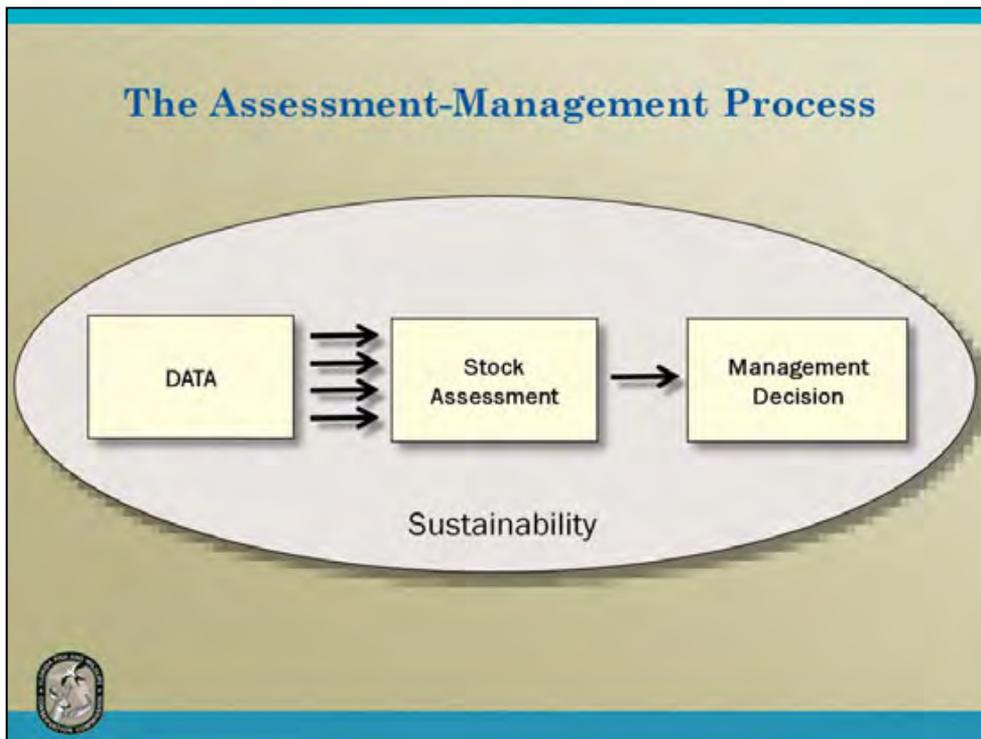


This document summarizes how stock assessments are handled on the state level between the Fish and Wildlife Research Institute (FWRI) and the Division of Marine Fisheries Management (DMFM) and the federal level and how management recommendations are formed and presented to the Commission.

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Stock assessments are periodically completed using the most current data and provide managers with a current picture of the fishery. We can think of the stock assessment process as a series of steps involving data collection, modeling/analysis and potential management actions based on the results of the stock assessment. These steps are all inter-dependent. The nature of the data available determines the type of model that can be used and different models are capable of calculating various management benchmarks such as Spawning Potential Ratio or SPR. All of these elements operate within policy and process constraints that further define the process. The most significant policy guidelines are spelled out in federal or state law regarding jurisdictional authorities, definitions of overfishing, and rebuilding schedules for certain stocks. More often than not, there are specific management benchmarks chosen for each stock that are designed to prevent overfishing.

The most informed stock assessments also involve significant stakeholder involvement in all stages of the work.

This presentation will cover the step from the stock assessment to the management decision.

