The Journey from Science to Management

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NMFS Southeast Regional Office

FishSmart Workshop
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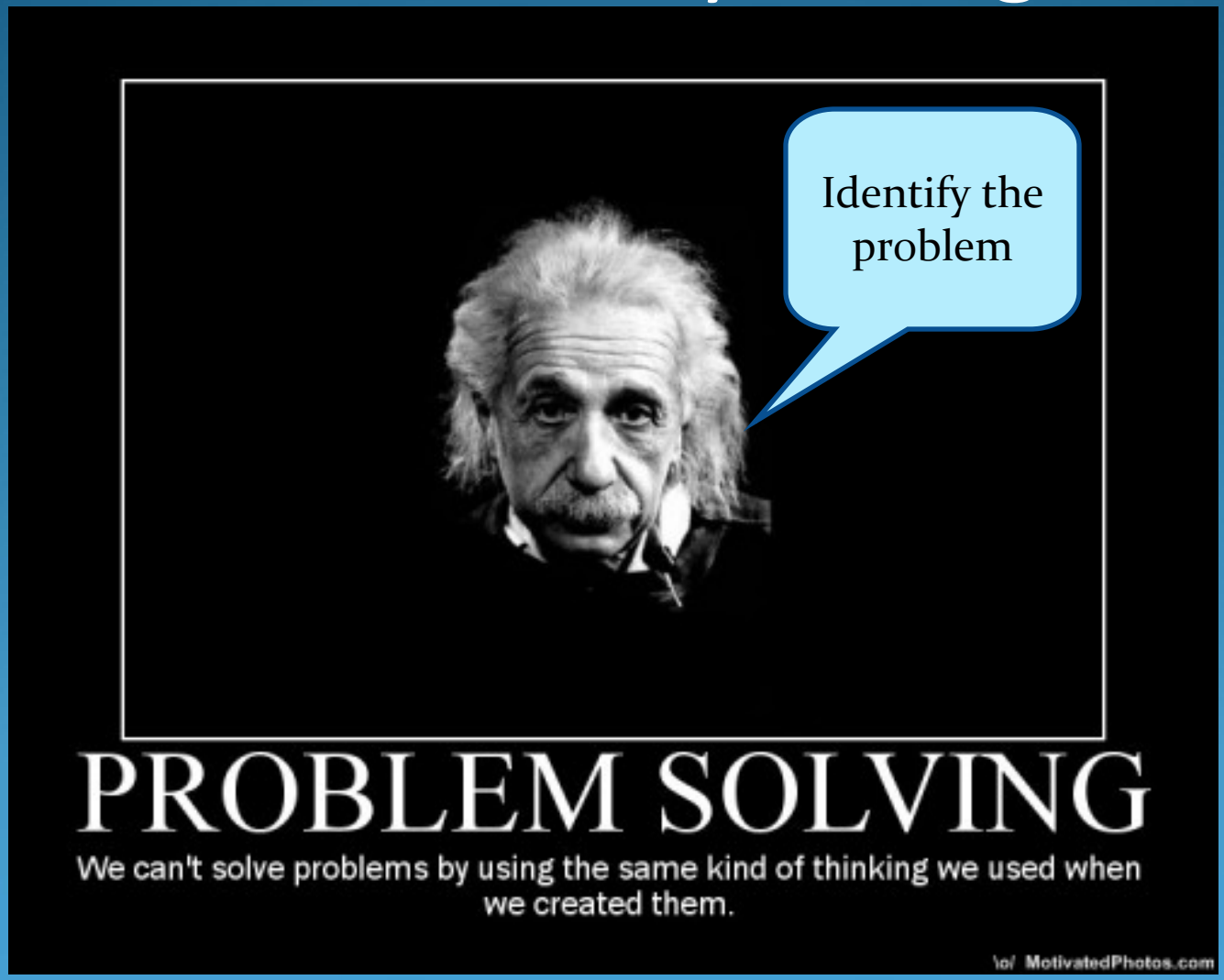
FWRI

