

# Fisheries Management



# Common Property Resources

- Tragedy of the Commons
  - When resource owned by all, no incentive to conserve or invest in resource.
- To prevent this “tragedy”, most common property resources are held in trust and managed for the people by state and federal government agencies.
- **So who owns the fish? We do!**

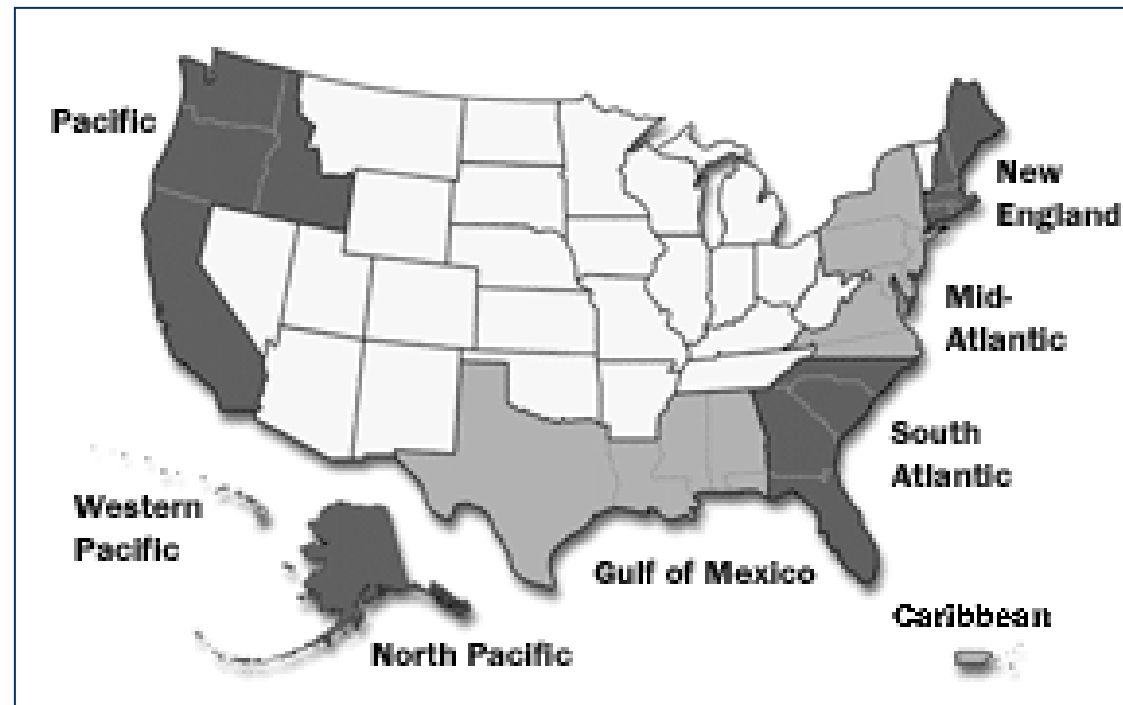
# Magnuson- Stevens Fishery Conservation and Management Act

- Primary law regulating U.S. fisheries.
  - Authorized the federal government to regulate fishing from three miles offshore (nine off Texas and Florida Gulf Coast) out to 200 miles. (EEZ)
  - Original purposes of the act – conserve fish stocks and eliminate foreign fishing while developing a sustainable U.S. fishing industry.
- Reauthorized in 1996 and 2006

# Federal and State Authorities

- NOAA Fisheries has primary responsibility from three miles to 200 miles offshore.
- Coastal states are responsible for inshore waters and offshore waters out to three miles, with exceptions in Florida and Texas

# Fishery Management Councils



# Membership

- Voting members include:
  - Each state's director of marine fisheries;
  - One individual from each state knowledgeable or experienced in recreational or commercial fishing, or marine conservation;
  - At-large members from any of the states in the region;
  - Regional director of NOAA Fisheries for the area.



# Panels and Committees

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- Advisory Panels
- Scientific, Management, and Statistical Committees
- Stock Assessment Panels

# Fisheries Management Plans (FMPs)

- Produced by the Councils for implementation by Secretary of Commerce.
  - Must protect fisheries resources while maintaining opportunities for commercial and recreational fishing at sustainable levels.
- Describe the nature and problems of a fishery and regulatory recommendations to conserve the fishery.



