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UNIVERSITY OF MIAMI
COOPERATIVE INSTITUTE
for MARINE & ATMOSPHERIC
STUDIES

Caribbean Fisheries Branch Update Report to the CFMC

April 22, 2025

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CFB update topics for CFMC

- ***Stock assessment updates – SEDAR 84 and SEDAR 91****
- ***Strategic Planning progress report***
- ***Collaborative projects with US Caribbean partners***
- ***Data and analytical improvements update***
 - Puerto Rico correction factors****
 - Landings data outliers****
 - CCL form history****
- ***Application of Alternative Assessment Methods***
 - SEDAR 2025/26 Workshop****
- ***Changes to SEDAR***

**** CFMC action requested***

Caribbean Fisheries Branch



Strategic Planning

10 ongoing projects
37 completed

Improving collaborative data collection to support fisheries management

Enhancing collaborations and workflows

Engaging regional federal, territorial, and university partners and stakeholders



Adyan



Carly



David



Katherine



Kevin



Matt



Rachel



Refik



Stephanie



Data Collection

Collaborate with regional partners and local fishers to conduct:

- Port sampling in PR and USVI
- Cooperative lobster trap surveys in PR and USVI (2025)
- Reef fish life history sampling
- Reef fish survey in PR (2024) and USVI (2025)
- Research with regional graduate students



Data Analysis and Provision

Reproducible workflows to support:

- Stock assessments
- Western Central Atlantic Fishery Commission reporting requirements
- Caribbean Fishery Management Council and external requests
- Data storage and automation
- Aquaculture stakeholders
- Management Strategy Evaluation



Stock Assessments

Coordinated by the SouthEast Data and Review Process

2024-2025

Queen Triggerfish
Yellowtail Snapper
Stoplight Parrotfish
Spiny Lobster

2025

SEDAR Workshop:
Application of Alternative Assessment Methods





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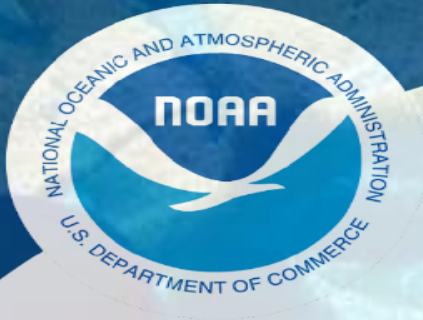
US Caribbean Stock Assessment Updates

SEDAR 84 – Yellowtail Snapper (PR & STTJ), Stoplight Parrotfish (STX)

- Assessment Workshop Reports – to be circulated in phases: April 28, May 12, May 26 for review by the AW panel, followed by public release
- Review workshop July 15-18, 2025 (CIE/SSC)
- Assessment to be reviewed by the **SSC in November ** 2025** and presented to the **CFMC in December 2025**
 - Additional session of the SSC?

SEDAR 91 – Spiny Lobster (all islands)

- Final Assessment Workshop webinar scheduled for April 25th (this Friday)
- Assessment workshop reports scheduled for AW panel review on May 26, 2025
- Review workshop scheduled for August 26-29, 2025
- Assessment to be reviewed by the **SSC in November 2025** and presented to the **CFMC in December 2025**



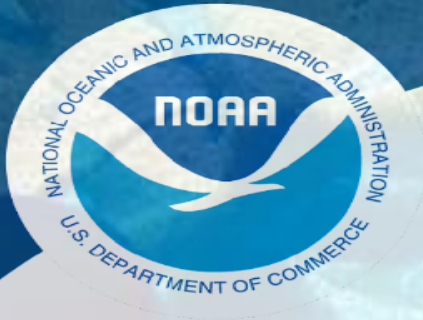
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Strategic Planning Update

Caribbean Strategic Planning

- **Objective** – collaboratively identify data improvement strategies to enhance stock assessment and fisheries management advice for Puerto Rico and the U.S. Virgin Islands
- **Projects** – 53 short-term projects total (39 SEFSC, 14 Regional)
 - 37 completed, 10 in progress, 6 remaining
- **Publishing** – workshop reports as Tech Memos; Manuscript in prep
- **Future steps** – Continue to accomplish projects; Plan for projects operational needs
- **Deliverables** – Online accessibility in prep; Contact rachel.banton@noaa.gov for specific deliverables
- **Guiding the work of CFB** – Coordination to optimize resource usage; Strengthened working relationships; Operationalized automation for data processes; Open science principles





