

From Bust to Boom: The success of industry collaboration in US sea scallop research

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Overview

- Principles of cooperative research
- Keys to successful collaboration from research planning to management decisions
- SMAST video survey example
- Funding opportunities and challenges
- Lessons learned

Principles of Cooperative Research

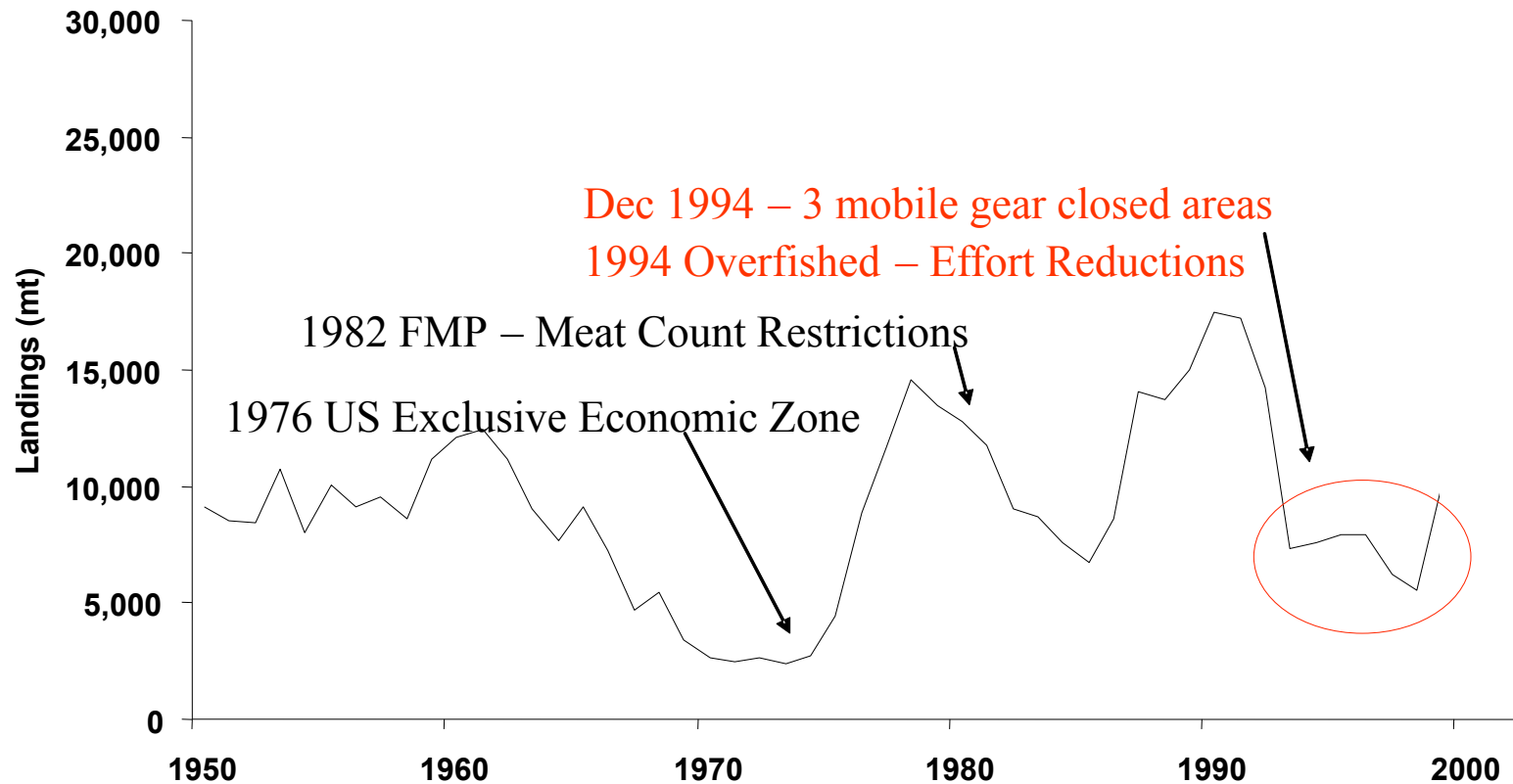
- Industry empowerment
- Transparency of analysis and unbiased results
- Utilization of unique skill sets from fishermen, scientists and managers
- Lowered costs for research
- Increased interest of fishermen in science that determines regulations
- Increased interest of scientists in social and economic implications of scientific advice