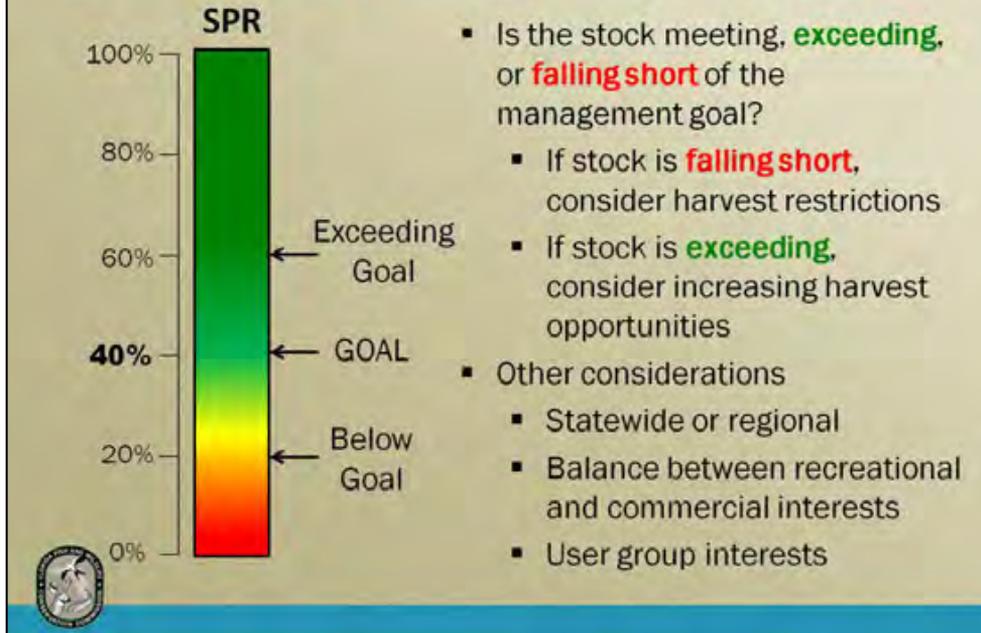
State Assessment Handoff

- FWRI and DMFM meet to discuss stock assessment results
 - Is the species meeting the management goal?
 - DMFM gives edits and suggestions to FWRI
- FWRI edits and finalizes assessment
- DMFM uses assessment to determine whether management changes are needed or warranted



After a State of Florida stock assessment is completed, FWRI and DMFM meet to discuss the stock assessment results. This discussion examines assumptions of the model and looks at whether a species is meeting the management goal. DMFM gives suggestions and edits that FWRI incorporates, then FWRI finalizes the stock assessment. DMFM uses the assessment to determine whether management changes are needed or warranted. If they think changes should be considered, then they move on to the next phase.

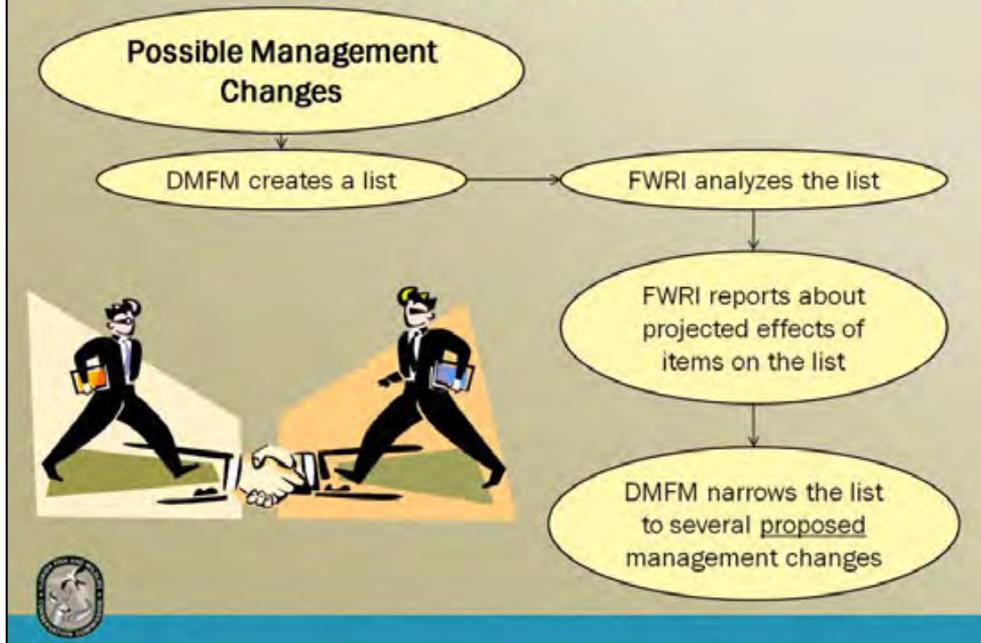
Management Change Considerations



How does staff determine if management changes are needed? Staff asks a number of questions concerning the results of the stock assessment. First, staff looks at whether the stock assessment showed that the population was meeting, exceeding, or falling short of the FWC's management goal for that species. In general, if a stock is falling short of the management goal, staff begins to consider whether restricting harvest in some way would improve the stock's health. If a stock is exceeding the management goal, staff may begin to discuss whether harvest can be increased in some way that would still keep the stock at or above the management goal.