# Ten National Standards

- FMPs must conform to Ten National standards identified in the Act.
- Standards 1, 2, 8, and 9 are most commonly referenced.

## Standard # 1

Conservation and management measures shall prevent *overfishing* while achieving, on a continuing basis, the *optimum yield* from each fishery for the United States fishing industry.

# Overfishing vs. Overfished

- Overfishing
  - Refers to removals from the population.
  - Implies that too many fish are being killed annually.
- Overfished
  - Implies that a population has declined to biomass levels that are below an established threshold.



## Standard # 2



Conservation and management measures shall be based upon the best scientific information available.

## Standard # 8

Measures shall, consistent with conservation requirements, take into account the importance of fishing resources to fishing communities to provide for sustained participation and minimize adverse economic impacts.

## Standard # 9

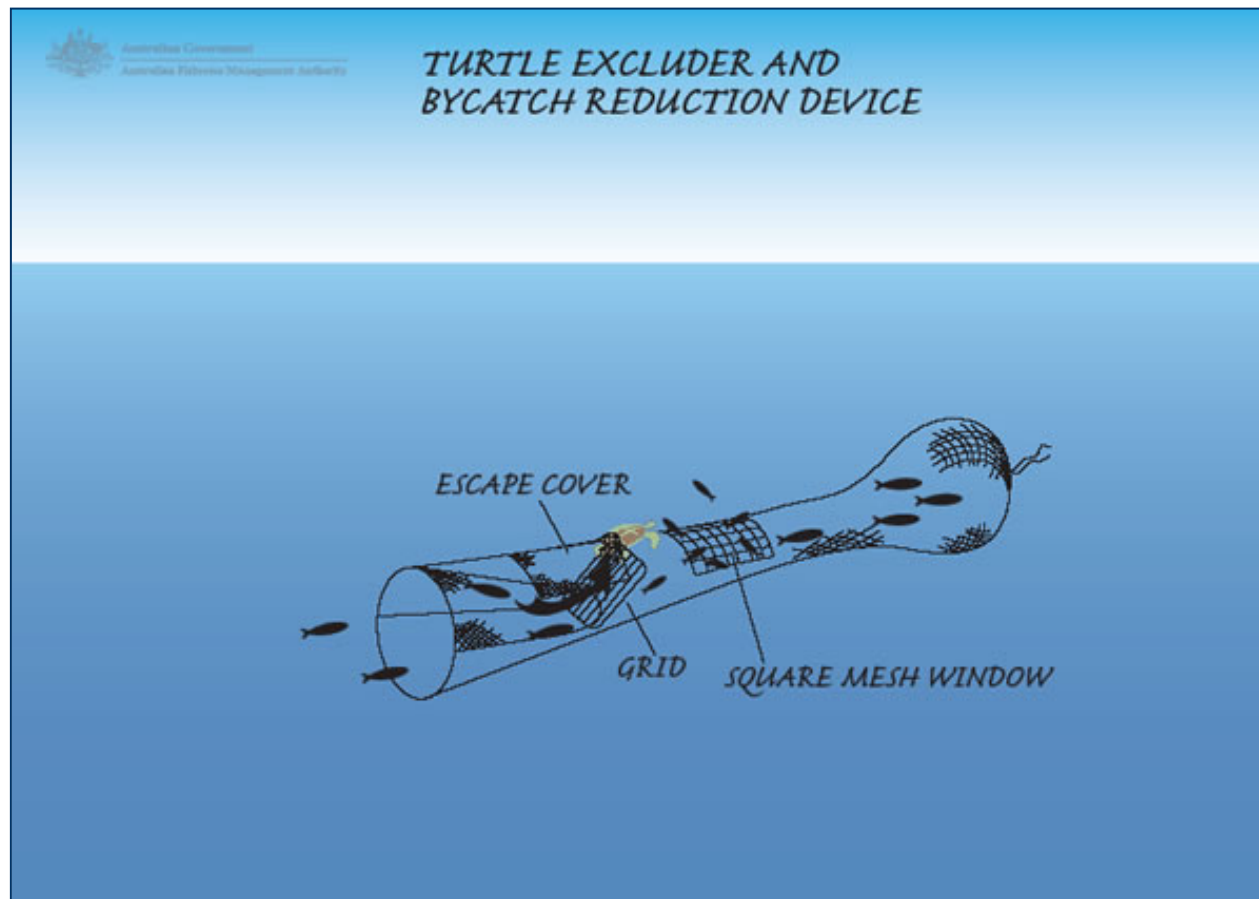
Conservation and management measures shall, to the extent practicable, (A) minimize bycatch and (B) to the extent bycatch cannot be avoided, minimize the mortality of such bycatch.