It can be a long journey …

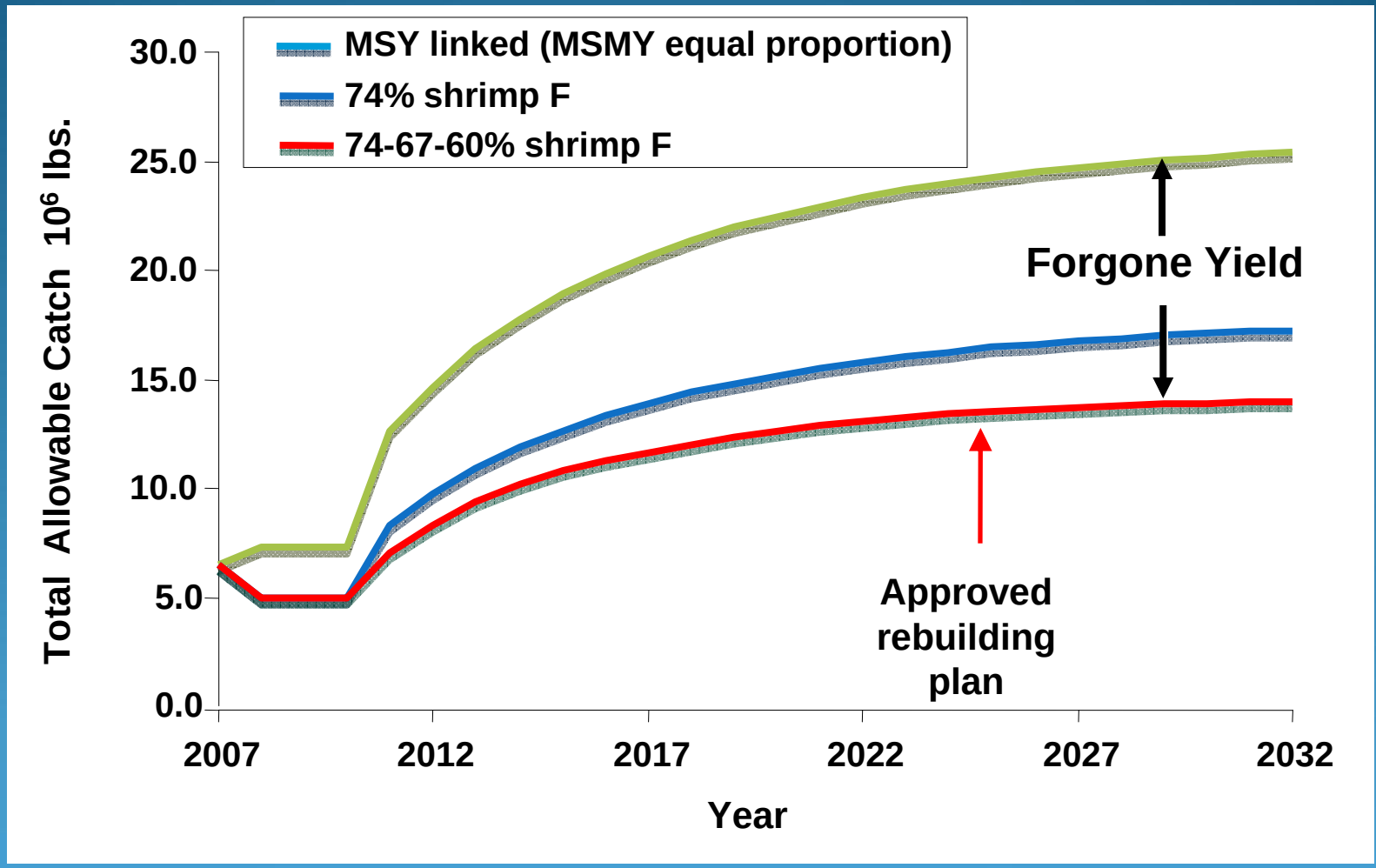
It’s complicated …

Send this back to the Council. It’s not complicated enough.

