US Marine Aquaculture: The Federal Perspective

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NOAA Aquaculture Program

Workshop on Offshore Aquaculture
New Orleans
October 7, 2008


Taiwan
Pavilion
台灣鯛
Taiwan Tilapia
TAIWAN
SEAFOOD
AMMON INTERNATIONAL INC.
YEN JING INTERNATIONAL PTY LTD.
YEN JING
Seafood
OceanGarden WILD
OceanGarden
SHRIMP

U.S. Marine Aquaculture is …

~ 1.5% of U.S. seafood supply, or
20% of entire U.S. aquaculture industry






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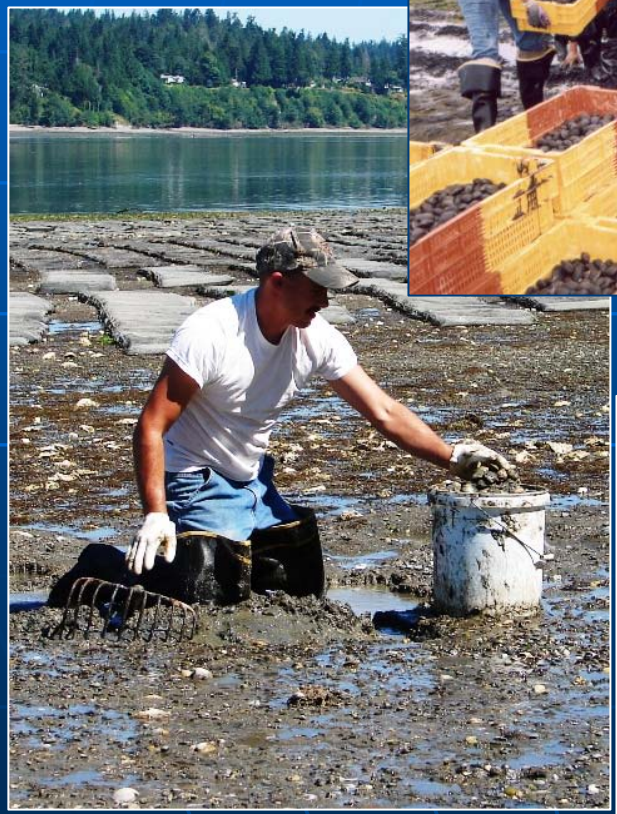
Shellfish



Maine Finfish

Salmon Farming in Maine

Hypothetical 1 MMT Production Increase in U.S. Aquaculture

Source: Nash (2004)

Group	Sub-group	Current U.S. Production	Increase	Target for 2025
Mollusks	All	100,000	**245,000**	**345,000**
Crustaceans	All	18,000	47,000	65,000
	Crayfish	14,000	35,000	49,000
	Shrimp and Prawns	5,000	11,000	16,000
Fish	All	340,000	760,000	1,100,000
	Freshwater	315,000	70,000	385,000
	Anadromous	25,000	100,000	125,000
	Saltwater	**< 1,000**	**590,000**	**590,000**
TOTALS		**458,000**	**1,052,000**	**1,510,000**

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Stock Enhancement & Restoration Aquaculture