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Collaborative Projects with US Caribbean Partners

Ongoing Projects with Regional Partners

- Puerto Rico Recreational Port Sampling Support
 - Port sampling underway 2024-present; focus on vessels, shore based fishing in future
- USVI Port Sampling (all sectors) Collaboration
 - Field testing electronic measuring system; sampling to begin in the next few months



Ongoing Projects with Regional Partners

- Fishery independent lobster trap survey in cooperation with Puerto Rico commercial fishers and local scientific consulting firm
 - Second year of sampling to develop an index of recruitment to the fishery
- Collection of life history samples in Puerto Rico
 - Collected samples sent to SEFSC Panama City laboratory and USC Aiken

Ongoing Fishery Independent Reef Fish Surveys

Deep water snapper survey

- Hook & line and video survey in cooperation with Puerto Rico fishers and local scientific consulting firm
- Two years of surveys in Puerto Rico at depths of 50-450m
- Additional years with survey now 20-450m – that survey now overlaps with the NCRMP/RVC diver survey

Ongoing Fishery Independent Reef Fish Surveys

NCRMP/RVC diver survey

- Survey conducted every two years, all islands
- Depths of 0-30m; some years to 50m
- Only long term FI survey that has supplied abundance indices for stock assessments
- Scheduled to sample this year

Survey calibration project – proposed, dependent upon available funding

- Studies to begin this year to calibrate the various sampling gears – divers, cameras, and hook & line

Projects Begun, Additional Work Contingent Upon Continued Funding

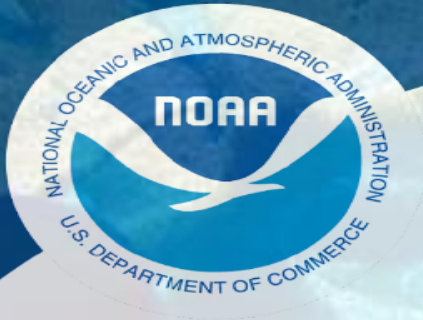
- Analytical support for classification of benthic habitats to design surveys
 - Depth, substrate complexity, substrate hardness from existing multi-beam sonar datasets
- Research Associate to integrate and coordinate fishery independent sampling surveys in the US Caribbean – *Hiring now*
- Incorporating AI/machine learning to improve fishery independent queen conch surveys
 - Field testing a prototype camera system

Projects Begun, Additional Work Contingent Upon Continued Funding

- Pilot stakeholder survey: What are the priorities of fishery stakeholders regarding fishery management?
 - Data will inform Management Strategy Evaluation
 - Proposal submitted, funding presumed, to begin Fall, 2025?
- Pilot pelagic species data collection and analysis
 - Pilot sampling of the for-hire sector, St. Thomas, USVI
 - Analysis of existing catch, landing and discard data

