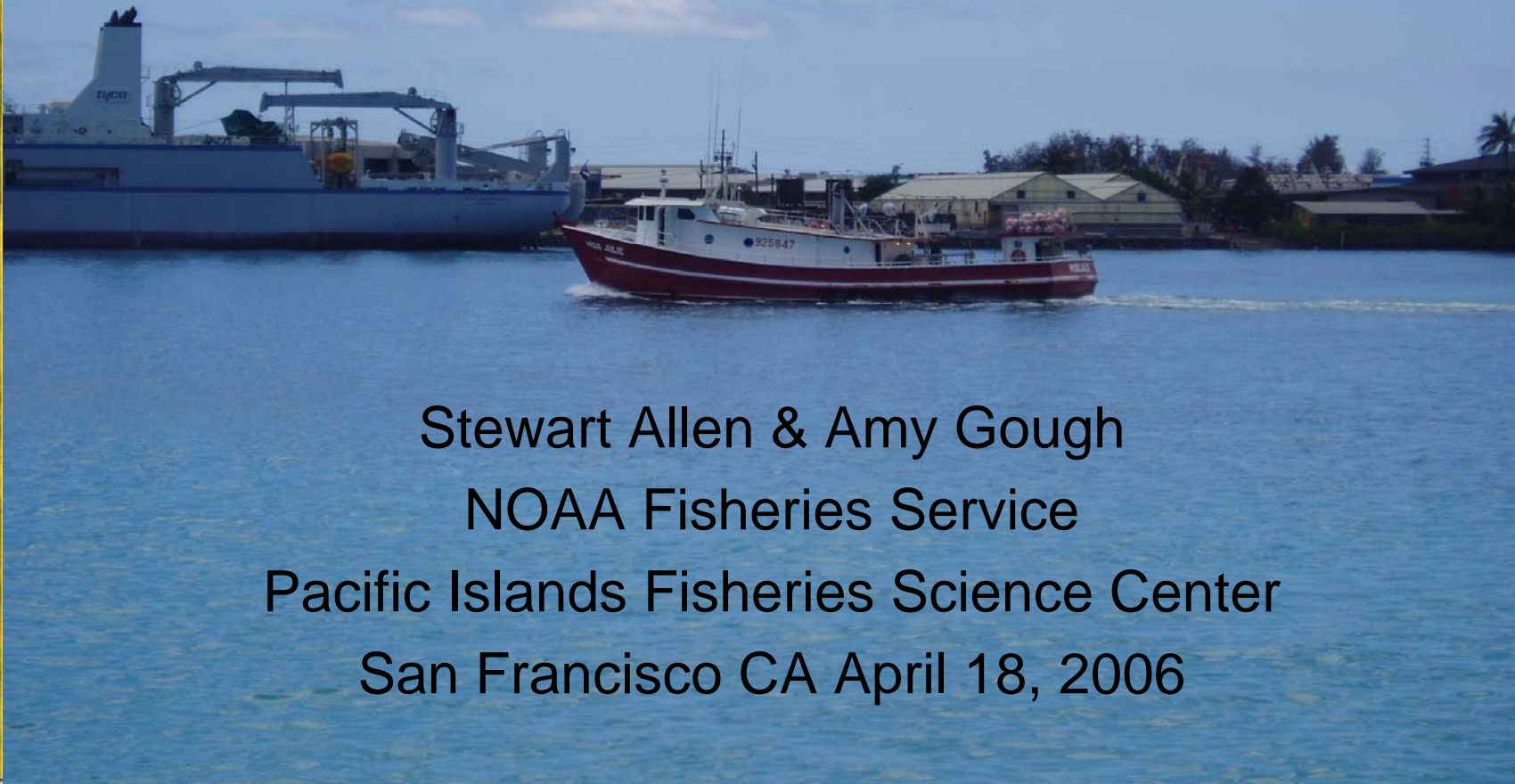




# Monitoring Environmental Justice Impacts: Vietnamese-American Longline Fishermen Adapt to the Hawaii Swordfish Closure



Stewart Allen & Amy Gough

NOAA Fisheries Service

Pacific Islands Fisheries Science Center

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# Outline of Presentation

- Hawaii longline fleet
- Closure of the swordfish fishery
- Predicted social impacts
- Actual social impacts
- Policy implications and epilogue
  - Re-opening the fishery
  - Disaster relief fund



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# Hawaii-Based Longline Fishery

