

# Marine Fisheries Management Introduction



Marine Fisheries 101 Workshop  
April 24, 2018



# Why Are We Here?

**Goal:** Learn about marine fisheries data collection and management at the state and federal level

- It's complicated, but staff is on top of it
- Marine fisheries challenges are unique
- No decisions will be made here today, education only
- Ask questions!



# Outline For The Day

- Introduction
- Data collection and stock assessments
- State process, workplan, strategic initiative
- Federal fishery management process
- Contrast between state vs. federal and successful management examples



# Introduction



# Why Manage Marine Fisheries?

- Marine fisheries represent an important asset to the state
  - Major economic engine
  - Strongly tied to the tourism industry
  - Part of the cultural identity of Florida
  - Linked to a fun and healthy lifestyle
  - Public trust responsibility



# Fisheries Economics of the U.S. 2015

Total Sales Generated by U.S. Commercial and Recreational Fishing Industries, 2015



\*Total Sales — the combined value of sales by businesses within the U.S. or state affected by commercial and recreational fishing industries

# Marine Fisheries: An Economic Engine

**Florida Marine Fisheries economic impact: \$28.7 billion/year in sales**

- Florida Citrus: \$8.6 billion/year
- Florida Cattle Ranching: \$900 million/year
- Florida Space Industry: \$26.7 billion/year

**Florida Seafood Industry: \$16.6 billion in sales**

**20 Million Saltwater Recreational Angling Trips per year statewide**

- Disney World: 20.4 million visitors/year
- 16 Smithsonian Museums and the National Zoo: 27.5 million visitors/year
- Grand Canyon, Yellowstone, Yosemite National Parks combined: 15.3 million visitors/year



# Marine Fisheries Challenges

- Perception that ocean is limitless
- Resource not generally visible to the public
- Resources usually managed at very large scales (statewide or by coast)
- User satisfaction derived from catch and release AND harvest
- Open access with multiple modes of participation (shoreline, docks, piers, private boat, charter, etc.)
- Significant recreational AND commercial component for many species



# Dozens of Species Managed Over a Wide Latitudinal Range

- Florida has many different “regions” – Panhandle, Big Bend, Keys, etc.
- Stakeholders in different areas of the state may have different desires
  - Regional management of redfish and permit
- The same species might have biological differences that require different assessment and management
  - Snook management: Atlantic vs. Gulf



Middle: photo courtesy of Tammy Hedspeth

Right: photo courtesy of Melanie Flower

# Scale and Scope: Large Number of Fisheries in Different Habitats



# Scale and Scope

- Florida leads the nation in number of
  - Licensed anglers
  - Visiting anglers (national and international)
  - Saltwater fishing trips
  - Boat owners
- High usage of the resource, year-round fishing
- Only state in the nation that sits on 2 federal Councils and 2 interstate Commissions



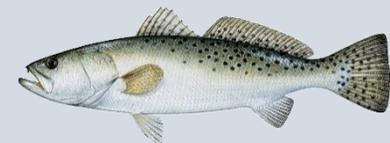
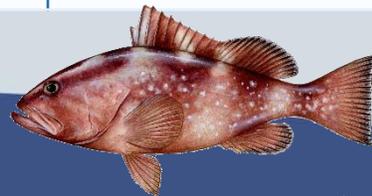
# Top Florida Fisheries

## Commercial

Species	Landing Value (millions)
Shrimp	\$61.2
Spiny lobster	\$28.5
Stone crab	\$26.7
Red grouper	\$14.1
Blue crab	\$10.2
Red snapper	\$9.8
King mackerel	\$9.3
Oysters	\$4.9
Mullet	\$4.3

## Recreational

Species	Catch (millions of fish)	Harvest (millions of fish)
Spotted seatrout	13.0	1.6
Mangrove snapper	8.0	1.8
Sheepshead	3.7	1.5
Red snapper	3.5	0.7
Red drum	3.1	0.5
Spanish mackerel	2.7	1.1
Common snook	2.4	<0.1
Gray triggerfish	1.5	<0.1



# Florida Marine Fisheries Management Strategy

- Focused on maintaining access and plenty of fishing opportunities while adjusting regulations to ensure sustainability
- Try to allow harvest whenever sustainable, then tailor management to stakeholder desires
- Demonstrated record of success
  - Nearly all stocks managed by FWC are meeting or exceeding management goals
  - High degree of stakeholder satisfaction
  - A history of collaborative management of commercial fisheries



# How Do We Evaluate and Manage Fisheries?

*Different methods of management may be based on fishery needs and available research*

## Evaluating a fishery

Stock abundance metrics  
or stock assessment

Evaluated against



Benchmark  
SPR or MSY

Ensures enough spawning production to have a sustainable population and that enough recruits (young fish) enter the population

## Regulations considered to keep fishery sustainable with or without quota

### Without Quota

Consider a list  
of tools

### With Quota or Annual Catch Limit (ACL)

- Cap on allowable harvest
- Required for federally managed species
- Regulations set to keep harvest under ACL or TAC



# Tools for Managing Fisheries With or Without Quota or Catch Limits

*Used to maintain sustainability and manage for what stakeholders desire*

- **Minimum size limit**: the smallest size at which a species can be harvested
  - Usually protects fish until size of first spawn
- **Slot size limit**: combination of a minimum and maximum size limit
  - Protects fish until their first spawn
  - Protects larger, high quality spawners
- **Bag limit**: the number of a specific species that an angler may harvest per day
  - Limits the fishing mortality per angler trip
- **Closed season and closed area**
  - Can coincide with a spawning period or spawning aggregation
  - Can be used when a species is particularly vulnerable, such as cold weather months or where species aggregate



# Challenges Moving Forward

- Series of challenging, interconnected decisions
- Managing many species for different outcomes
  - Sustainability vs abundance
  - Food vs sport
  - Diver satisfaction
  - Access
- Many challenges
  - Data collection
  - Overall number of issues
  - Interconnected nature of issues



Up next: Data Collection and Stock Assessments