Keys for Success

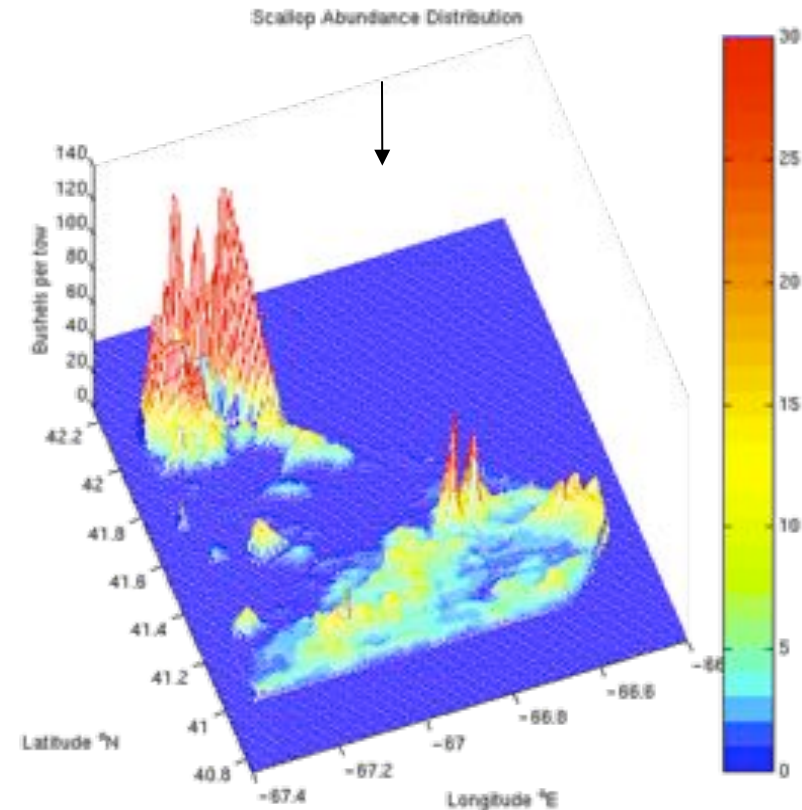
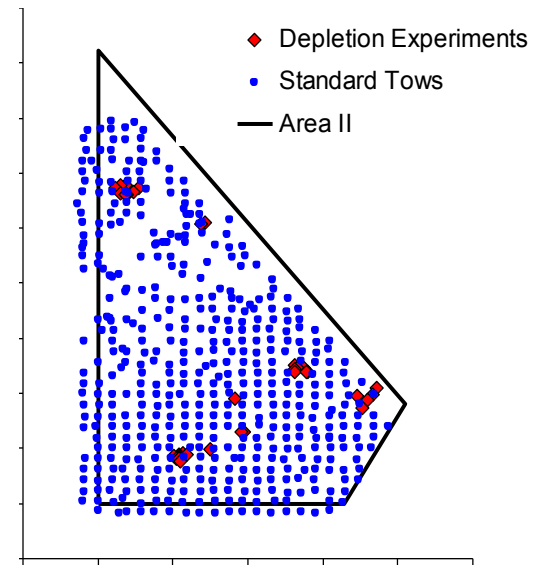
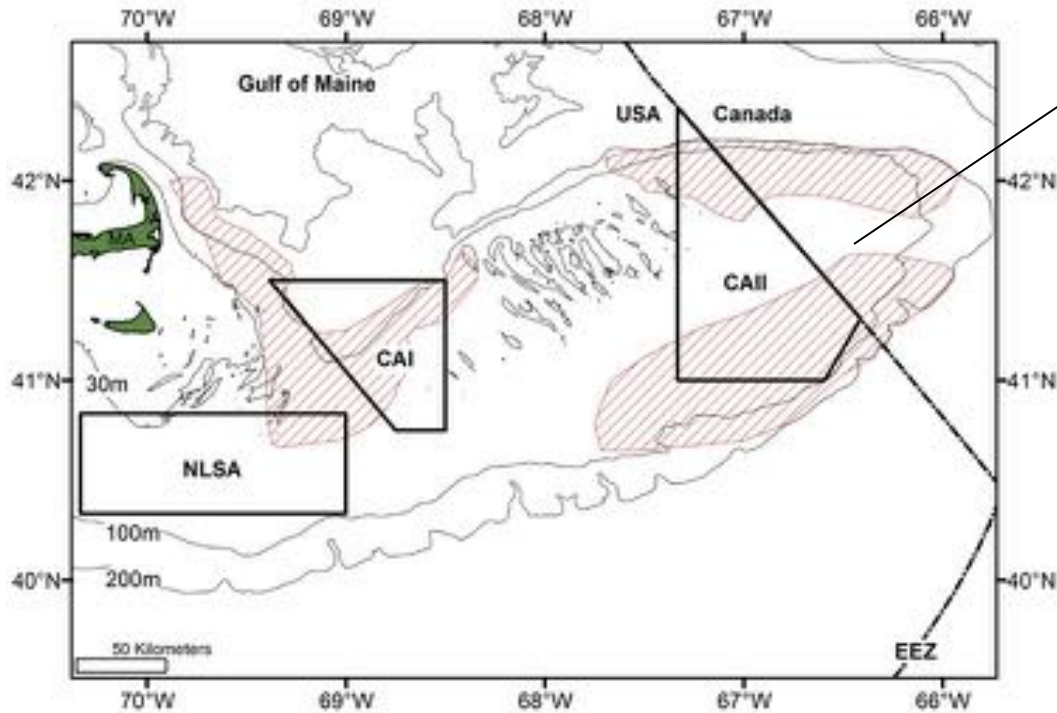
- Industry incentive
- Formal partnerships
- Definition of goals
- Applicable to management decisions and regulatory agencies