- Tuna, swordfish, mixed trips
- Lands over 70% of Hawaii's commercial pelagic catch
- Limited entry capped at 164 permits (120 active)
- 1/3 vessels are owned by Vietnamese-Americans; swordfish niche



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# Swordfish Closure

- Series of legal cases and court-ordered regulations based on bycatch of threatened and endangered sea turtles resulted in 2001 ban on swordfishing for Hawaii-based longline vessels



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# Predicted Social Impacts

- Final EIS predicted “Disproportionate high and adverse impacts” to Vietnamese American owners, captains, crew and suppliers
- Due to lack of baseline social data, comparison made to effects on laid-off sugar industry workers:
  - Heightened feelings of anxiety, depression, illness, and increased problems in relationships among laid-off employees and family members
- Effects on owners could be mitigated by a permit or vessel buy-back program



# Study Methods

- Broader study: semi-structured interviews conducted in small groups or individually, over time
- Owners, captains, crew
- Quota sampling based on role in industry, pier, ethnicity, social network
- Interviewer and interpreter-community liaison were participant observers





# Sample Characteristics

**22 owners (6 wives), 6 captains, 12 crew**

<b>Average age</b>	<b>45</b>
<b>Average # years commercial fishing</b>	<b>17</b>
<b>Fished shrimp or longlined in Gulf</b>	<b>63%</b>
<b>Didn't finish high school</b>	<b>76%</b>
<b>Not fluent in English</b>	<b>84%</b>
<b>From fishing family</b>	<b>81%</b>
<b>Currently married</b>	<b>86%</b>
<b>Family dependent on longline</b>	<b>72%</b>
<b>Fishing is way to make money, not meet other needs</b>	<b>33%</b>

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# Initial Adjustments

- 18+ vessels moved base to California where swordfishing still open (but then closed)
- Other half converted to tuna fishing with \$32,000 provided to each; learning curve
- Switch to Filipino crew



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# Trigger: Drop in Income

- “I was holding a bowl of rice and the government snatched it away.”
- Two-boat owner: “From \$800,000-\$900,000 annually to \$300,000 after the ban.”
- Captain: “Income on the last trip was no more than the crew’s.”
- Crew: “Before the ban, I made \$30,000 - \$40,000 a year, and now it is about half that.”



# Individual-Level Impacts

- Many symptoms of anxiety, depression and general anomie voiced and observed
  - Hopelessness associated with lack of influence
  - Shame at not being able to support family
  - Inability to get out of bed in the morning
  - Uncertainty with ability to continue fishing out of California or to convert to tuna fishing

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# Family/Household Impacts

- Even less time with family
- Disruption of normal patterns of behavior (wives to CA, getting/leaving jobs)
- Arguments and family stress
- Less money to visit or provide for extended family members
- Lack of money for children's highly valued education

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# Vietnamese-American Fishing Community Impacts

- Decreased ability to lend money
- Lower levels of communication
- Fewer social events and celebrations
- Decrease in collective action
- Lower levels of cooperation at sea

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# Longline Fishing Community Impacts

- Initially fishermen work through the Hawaii Longline Association to fight the closure (2 cents/pound contribution)
- Disenchantment increases over time
- Resentment with HLA and its leaders
- Tuna fishermen foresee increased supply/competition and lower prices

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# Cumulative Impacts

- California swordfish closure in 2004
- Filipino crew costs and difficulties
- Bigeye tuna quotas
- Increasing fuel costs
- Continued pressure on longline industry



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# Sources of Resiliency

- Close-knit community of Vietnamese-Americans in Honolulu
- Attachment to fishing lifestyle and Hawaii
- Refugee experience
- Experience in other fisheries
- Other income potential in Honolulu



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# Swordfish Fishery Re-Opens 2004

- Circle hooks, mackerel bait
- 100% observer coverage
- Hard limit on turtle interactions
- Sets limited to 2,120 per year
- Set certificates distributed among all interested longline permit holders



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# So All Is Well?

- Vietnamese-Americans very dissatisfied with allocation method and HLA role
- 2004: many refused to use certificates
- 2005 better; 80 percent of sets used
- 2006: turtle cap reached on March 20 so swordfish fishery closed for the year
- Disaster relief funds debate

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# Policy Implications

- Buyback program would not be effective mitigation for nearly all Vietnamese-Americans
- Need to monitor impacts over time to understand range of effects and mediating variables
- Social impact assessment highly dynamic
- Consider alternative methods of swordfish set allocations
- Better approaches to address barriers to effective participation of Vietnamese-Americans (and others)

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