# Bycatch



- “Fish which are harvested in a fishery, which are not sold or kept for personal use.”
  - Includes economic discards and regulatory discards
  - Excludes fish released alive under a recreational catch and release program.
- Many FMPs require the use of bycatch reduction devices (BRDs).

# Turtle Excluder Devices (TEDs)







# Reauthorization

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On January 12, 2007, the President signed the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 into law, strengthening the 1996 provisions and extending the Act until 2013.

# New Mandate to End Overfishing

- Rebuilding plans to end overfishing must be developed and implemented within two years of a declaration that a stock is overfished.
- FMPs must now establish a mechanism for specifying annual catch limits at a level that prevents overfishing.
  - Catch limits must be in place by 2010 for stocks already subject to overfishing.

# Limited Access Privilege Programs

- Basically a new term for IFQ programs.
- LAPPs assign specific shares of the annual harvest quota to eligible fishermen, fishing communities, and regional fishing associations.
- There is a term limit of 10 years on quota shares.

# Deep Sea Coral Protection

- Authorizes inclusion of deep sea coral protections in FMPs.
- Mandates the mapping of coral locations and development of technologies to assist fishermen in reducing the fishing gear interactions.

## *Coastal Conservation Assn. v. Gutierrez*

- Challenge to NMFS' adoption of Amendment 22 to the Gulf of Mexico Reef Fishery Management Plan.
- In March, Texas District Court ordered the Secretary to issue a red snapper rebuilding plan with measures to reduce bycatch in the shrimp fishery within the next nine months



# Unit 5: Aquaculture



# Policy Context

- The United States is a net importer of seafood, with a current seafood trade deficit of approximately \$8 billion.
- About 40 percent of the seafood imported into the United States is farm raised, mostly consisting of salmon and shrimp.