US Sea Scallop Fishery



1998 SMAST-NMFS-Industry Cooperative survey of Georges Bank Closed Area II



Biomass increased 8.5 times between 1994 and 1998 and was expected to increase another 23% by mid-1999

Industry Collaboration

A group of approximately ten people are seated in a circle on chairs in a room with large windows and blue curtains. They appear to be engaged in a collaborative meeting or discussion. Some individuals are holding papers or documents. In the background, several large posters or informational displays are visible on the wall. The room has a carpeted floor and fluorescent lighting on the ceiling.

- **Incentive**
 - Access to harvestable resource
- **Participants**
 - Owners, Captains, crews
- **Commitment**
 - Survey design, donation of vessels, review results for management

SMAST Video Survey

OBJECTIVES

Spatially Specific Information

How many scallops?

Where are the scallops?

What size are the scallops?

CHARACTERISTICS

Cooperative

Inexpensive

Non-invasive

Adaptable to management



Video survey

Digital Still Camera = 1.13 m²



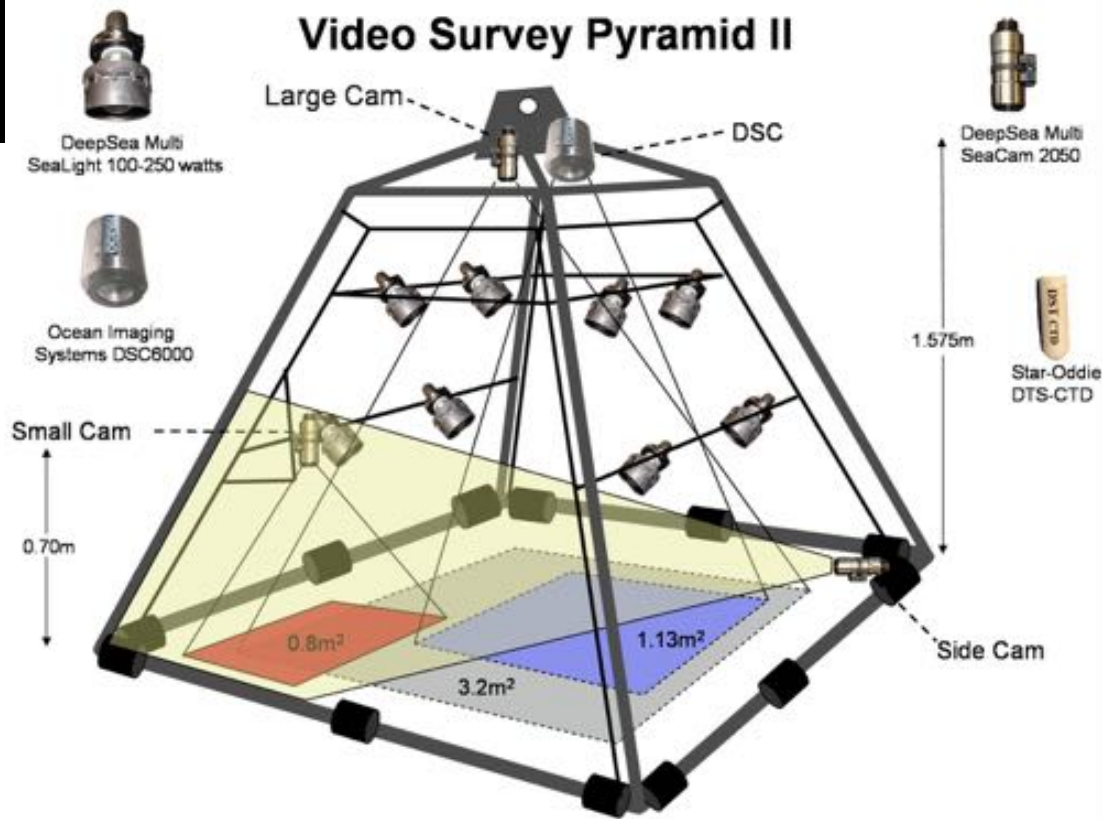
Large Camera = 3.2 m²



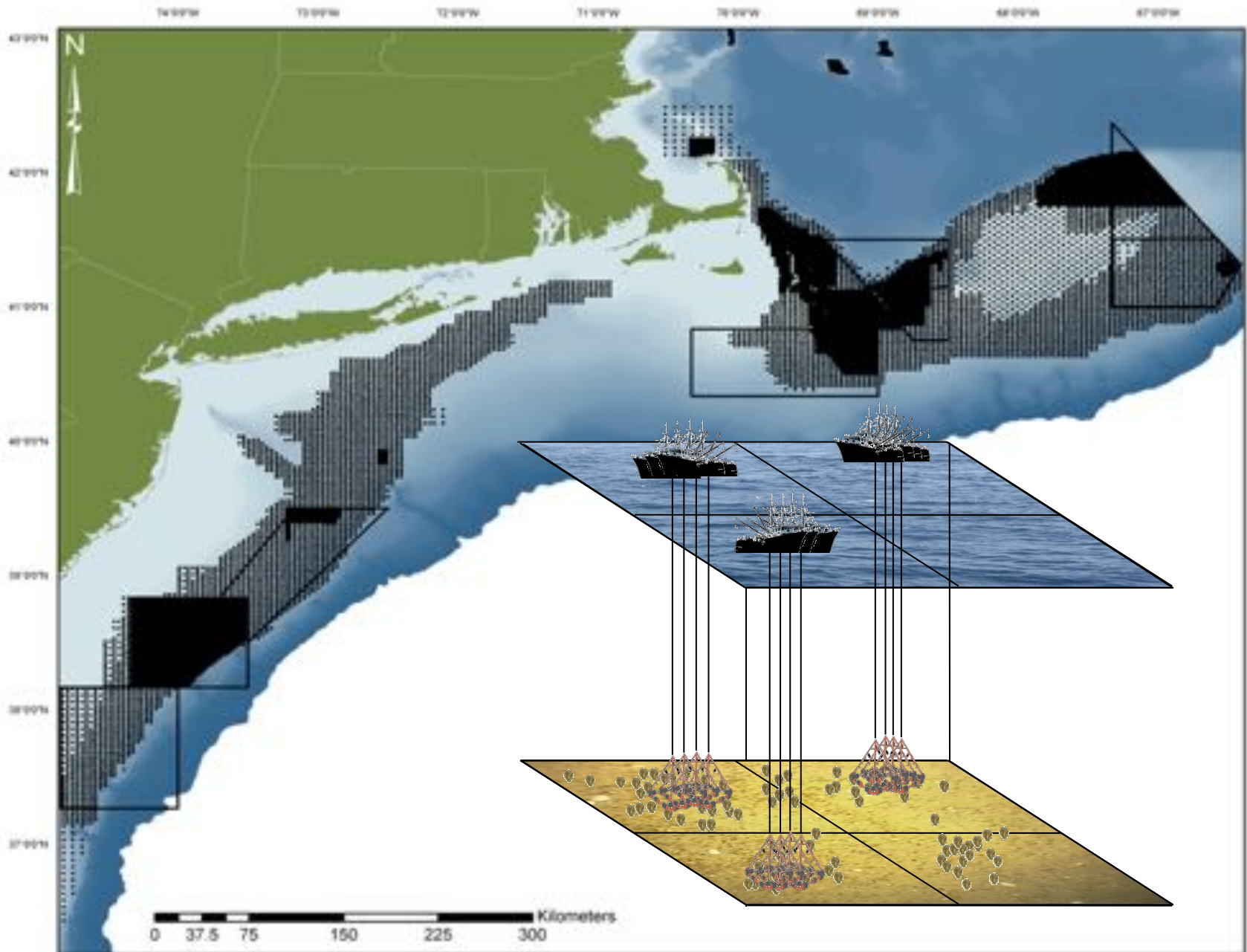
Small Camera = 0.8 m²



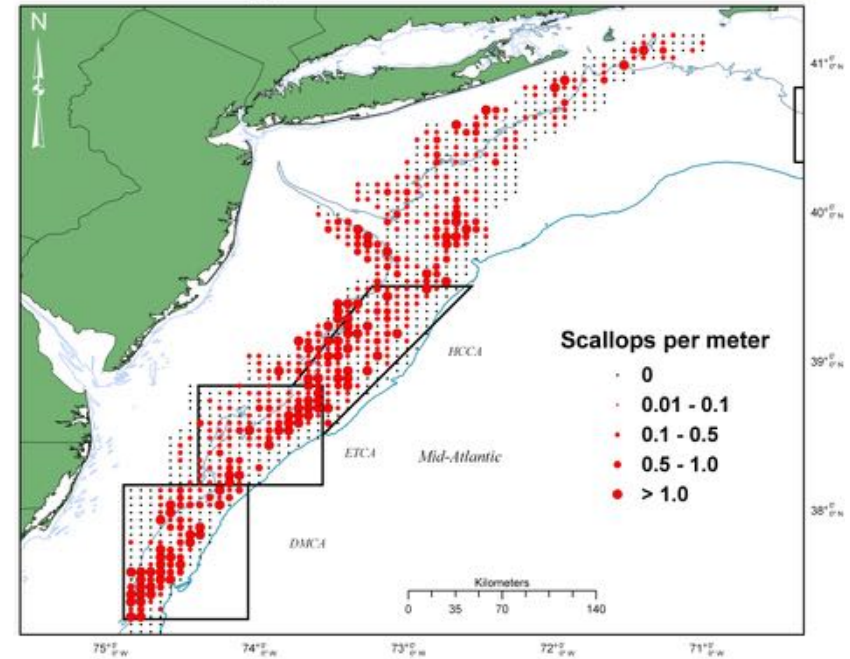
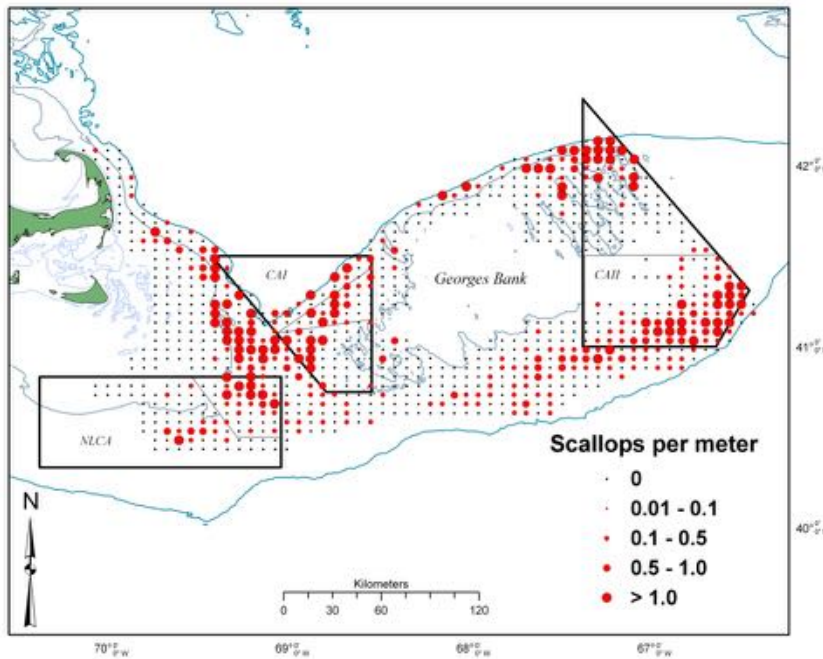
Side Camera