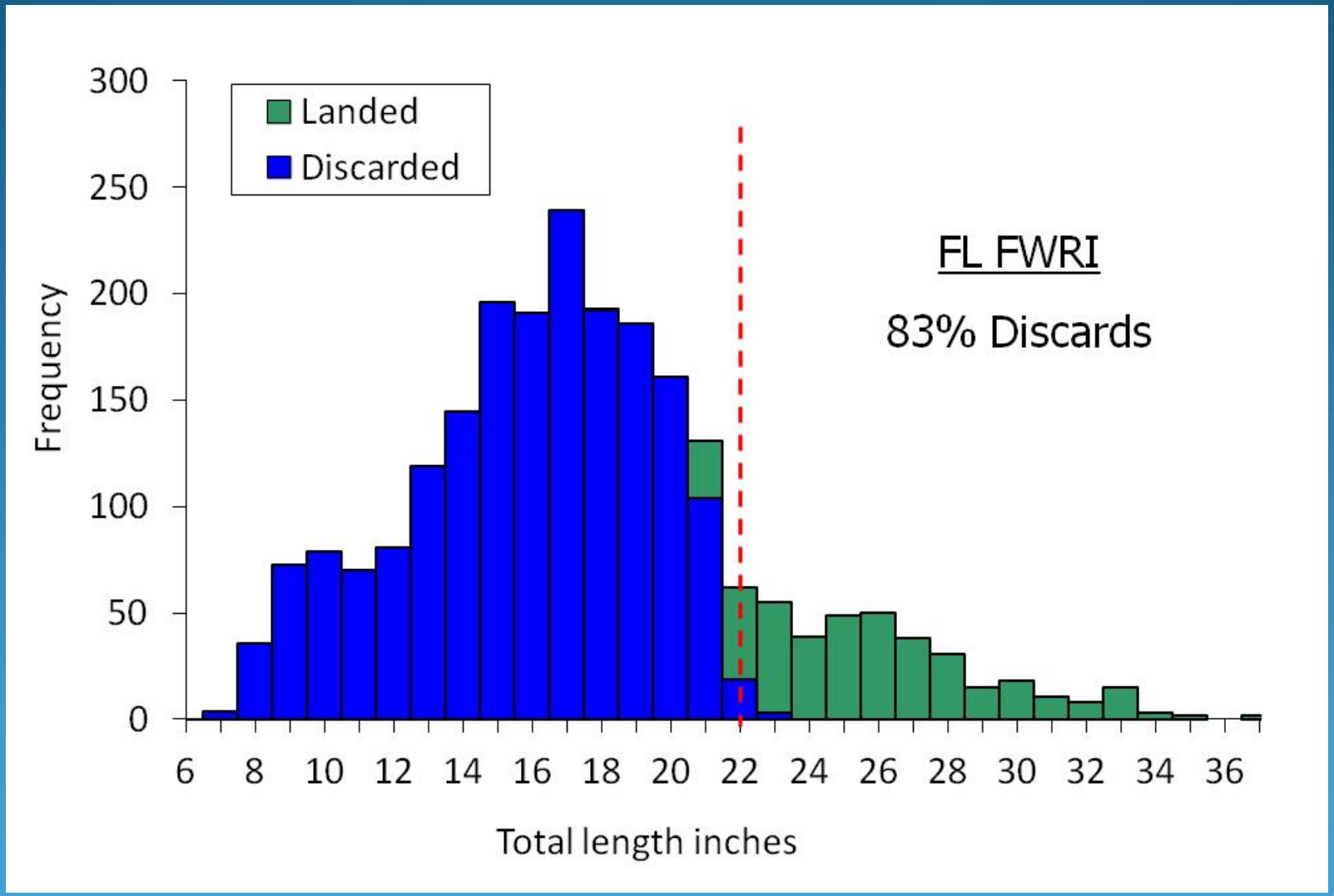
So where do you begin…



As an example …

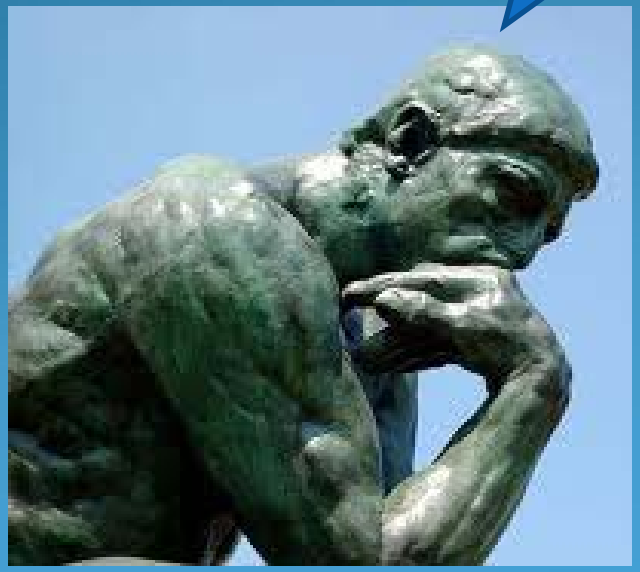


And another example …

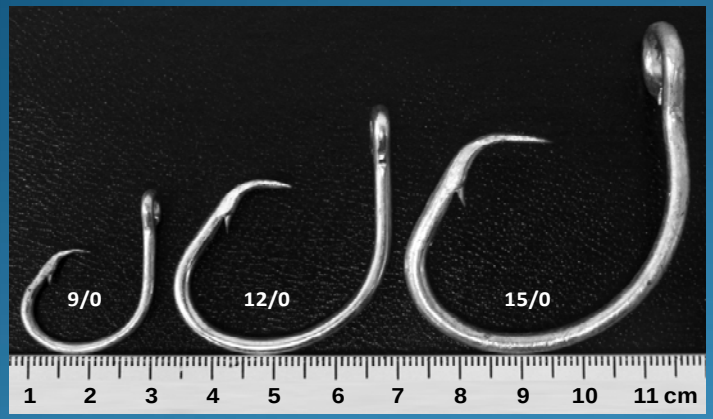


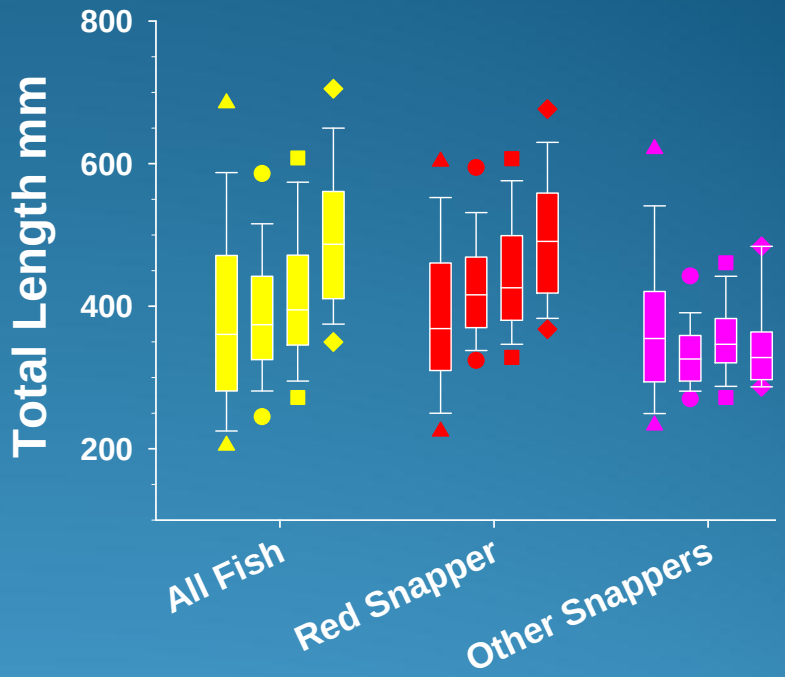