Staff also considers whether the stock is meeting, exceeding, or falling short of the goal in the same way in all regions of Florida. Sometimes one coast or one region's population performs better or worse than another. In these cases, regional regulation changes may be appropriate. Also, when considering either restricting or increasing harvest, staff considers the interests of both the recreational and commercial sectors. Occasionally there are interested groups that have a particular concern or request that staff considers in relation to the stock assessment results.

DMFM and FWRI Cooperation



- DMFM creates a list of possible management changes after considering the assessment results and other factors
- FWRI analyzes the list of possible management changes
- FWRI reports back to DMFM about the projected effects the possible management changes would have on the health of the stocks
- DMFM narrows possible management changes based on FWRI information into a list of proposed management changes

Collect Input on Proposed Changes

- **Stakeholder** input gathered via
 - Public workshops
 - Video and phone meetings, phone calls, emails, letters
 - Surveys
- Input from stakeholders, LE, and Legal is considered prior to developing a draft rule proposal
- DMFM presents a proposed Draft Rule to Commission, and if directed a Final Public Hearing



Once the alternatives have been narrowed down to a list of proposed management changes, DMFM staff often collect stakeholder input on the proposed changes. This is sometimes done through a series of public workshops held around Florida. Stakeholder input is also commonly gathered by video and phone meetings, as well as phone conversations, emails, and letters from the public. DMFM staff also discusses the proposed changes with law enforcement and our Legal office to make sure that any new regulation being considered is enforceable and also legal. Finally, staff presents a Draft Rule to the Commission, which includes an explanation of the proposed management changes and a summary of stakeholder input. If directed by the Commission, DMFM staff will return at a future meeting with a Final Public Hearing, where the proposed management changes are officially approved.

Examples

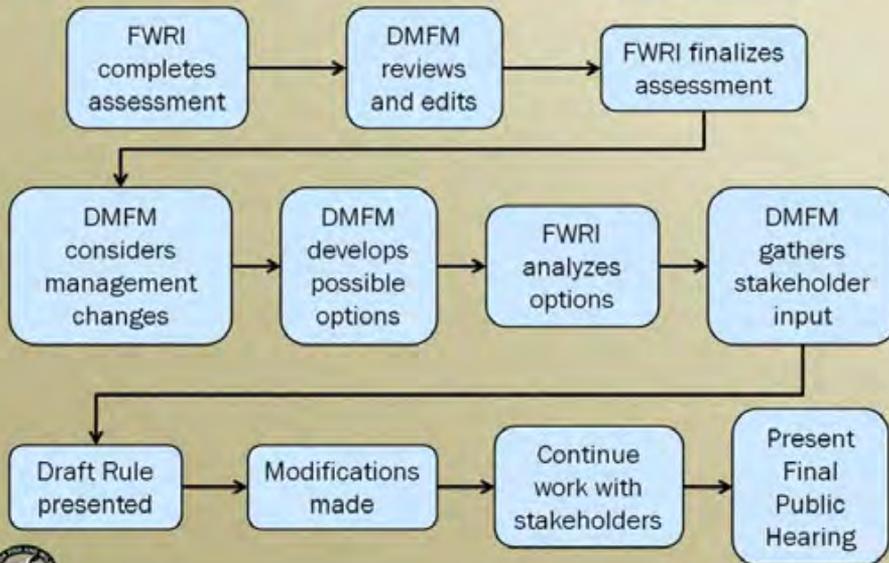
- FWRI Analyses: Red Drum
 - In 2010, FWRI scientists projected escapement rates if the mortality increased, decreased, or stayed the same
 - These projections affected DMFM staff's recommendations
- Stakeholder Involvement: Permit, Florida pompano, African pompano
 - In 2009-2010, stakeholders participated in Technical Assistance groups, video workshops, public workshops, and written surveys
 - The proposed changes were revised after considering stakeholder input



On this slide are a couple examples of the topics that were discussed on the previous slides. First, the management changes that were voted on for red drum in 2011 were affected by FWRI's analyses. In 2010, DMFM asked FWRI to project red drum escapement rates for if red drum mortality stayed the same, increased, or decreased. This information helped DMFM make staff recommendations for management changes.

