



NOAA
FISHERIES

Data Triage Stock Assessment Matrix

SEFSC SFD Caribbean Fisheries Branch

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March 16, 2022

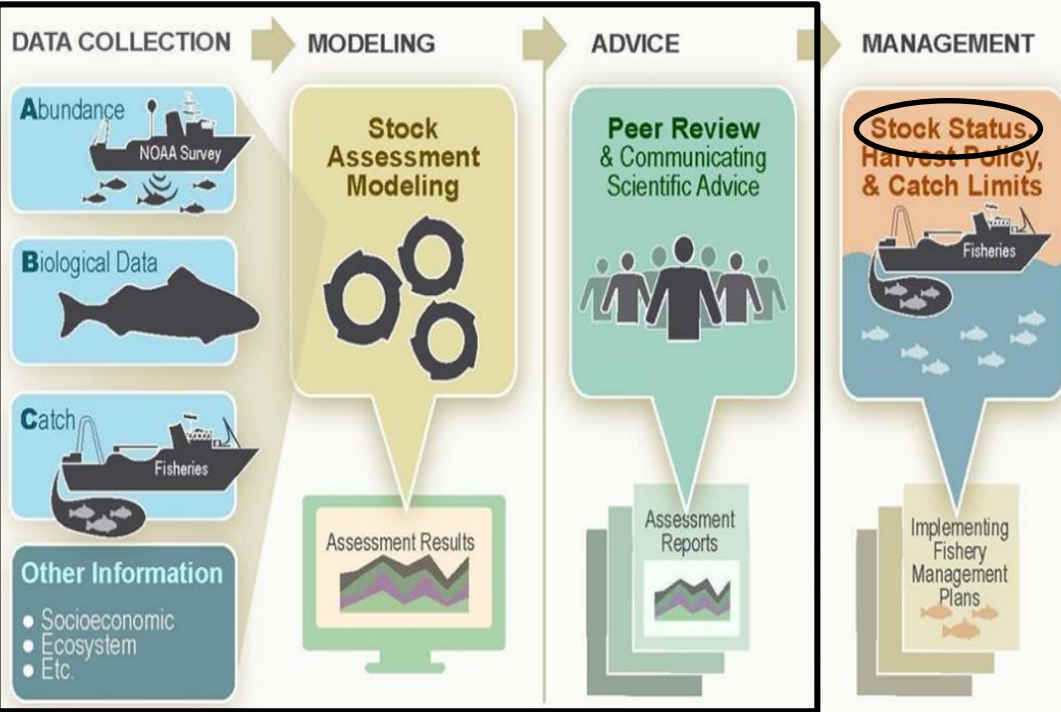
Assessment Prioritization Data Triage Overview

NOAA Fisheries Stock Assessment Process

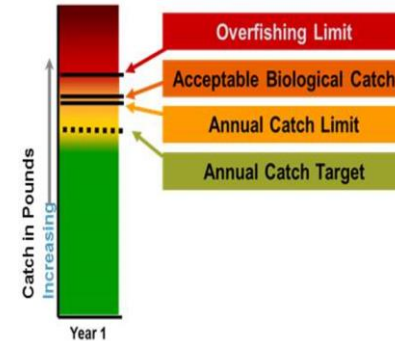
The Science Behind Sustainable Fisheries Management



Healthy Fish Stocks
= Sustainable Jobs,
Fisheries, and Food



The Magnuson-Stevens Reauthorization Act calls for the **best scientific information available** to manage U.S. commercial and recreational fisheries.



Stock Assessments Provide Scientific Advice For Sound Fisheries Management



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To inform management under MSA, what kinds of data do we need?

- **Landings/take (commercial, recreational, and dead discards)**
- **Size composition of the landings - by sector and gear fished**
- **Life history information**
 - **Reproduction**
 - **Size/age**
 - **Growth**
- ***Index of abundance (CPUE over time)**

***We have much of this information for some of the managed species,
but little of this information for many of the managed species***

First steps



Identify data gaps using:

- Data triage
- Compilation of federally funded research into a searchable database
- Coordinate among life history researchers
 - Working group formed with Stephanie Martinez Rivera as coordinator

Data gaps found, now what?