Commercial: Salmon, oysters

Recreational: Pacific rockfishes, Gulf redfish

Habitat: Oysters

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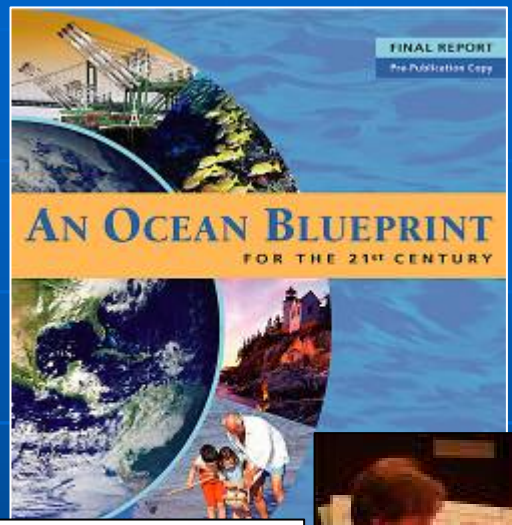
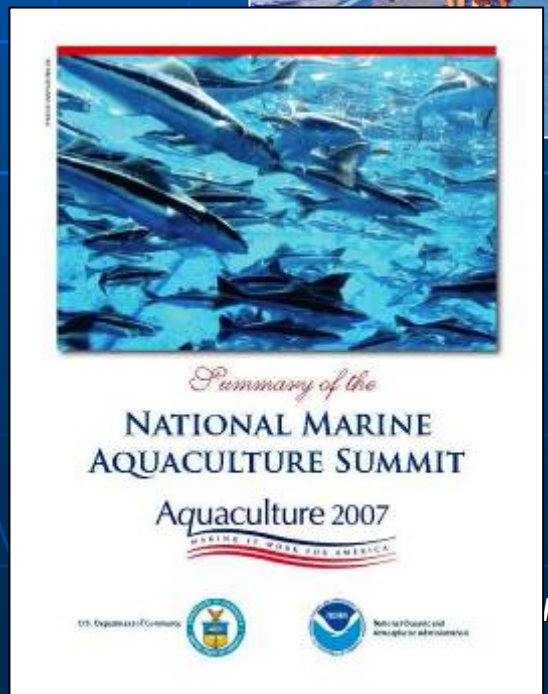
Constraints


KONA BLUE

Federal Perspective: Drivers

Legislation
Directives
Stakeholders
Markets
Science





Rationale for Marine Aquaculture

- Increase domestic supply to complement wild catch
- Regional food supply and security
- Health benefits
- Jobs, maintain working waterfronts
- Ecosystem management
- International role
- Stock replenishment

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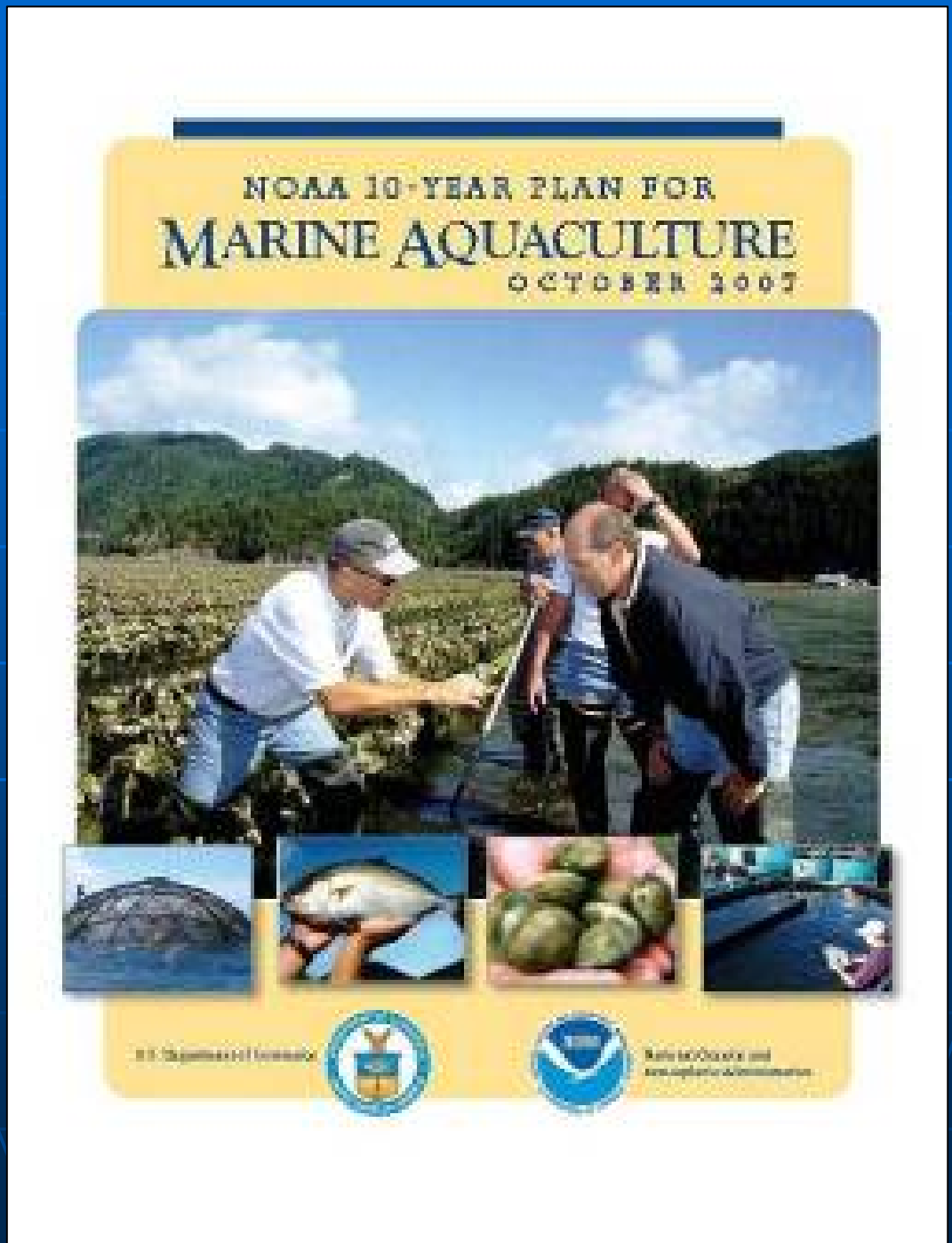
NOAA 10-YEAR PLAN FOR
MARINE AQUACULTURE
OCTOBER 2007