So what's next …

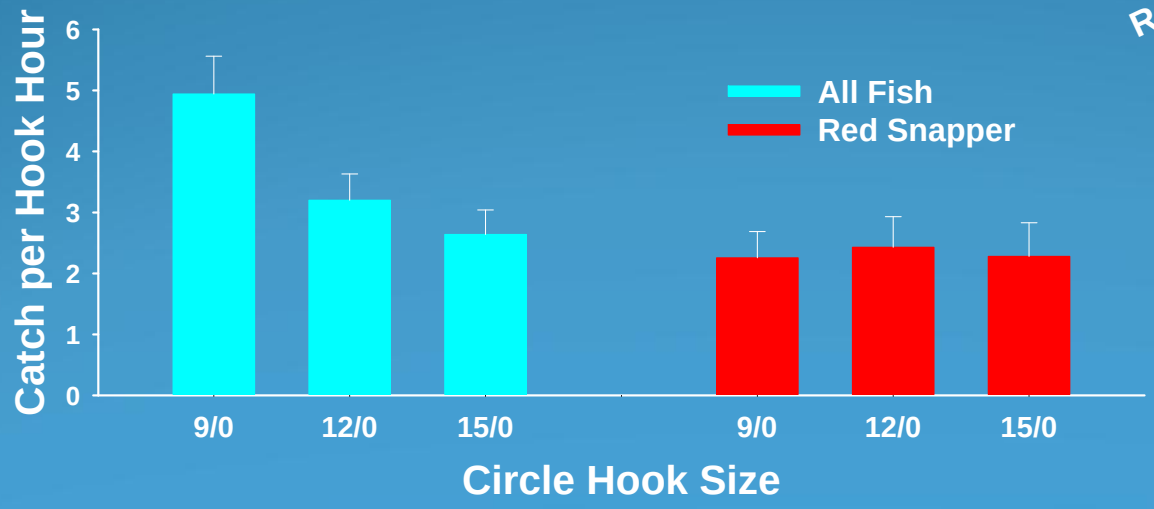
Construct a hypothesis and test it



Ask the right questions …





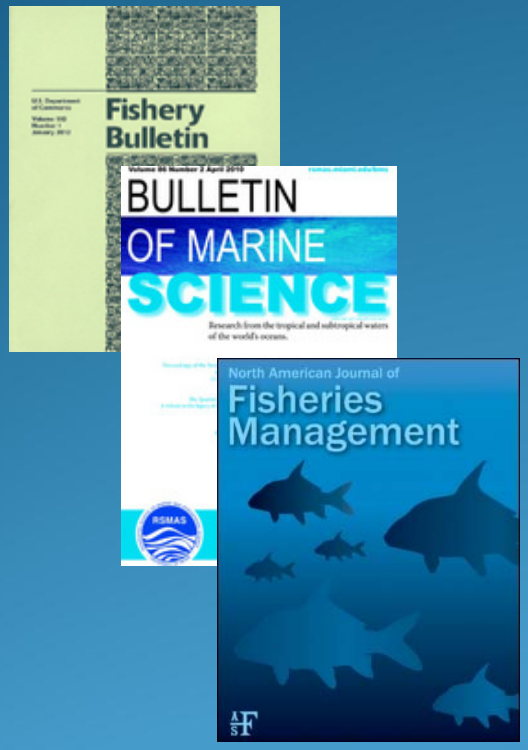


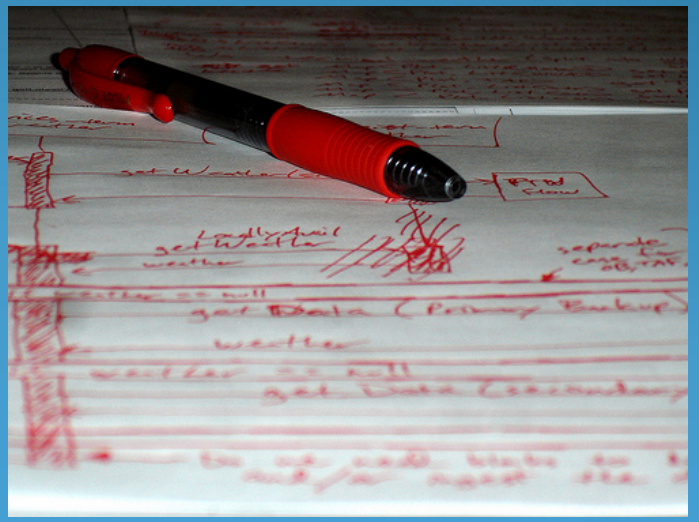
Applied Science