Once identified, **PRIORITIZE**, and then address data gaps through:

- Design new or expanded surveys
- Improve survey designs of existing surveys
- Collaborative research with fishers
- Maintain database of federally funded research
- Continue coordination among life history researchers

A non-comprehensive list of SEFSC Caribbean research projects

Landings and size composition data collection

- *Puerto Rico commercial port sampling*
 - *The objective of this project is to develop a statistically robust survey design to be implemented once funding is available*
- *Support Puerto Rico DNER recreational fisheries survey work*
- *US Virgin Islands port sampling*
 - *Commercial and recreational fishery sampling*
 - *Recently begun with the same objective as in Puerto Rico*
- *Fishery Information Systems funded study to improve efficiency of sampling through automation/machine learning*

Surveys will collect landings and size composition data

A non-comprehensive list of SEFSC Caribbean research projects

Life history data collection

- *Puerto Rico shallow water sampling*
 - *The objective of this project is to collect samples of shallow water finfish species as identified in the data triage*
- *Puerto Rico deep water snapper sampling and life history work*
 - *Kate Overly and Andy David at the SEFSC Panama City Laboratory and Virginia Shervette, USC Aiken*
- Working group to coordinate among life history researchers
 - Includes DNER, University, and SEFSC scientists
- Support DNER life history laboratory
 - Data analysis support and equipment/supply purchases

A non-comprehensive list of SEFSC Caribbean research projects

Abundance indices

- Develop CPUE series using commercial fisher logbook data
 - Completed for SEDAR 80 Queen Triggerfish
- Develop indices from Reef Visual Census (RVC) survey
 - Completed for SEDAR 80 Queen Triggerfish - Jay Grove *et al.*
- *Lobster recruit survey*
 - *Cooperative research with Puerto Rico commercial fishers*
 - *Will expand to USVI as funding becomes available*
- *Deep water snapper camera survey*
 - *Preliminary work to design a fishery independent survey for an abundance index for deep water species*

A non-comprehensive list of SEFSC Caribbean research projects

Gear selectivity studies

Focus on lobster as per SEDAR recommendation

What sizes of animals are caught by the fishery?

- Depends upon the gear fished
- Important input to the assessment models

- *US Virgin Islands trap study*
 - *In partnership with US Virgin Islands DFW*
- *USVI diver survey*
 - *In partnership with University of the Virgin Islands (St. Thomas survey)*
 - *In partnership with US Park Service (St. John and St. Croix surveys)*
- *Puerto Rico trap study*