NOAA's Aquaculture Program

Regulation

Science, R&D

Outreach and Education

International

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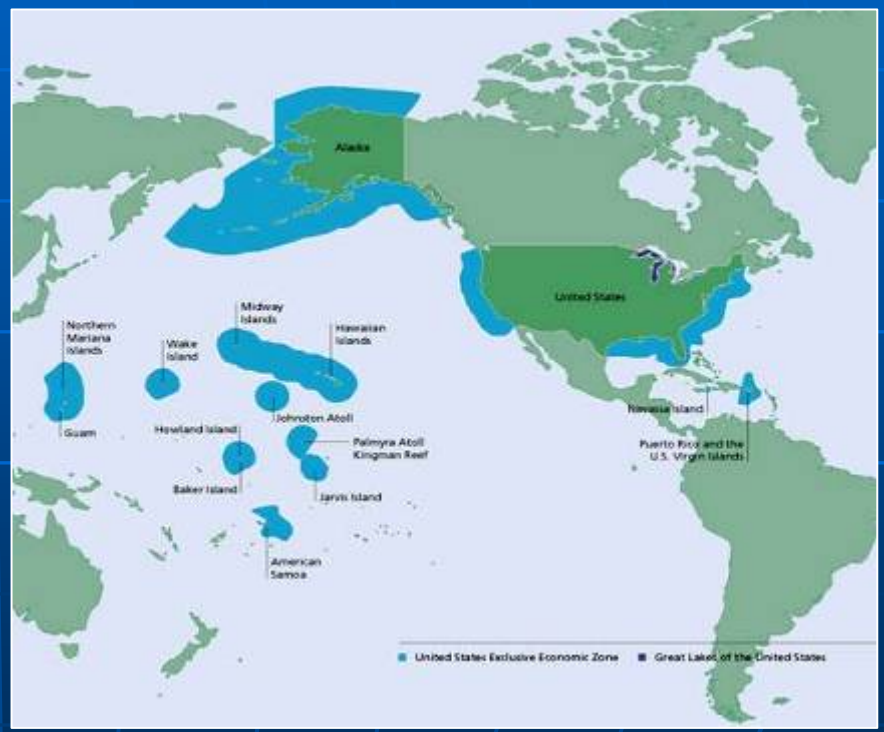
Legal & Regulatory Context for Offshore Aquaculture