Proposed Projects Contingent Upon Funding

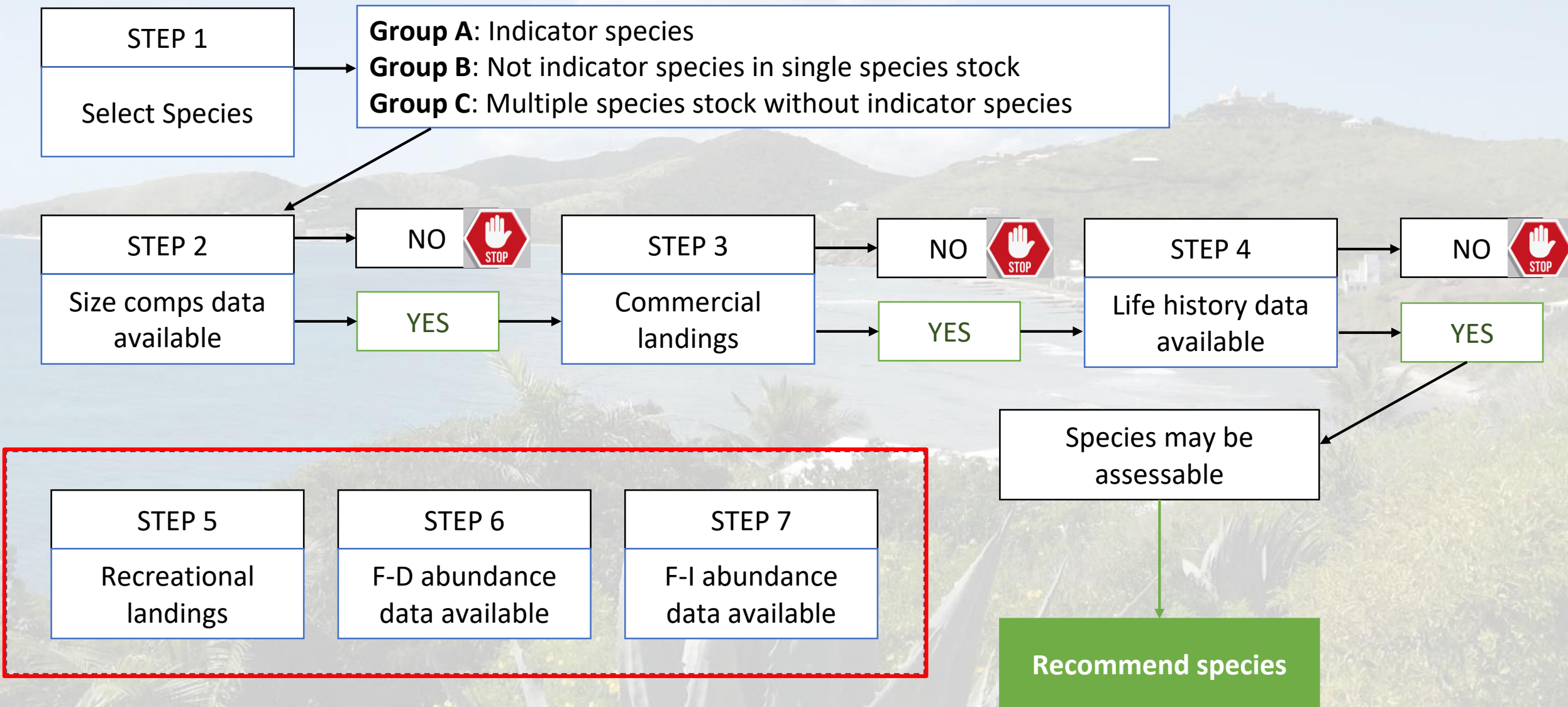
- Extend existing Puerto Rico lobster recruit survey into the US Virgin Islands
- Extend existing Puerto Rico reef fish hook and line survey into US Virgin Islands and include shallower water sampling sites (20-450m)
- UVI student to develop methodology to use remote sensing (e.g., satellite photos) to estimate total fishing effort