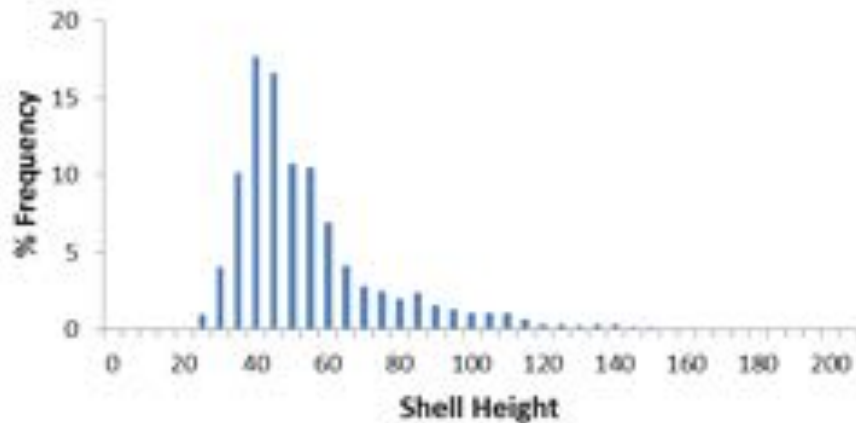
Survey Locations 1999 - 2014



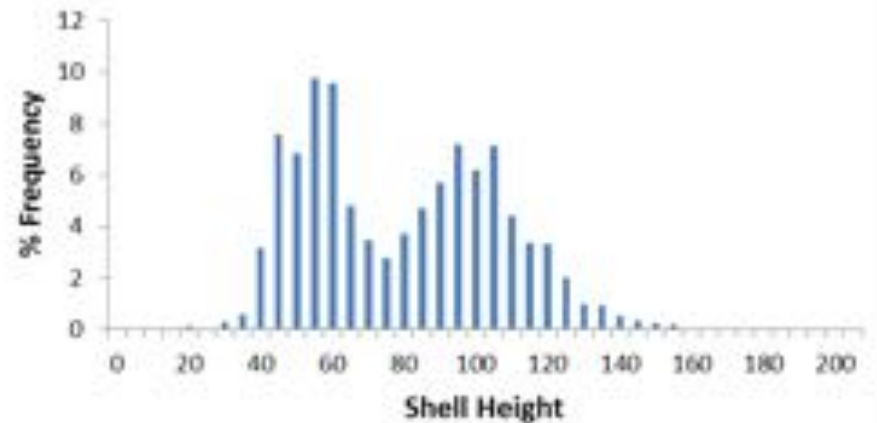
Management Applications

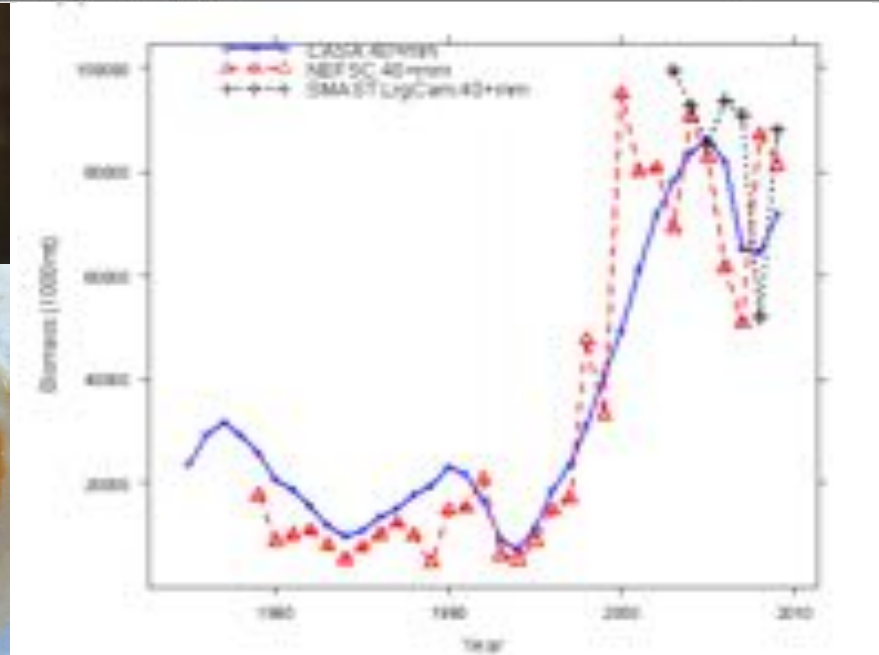
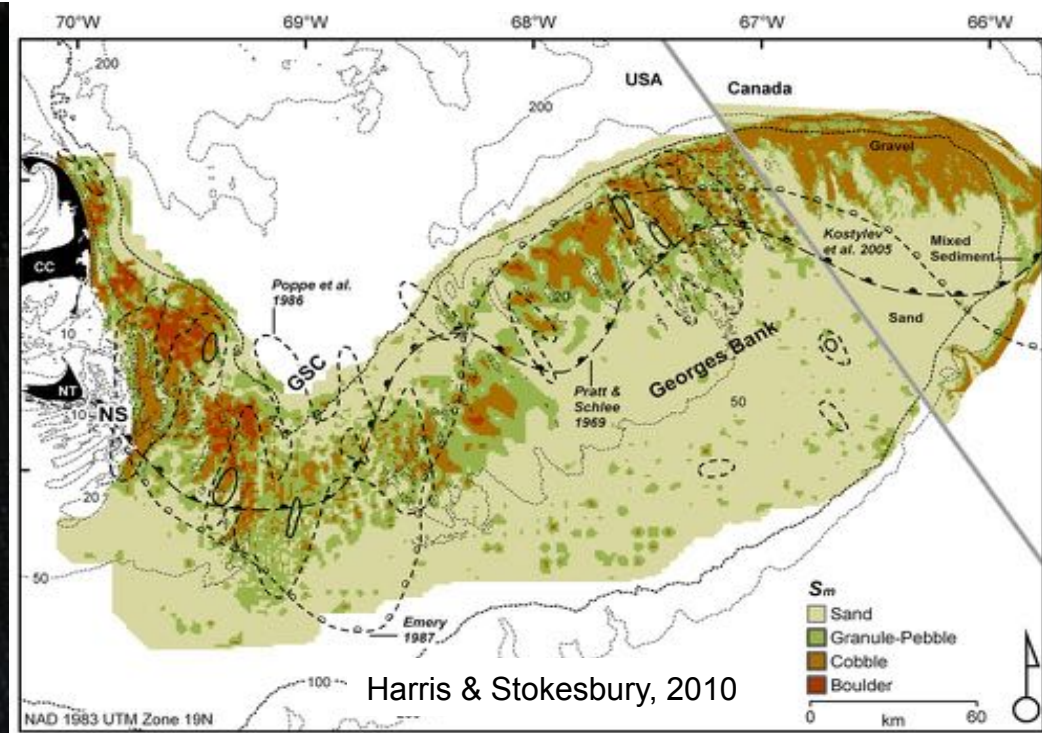


Georges Bank 2014



Mid-Atlantic 2014