- Jurisdiction
  - State v. federal
  - Multiple federal agencies
  - Multiple mandates
- Regulatory Development
  - New legislation
  - Improvements under current law



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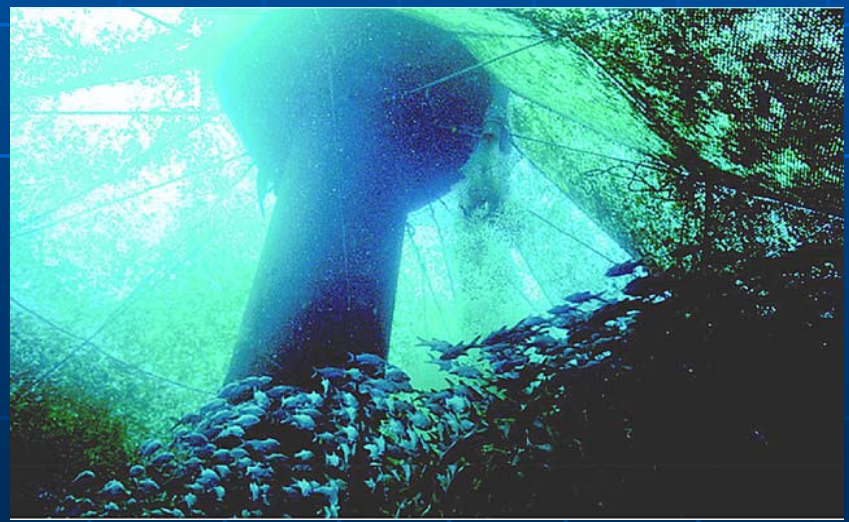
National Offshore Aquaculture Act
(H.R. 2010, S. 1609)

Grant NOAA authority to issue offshore permits

NOAA coordinates federal process

Provide environmental and other safeguards

Consultation with states



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Steps to Develop Offshore Regulations

- Environmental/social analysis
- Regional mapping
- State, Fishery Management Council, stakeholder & expert consultations
- Interagency consultations
- Draft permit requirements
- Federal Register process

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Research: support development of ALL marine aquaculture

- R&D industry partnerships
- Biological, social, production and economic data collection
- Alternative feeds research