Now what? Whose going to use my research…

The stock assessment process …

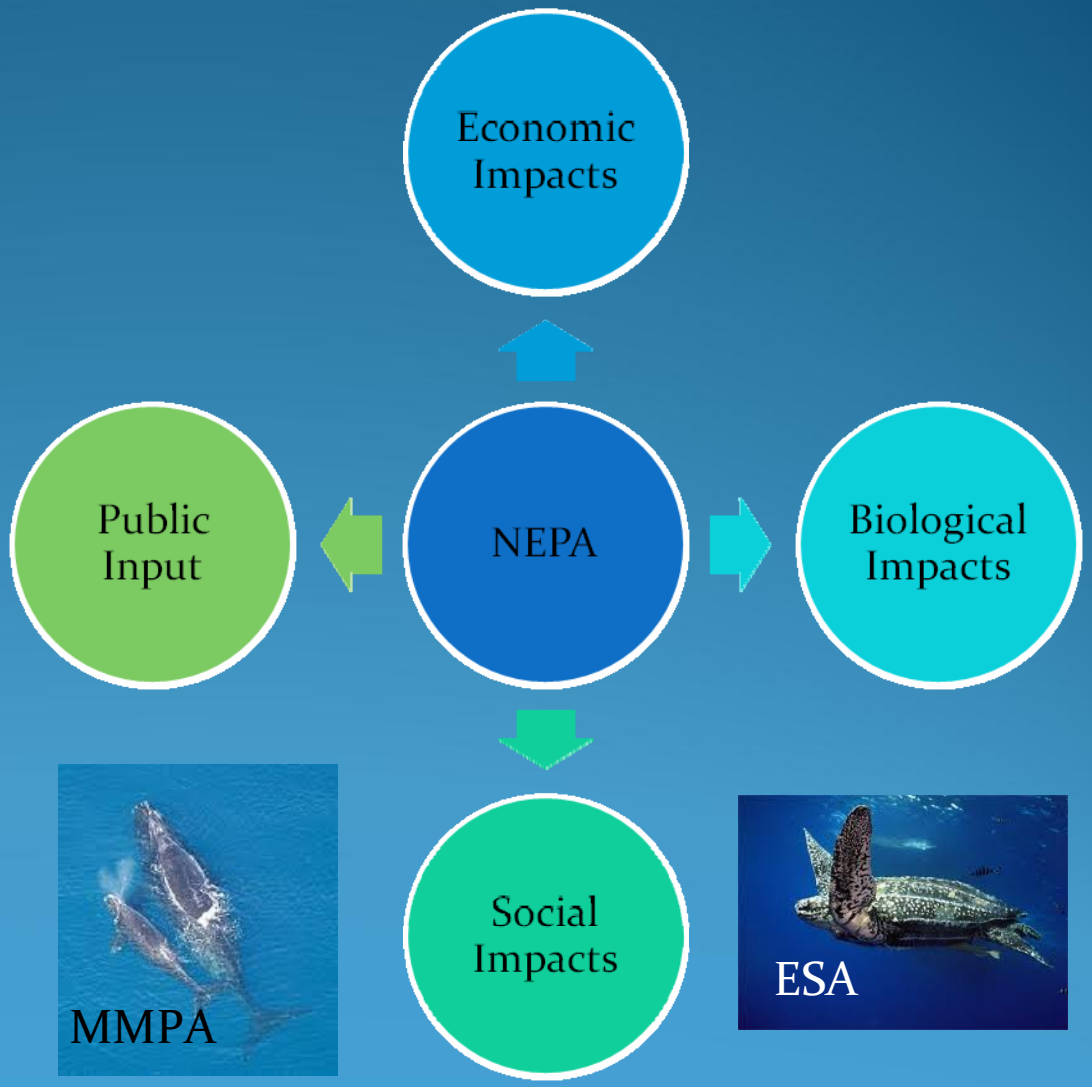
Peer reviewed publications





So where does management fit in?

Fishery Management Plans



Whose in charge?