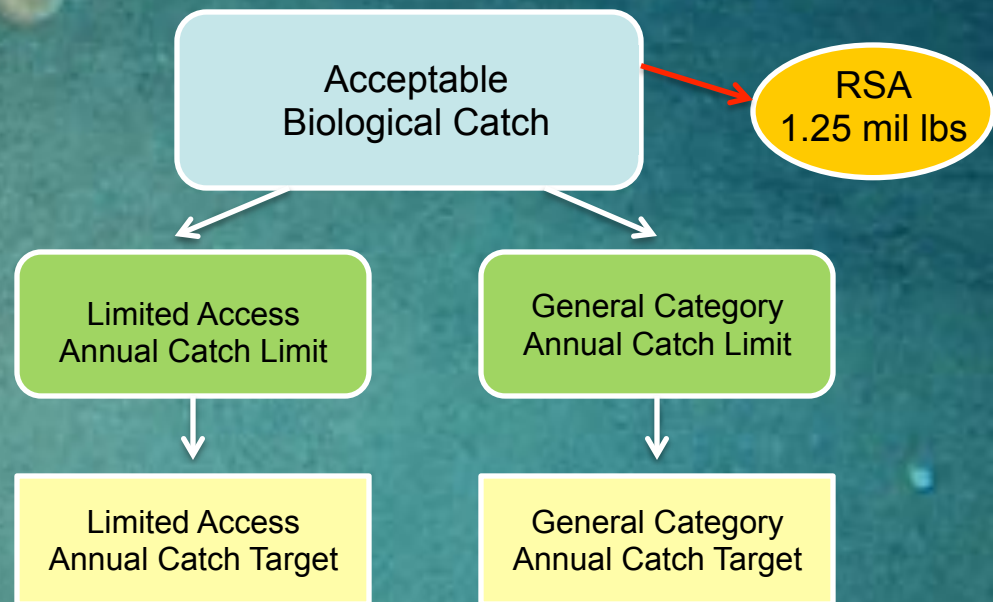




NEFSC, 2010

Scallop Research Set-Aside

- Funding derived from the sale of scallop catch
- Direct partnerships with industry members
- Priorities set by scientists, managers, industry
- 2014 value = \$13,125,000
 - Research
 - Compensation