# Ocean Spar 3000



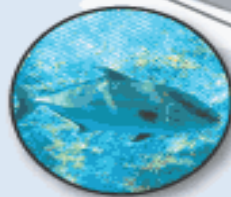
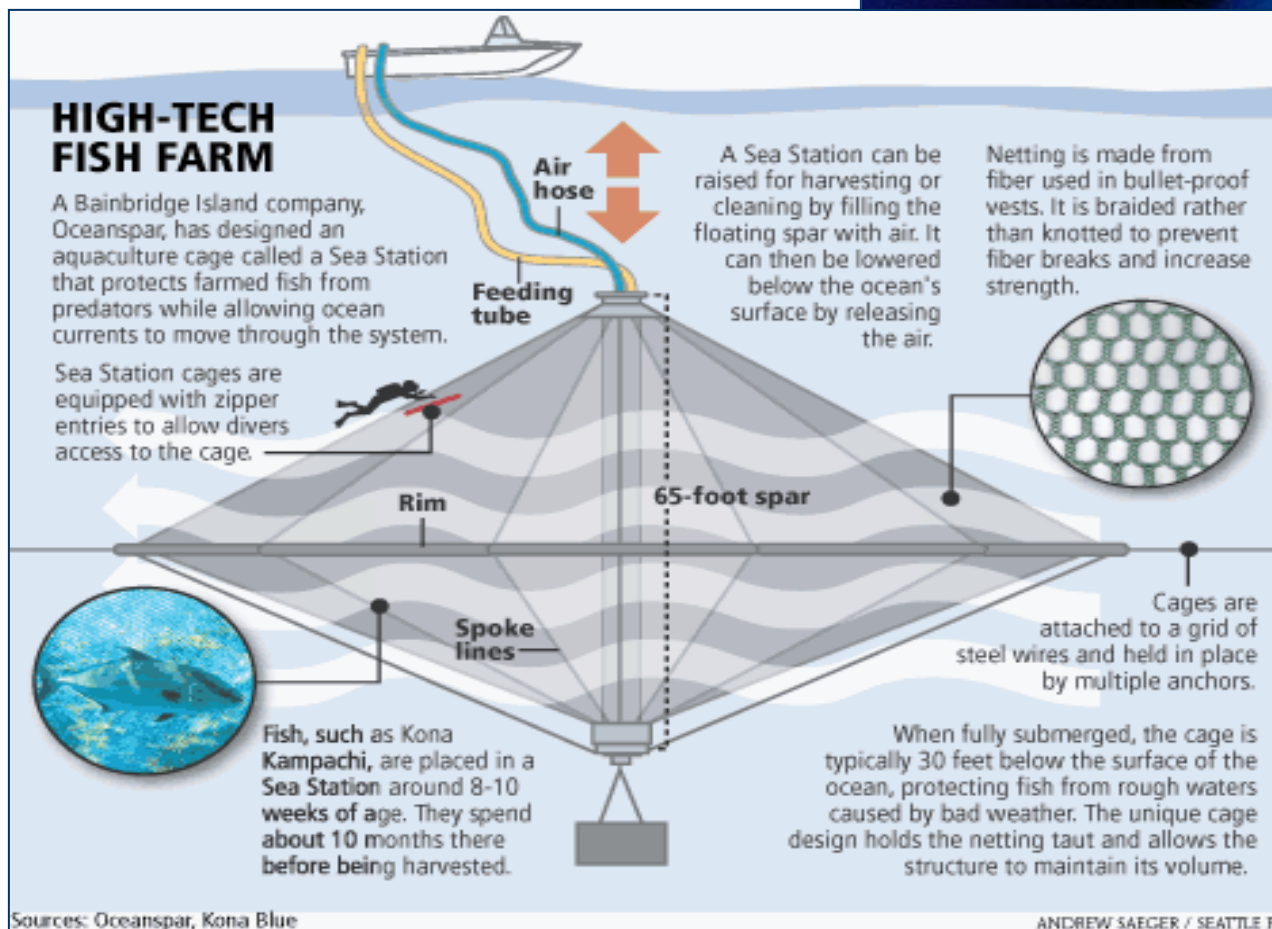
## HIGH-TECH FISH FARM

A Bainbridge Island company, Oceanspar, has designed an aquaculture cage called a Sea Station that protects farmed fish from predators while allowing ocean currents to move through the system.

Sea Station cages are equipped with zipper entries to allow divers access to the cage.

A Sea Station can be raised for harvesting or cleaning by filling the floating spar with air. It can then be lowered below the ocean's surface by releasing the air.

Netting is made from fiber used in bullet-proof vests. It is braided rather than knotted to prevent fiber breaks and increase strength.



Fish, such as Kona Kampachi, are placed in a Sea Station around 8-10 weeks of age. They spend about 10 months there before being harvested.

When fully submerged, the cage is typically 30 feet below the surface of the ocean, protecting fish from rough waters caused by bad weather. The unique cage design holds the netting taut and allows the structure to maintain its volume.



# Current Federal Regulatory Regime

- National Aquaculture Act of 1980
- Clean Water Act
- Magnuson-Stevens Fishery Conservation and Management Act

# Major Concerns

- Conflicting/Competing Uses
- Escapes
- Water Pollution
- Habitat Impacts
- Increased Pressure on Wild Stocks

## NOAA's Definition

"The propagation and rearing of aquatic organisms in controlled or selected environments for any commercial, recreational or public purpose."

# National Offshore Aquaculture Act of 2007

- **Purpose:** Create regulatory framework allowing for safe and sustainable aquaculture operations for fish and shellfish in U.S. federal waters (3 – 200 miles offshore).
- Transmitted to the Congress on March 12, 2007.
- Introduced by Representative Rahall (D-WV) on April 24, 2007 (H.R. 2010).

## What would the Act do?

- Authorize the Secretary of Commerce to issue offshore aquaculture permits.
- Require Sec. to establish environmental requirements.
- Require Sec. to work with other agencies to develop and implement coordinated permitting process.
- Exempt permitted offshore aquaculture from fishing regulations that restrict size, season and harvest methods.