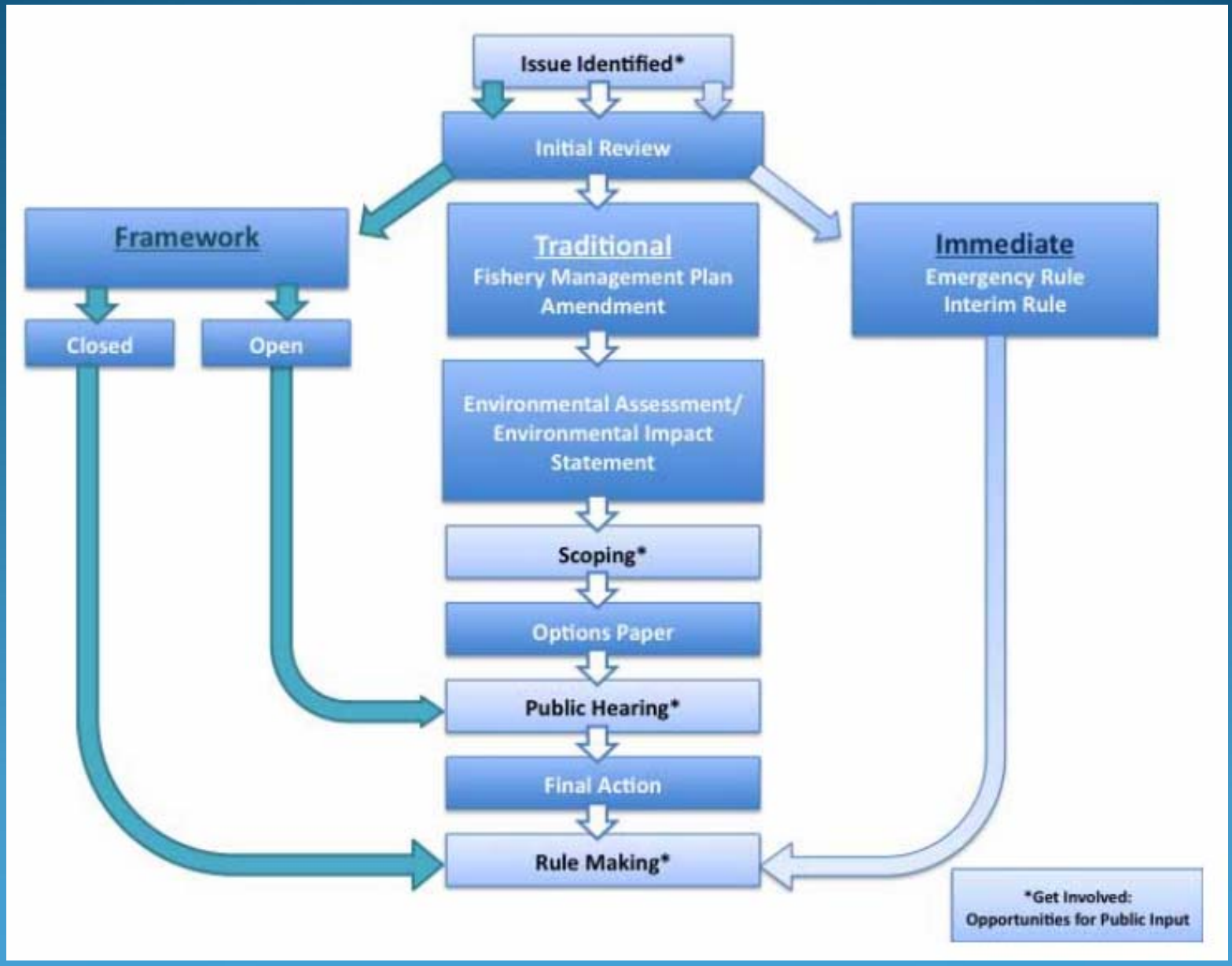
South Atlantic Fishery Management Council
"To Conserve and Manage"

CFMC

GULF OF MEXICO
Fishery Management Council

NOAA
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

The process …


Issue Identified*
Initial Review
Framework
Closed
Open
Traditional
Fishery Management Plan
Amendment
Immediate
Emergency Rule
Interim Rule
Environmental Assessment/
Environmental Impact
Statement
Scoping*
Options Paper
Public Hearing*
Final Action
Rule Making*
*Get Involved:
Opportunities for Public Input

Fishery politics

The Ten National Standards

National Standards of the Magnuson-Stevens Act

Conservation and management measures shall:

(1) Prevent overfishing while achieving optimum yield.

(2) Be based upon the best scientific information available.

(3) Manage individual stocks as a unit throughout their range, to the extent practicable; interrelated stocks shall be managed as a unit or in close coordination.

(4) Not discriminate between residents of different states; any allocation of privileges must be fair and equitable; promote conservation; and carried out in such a manner that no particular individual, corporation, or entity acquires an excessive share of such privileges.

(5) Where practicable, promote efficiency, except that no such measure shall have economic allocation as its sole purpose.

(6) Take into account and allow for variations among the contingencies in fisheries, fishery resources, and catches.