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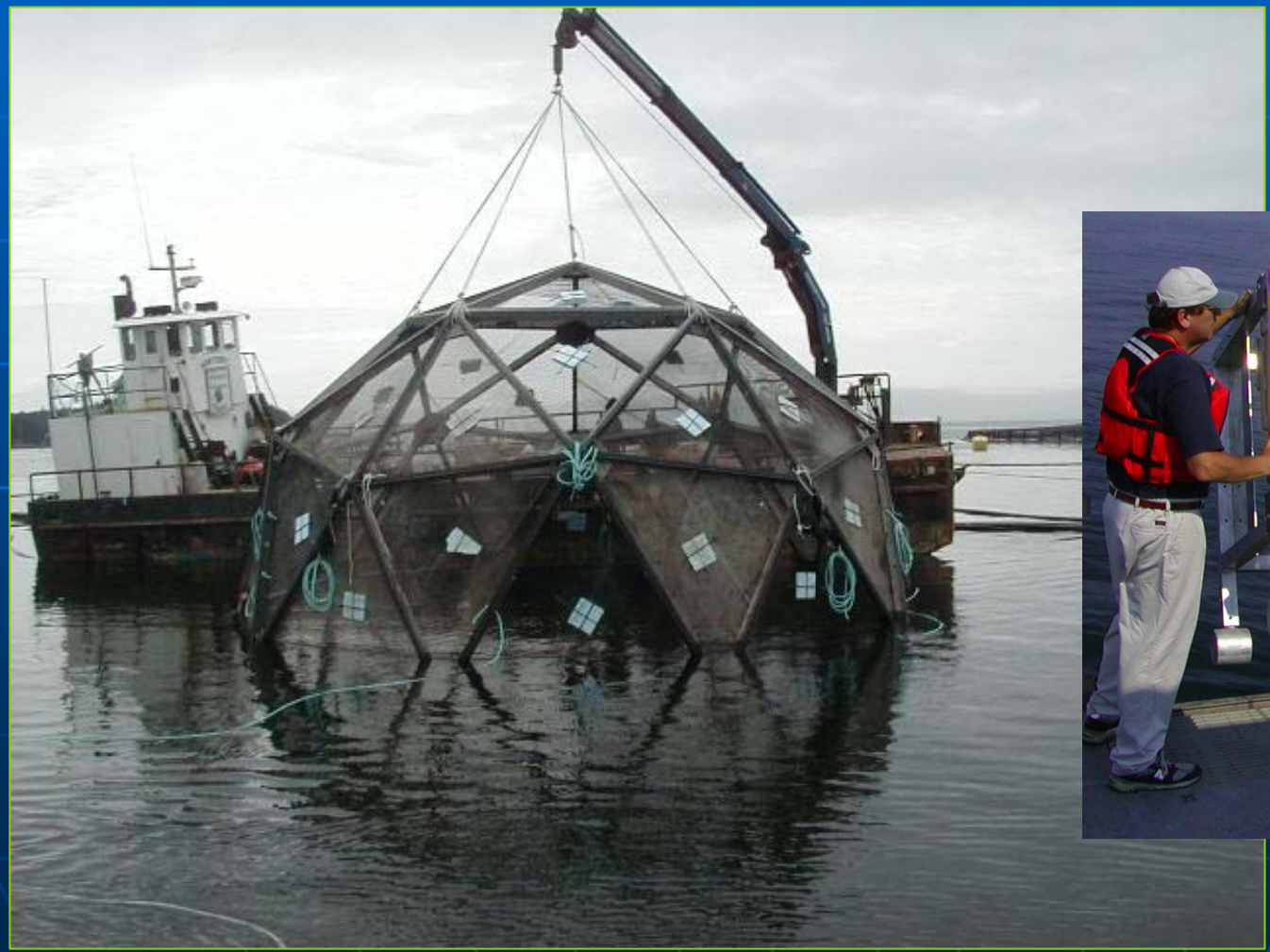