A non-comprehensive list of SEFSC Caribbean research projects

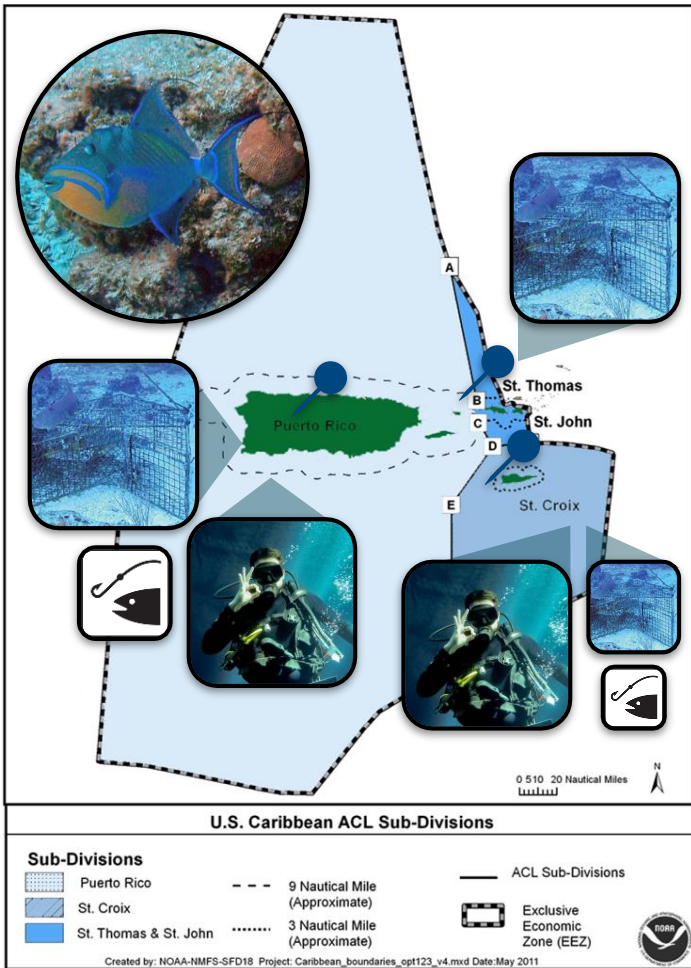
Additional projects

- *SEFSC strategic planning project*
 - *To include SEFSC-specific planning workshop and workshop with partners (e.g., CFMC, SERO, DFW, DNER, etc.)*
 - *Progress to date includes development of a database of federally funded projects in the US Caribbean*
- *Automate Puerto Rico correction factor calculation*
 - *Develop new data entry system for correction factor survey data*
 - *Import electronic logbook data into ACCSP database*
 - *Develop mechanism to merge electronic and traditional CCL data*
 - *Automate calculation of correction factors*
- *SEAMAP-C Reef video data QA/QC in collaboration with SEFSC staff*

A non-comprehensive list of NOAA funded Caribbean research projects

MARFIN, S&K, CRP funding

- >\$6.5M in NOAA funding to non-NOAA researchers for US Caribbean projects from 2015-2020
- Research projects include life-history, genetics, survey design, aquaculture, and spawning aggregation work
- Researchers include: Appeldoorn (2 awards), Ault (2 awards), Baeza, Butler, Cruz, Cruz-Marrero, Davis, Espinoza (2 awards), Harms-Tuohy (2 awards), Heppell, Hoenig, Hueter, Matos-Caraballo, Nemeth, Page, Patterson, Rosemund, Ruiz, Schizas, Shervette (4 awards), Shivlani, Stevens, Tookes, Tuohy, Turingan, Yandle



SEDAR 80 U.S. Caribbean Queen Triggerfish Operational Assessments

Terminal year: 2019

Lead Analyst: Nancie Cummings

Data Contact: Adyan Rios

Data inputs

x3 Island Platforms

- Commercial Logbook Landings
- Commercial Logbook Indices
- Trip Interview Program Lengths
- Region-Specific Life History
- Socio-econ. & Fishing Behavior
- Fishery Ind. RVC Indices

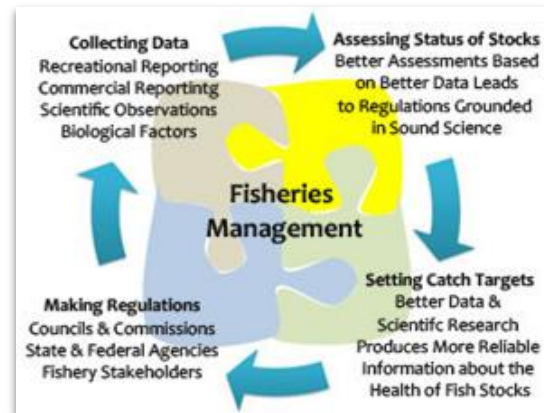
FY22 SEFSC Milestone
First CFB assessment attempted
using Stock Synthesis & indices
and robust local life history



CFMC Public Meeting - December 7, 2021
Adyan Rios, SEFSC SFD Caribbean Fisheries Branch

2022 Roadmap SEDAR 80 Project Schedule

- ☐ Life History TWG 1/28
- ☐ Indices Final TWG 2/28
- ☐ Selectivity TWG 2/28-3/2
- ☐ Analytical Products 3/4
- ☐ Reports to SEDAR 7/1
- ☐ Reports to Council 7/8



SEFSC SFD Caribbean
Fisheries Branch

Assessment Prioritization
Data Triage Overview



DATA COLLECTION		Yellowtail Snapper	Queen Triggerfish	Red Hind	Spiny Lobster	Blue Runner	White Grunt	Coney
A	A measure, or relative index, of the number or weight of fish in the stock - Fishery-independent surveys - Catch rates by fishermen	✓	✓	✗	✗	✗	✗	✗
B	Information on fish growth rates and natural mortality - Whole Fish (Size) - TIP - Gonads (Maturity) - Otolith (Age)	✓	✓	✓	✓	✗	✓	✓
C	Amount of fish removed from a stock by fishing - Logbooks - Dockside monitoring	✓	✓	✓	✓	✓	✓	✓