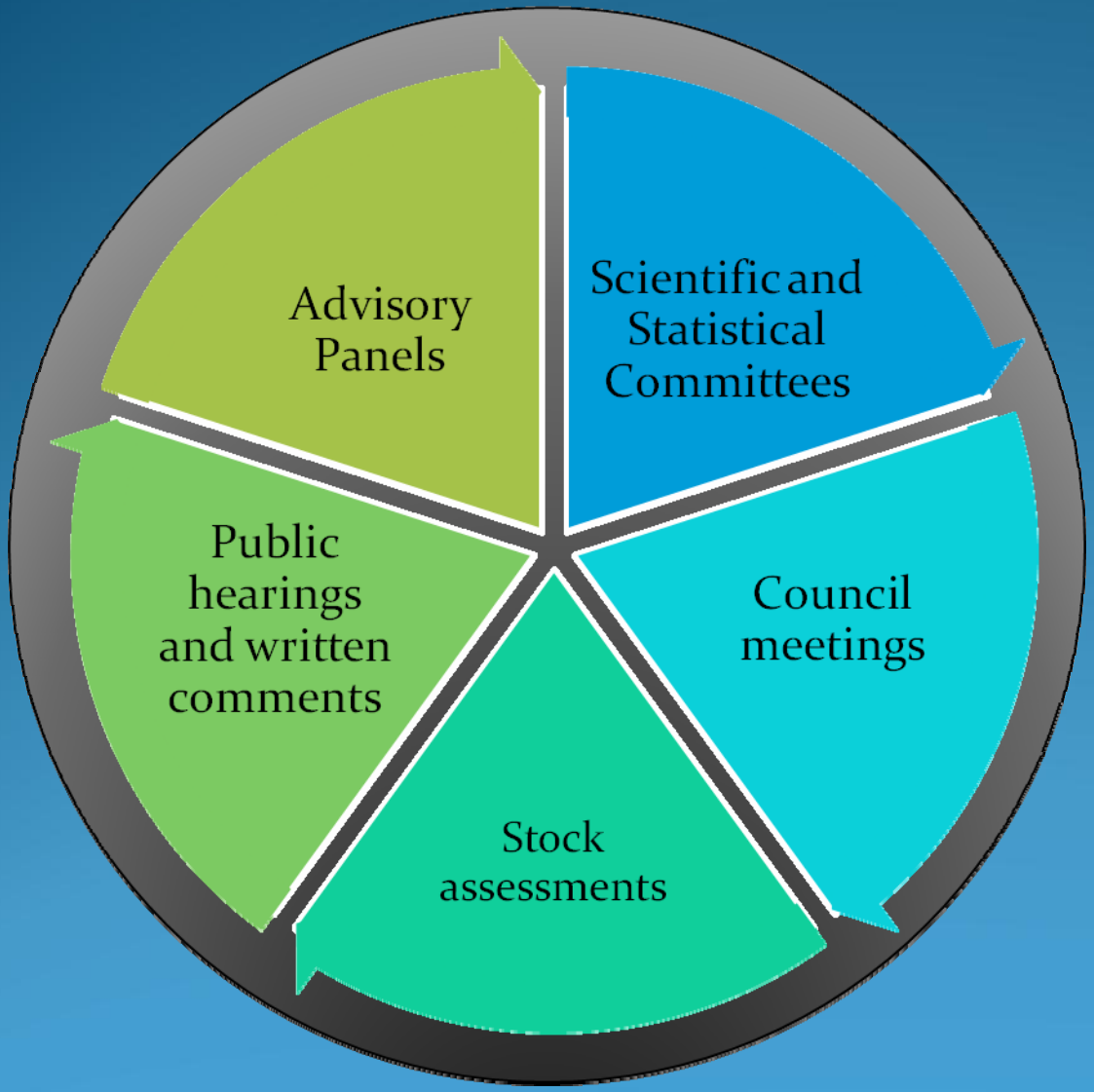
(7) Minimize costs and avoid duplications, where practicable.

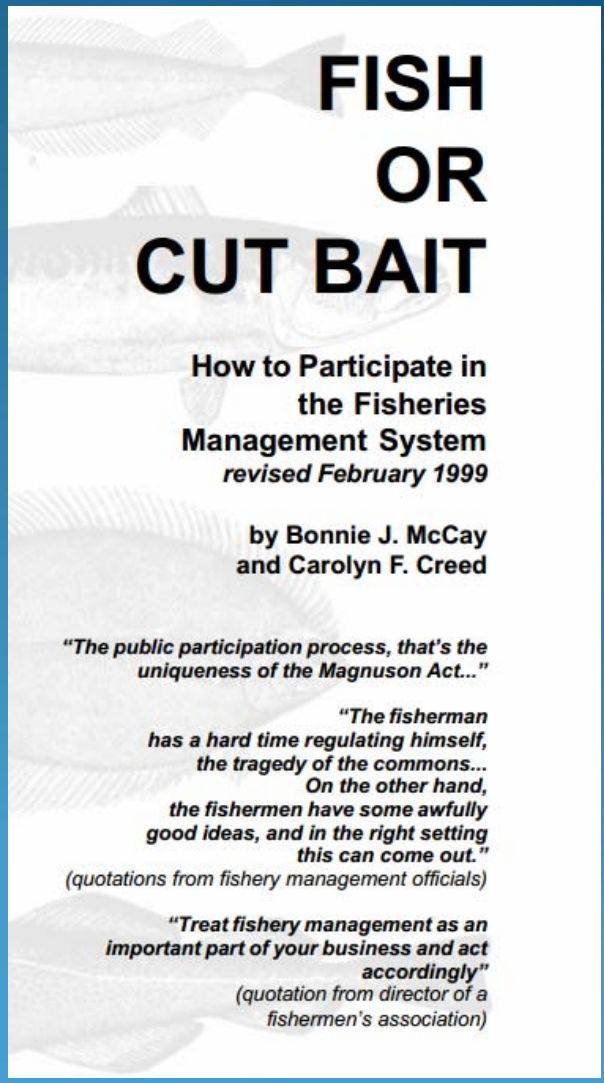
(8) Take into account the importance of fishery resources to fishing communities to provide for the sustained participation of, and minimize adverse impacts to, such communities (consistent with conservation requirements).

(9) Minimize bycatch or mortality from bycatch.

(10) Promote safety of human life at sea.