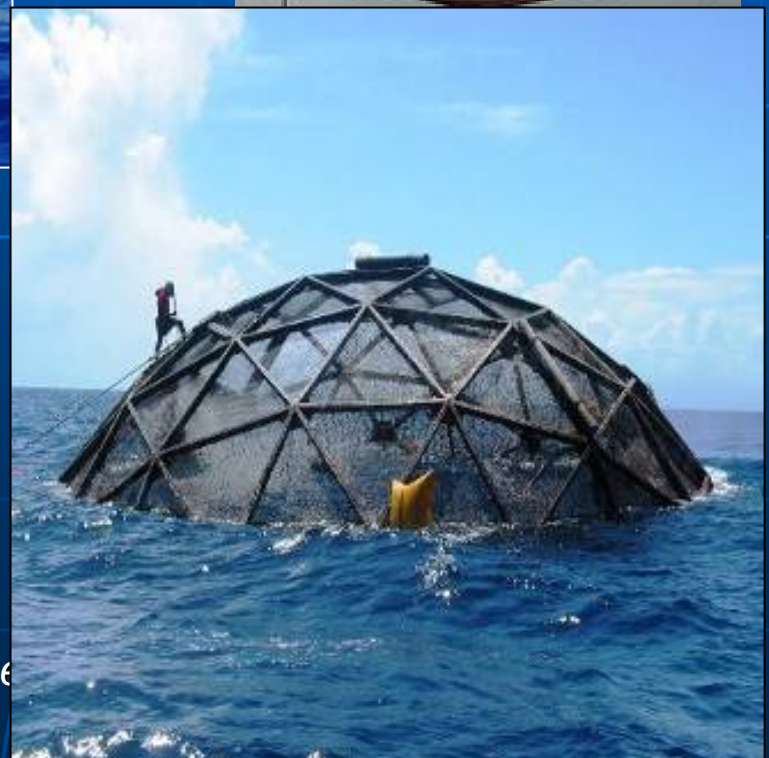
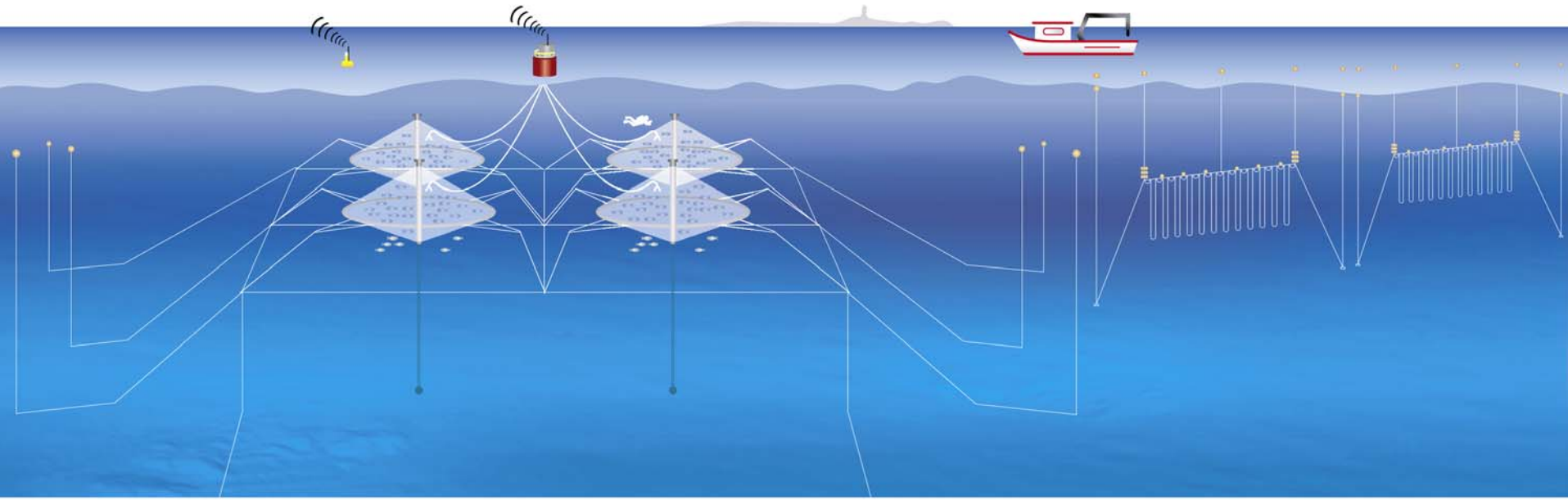
Concerns: Technology, Economics, Environment