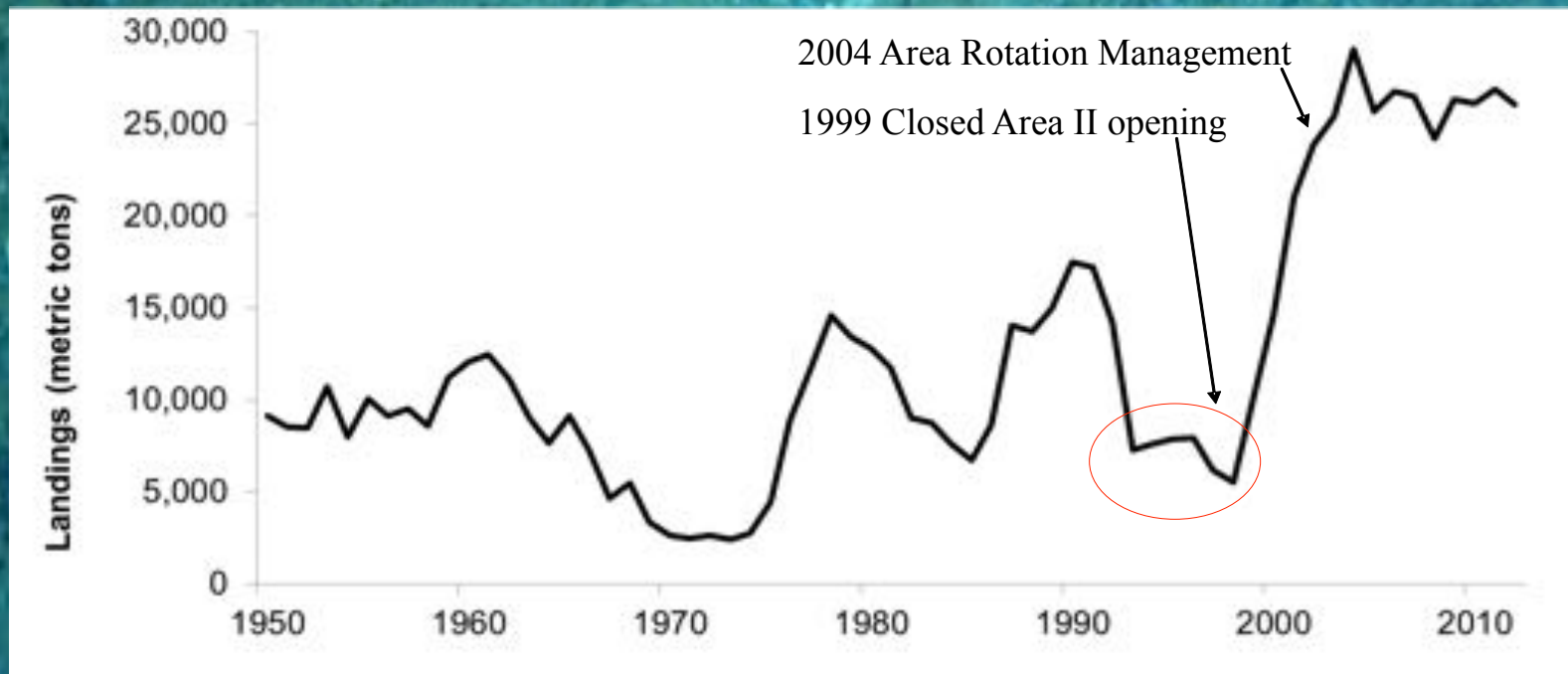


Lessons Learned

- Video survey methods and results were scrutinized and have been marginalized at times, which has motivated improvements to the survey methods and better understanding of results.
- Managing expectations from the beginning (initial survey, each survey year, start of individual trips) is critical to generating results and having the results used in management.
- Building relationships with industry members fosters a strong research result and continued cooperation and buy-in.

Continued Benefits of Cooperation

- Industry trust of results, both positive and negative
- Program growth – participants, donations, scale of survey
- Increased acceptance and collaboration with NMFS
- Resource is strong and well-managed, industry continues to benefit economically



Acknowledgements

- **US Sea Scallop Fishing Industry**
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- **Massachusetts Marine Fisheries Institute**
- **Sea Scallop Research Set-Aside Program**