Opportunities for Public Input





The final decision …

Certification as best available science

REPORT:
BEST SCIENCE COMMITTEE

Defining and Implementing Best Available Science for Fisheries and Environmental Science, Policy, and Management

In the United States, many of the laws governing environmental conservation and management stipulate that the best available science be used as the basis for policy and decision making. The Endangered Species Act, for example, requires that decisions on listing a species as threatened or endangered be made on the basis of the "best scientific and commercial data available." Similarly, National Standard 2 of the Magnuson-Stevens Fishery Conservation and Management Act states that conservation and management measures shall be based on "the best scientific information available." Further, the U.S. Environmental Protection Agency has emphasized the role of best available science in implementing the Clean Water Act (USEPA 1997). Determining what constitutes the best available science, however, is not straightforward, and scientists, policymakers, and stakeholders often have disparate ideas on how the concept should be defined and

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D. H. Secor, University of Maryland Center for Environmental Science, Solomons
R. Wunderlich, U.S. Fish and Wildlife Service, Lacey, WA
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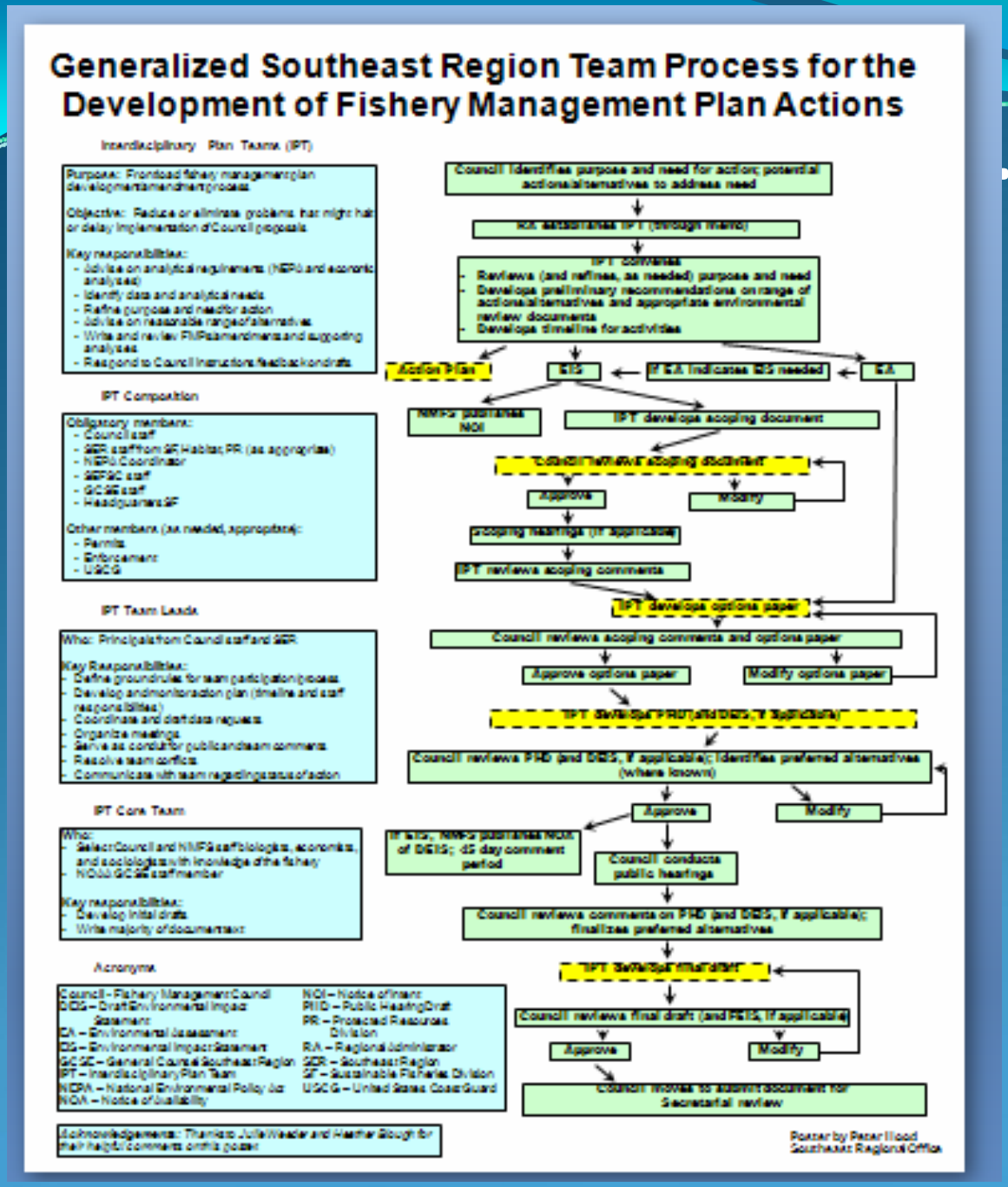
The findings and conclusions of this report are those of the committee, and do not necessarily represent those of any agency or organization.

as a body of organized knowledge or as a rigorous, standardized way of collecting information. Science may be more broadly viewed as a way of knowing things or creating knowledge, where what is defined as knowledge is based on a mix of observation, intuition, experimentation, hypothesis

tested, value-free, universally applicable knowledge that is accessible to everyone, scientist and nonscientist alike (Salter 1988; Pouyat 1999). Although the scientific process is designed to minimize the influence of values, that influence can never be entirely eliminated. Nevertheless, adherence to a

National Standard 2 –
Be based on the best scientific information available

In a nutshell…



… it's really quite simple.

For more information navigating the fishery management process

http://www.gulfcouncil.org/news_resources/Publications/Navigating.pdf

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