US Offshore Technologies



culture



cinemar

NOAA

University of New Hampshire

Economic, Competition Concerns

- Financial viability
- Economic impact
- Competition and synergies with fishing

Hawaii

New Hampshire

Offshore Mussels in NE

North Carolina

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North Carolina's Research Hub

http://aquaculture.noaa.gov

Rhode Island

http://aquaculture.noaa.gov

Chesapeake Bay

gov

Maine

Alaska

Environment - Science - Innovation

- NOAA/USDA Aquaculture Feeds Initiative
- Shellfish and Environment Symposium
- National Aquatic Animal Health Plan
- Offshore aquaculture water quality effects
- Regional siting studies for aquaculture in federal waters (Gulf, NE, CA)
- Genetics

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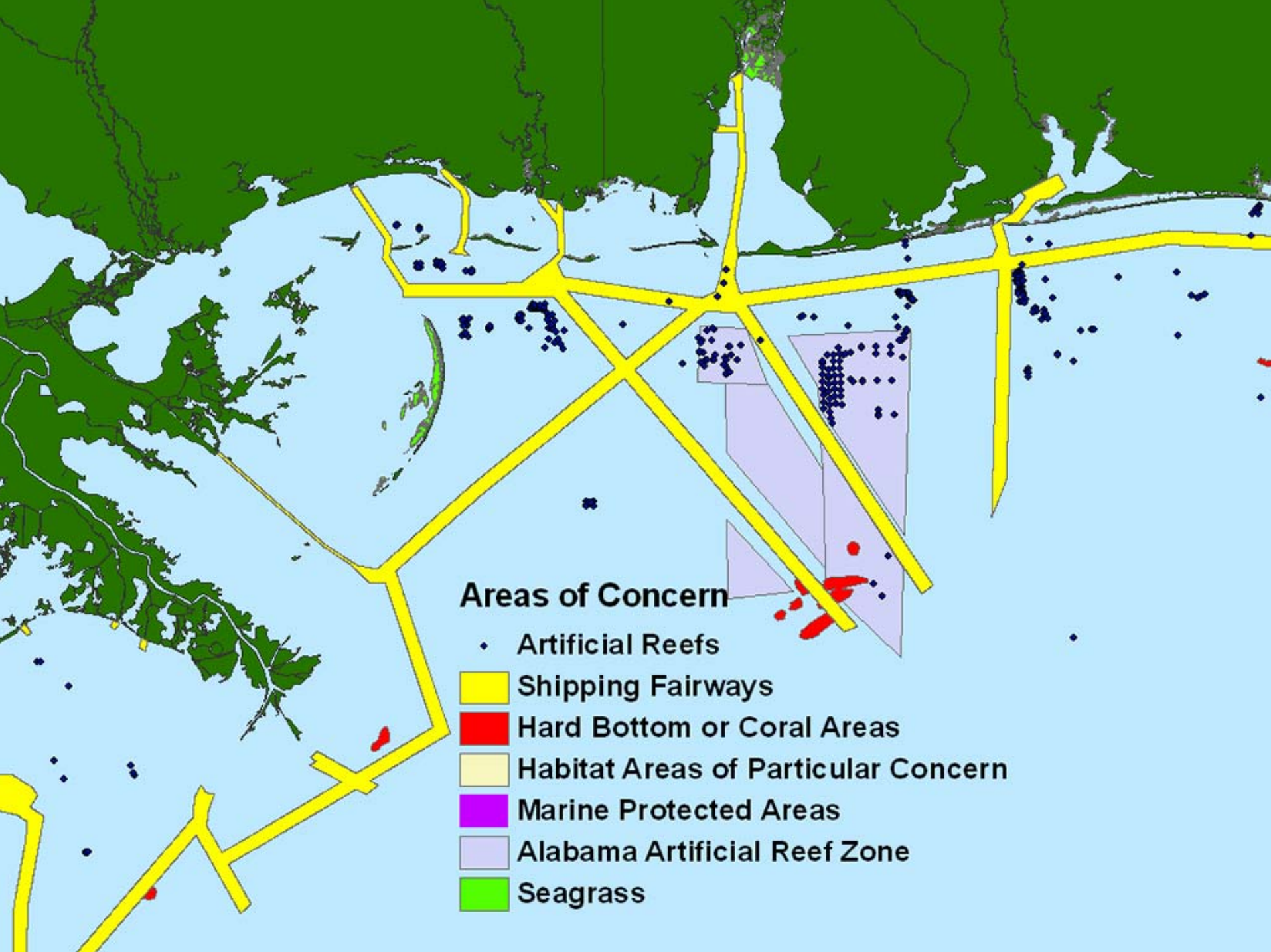
Areas of Concern
Artificial Reefs
Shipping Fairways
Hard Bottom or Coral Areas
Habitat Areas of Particular Concern
Marine Protected Areas
Alabama Artificial Reef Zone
Seagrass

Pilot Projects: NOAA Grants

- Mussels and cod in Northeast
- Pacific NW species
- California yellowtail
- King crab in Alaska
- Cobia
- Black sea bass
- Hawaiian species
- Hatchery technology
- IMTA

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Next for Gulf?

To Find Out More …

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Kate Naughten – *Outreach*
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