A good example of collecting stakeholder input comes from the permit, Florida pompano and African pompano issue that was worked on over the past several years. DMFM staff met with stakeholder groups even before the draft rule hearings to begin to gather information on these fisheries in Florida. Staff also did numerous public workshops around Florida, and help several more workshops via the phone and video. Written surveys were also conducted at the workshops. The stakeholder input gathered on this issue helped staff decide on the proposed management changes to present to the Commission.

From Assessment to New Regulation



Federal Management Handoff

- SEDAR assessment completed and Council decides whether action is needed for federal waters portion of the stock
- Commission gives direction to Council representative from DMFM staff to help guide Council process
- After regulations made by the Council, DMFM staff independently evaluate whether consistent regulations in state waters are necessary



Federal Councils also conduct stock assessments through the SouthEast Data, Assessment, and Review (SEDAR) process. Once a SEDAR stock assessment is completed, the respective Council decides whether any regulatory action is needed for the species in federal waters. The Commission gives direction to the DMFM staff member serving as the representative on the Council as to how they would like the Council to proceed with possible management changes. If new regulations are implemented by the Council, DMFM staff independently evaluates whether consistent regulations are necessary for state waters. If they are necessary, DMFM staff will discuss possible consistent rules for state waters with Commissioners at a future meeting.

The following slides are considered back up material and are not anticipated to be part of the actual presentation to the Commission



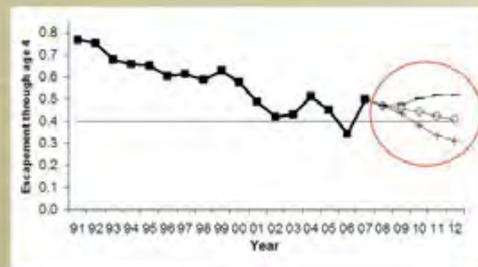
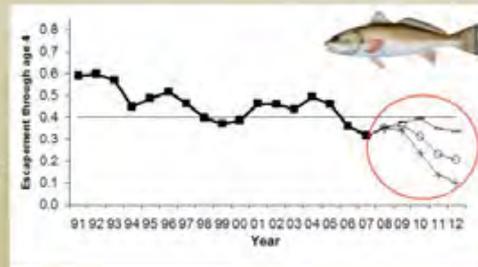
Escapement and Potential Trajectories

Gulf Coast

- 2005-2007 Average Escapement = 37%
- Escapement will continue below 40% at any level of fishing mortality

Atlantic Coast

- 2005-2007 Average Escapement = 44%
- Escapement will fall below 40% if fishing mortality increases



These graphs show escapement rate data for both the Gulf and Atlantic coasts since 1991 and include potential trajectories for 2008 through 2012. The horizontal line at 0.4 represents the management goal of 40% escapement. If escapement drops below 40%, recruitment would likely decrease over time and result in decreased red drum abundance.

Before being managed aggressively in the mid 1980s, escapement rates were below what was then an escapement goal of 30% on both coasts. However, these rates increased rapidly in response to strict regulations placed on red drum in the mid 1980s, and peaked in 1990 and 1991. Starting around 1992, escapement rates declined due to increasing fishing effort and harvest. As seen on the graphs, this trend continued through the late 1990s on the Gulf coast, and through 2002 on the Atlantic coast. Escapement rose until 2005 on the Gulf coast and has been variable between 2002 and 2006 on the Atlantic coast. On the Gulf coast in 2007, escapement decreased to 31%. On the Atlantic coast in 2007, escapement increased to 50%. A recent average of escapement can be used for a more accurate picture of the state of the fishery. The 2005-2007 escapement average is 37% on the Gulf coast and 44% on the Atlantic coast.

Because total mortality rates (fishing plus release mortality) continue to increase on both coasts, escapement projections were evaluated for 2008-2012. These projections were evaluated for three different fishing mortality simulations: total mortality follows the current trend (o), follows the same trend but with the total mortality reduced by 20% (-), or increased by 20% (+). On the Gulf coast, the projections show that escapement will continue to be below 40% from 2008 through 2012 for all three projections. On the Atlantic coast, escapement will remain just above 40% through 2012 if mortality follows the current trend, but will fall below 40% in 2010-2012 if mortality increases.