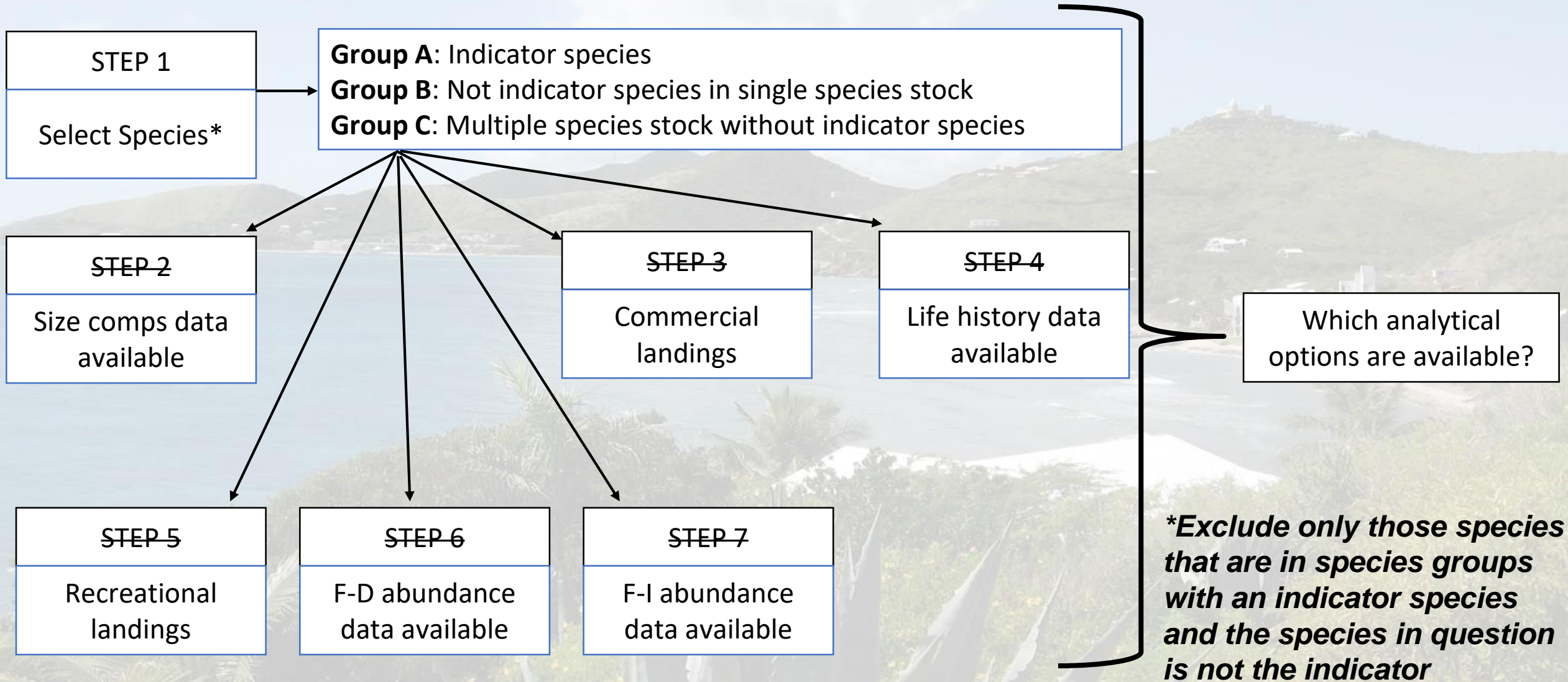
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Data and Analytical Improvements Update

Data Triage Process



Data Triage Process



Data and Analytical Improvements

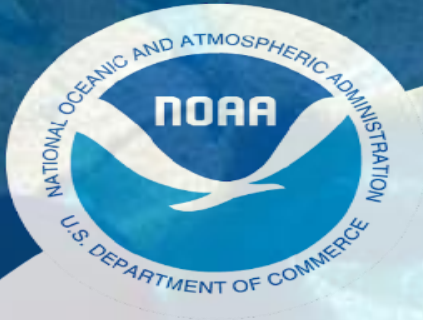
- Caribbean Trip Interview Program Modernization Project
 - Length composition data from port sampling
 - Developed improved data accuracy, quality control, and analysis
- WECAFC Data Provisioning
 - WECAFC data provisioning processes aligned with Data Collection Reference Framework (DCRF)
- Outlier Analysis SEDAR 91 Caribbean Spiny Lobster
 - Collaborative project between Puerto Rico DRNA and the SEFSC resulting from the SEDAR 91 Data Workshop
 - Corrections recommended by DRNA totaled ten trips with a total of 19,403 pounds (2023) and 8,403 pounds (2022)
 - ***ACL implications***

Data and Analytical Improvements

- Calculation of Puerto Rico Correction Factors 2014-2019
 - Collaborative project between Puerto Rico DRNA and the SEFSC resulting from the SEDAR 91 Data Workshop
 - Conducting a review of the correction factor raw data and calculations
 - Average of 2014-2019 used for 2020-present correction factors
 - ***ACL implications***
- Species and Gears on the Island-Based Catch Records Forms
 - Numerous form changes over time, particularly prior to ~2000, but also 2011, 2016, 2019
 - Species not on the form have to be written in
 - ***ACL implications***

Recommendations

- Systematic review of trip level landings outliers – all islands
- Systematic review of Puerto Rico commercial landings correction factors
- Resolve database incompatibilities and calculate Puerto Rico correction factors by year and coast
- Systematic review of Commercial Catch Logbooks/Reports to determine species missing from the forms
- *SSC/CFMC review of ACLs in light of above items*



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Application of Alternative Assessment Methods SEDAR 2025-26 Workshop

SEFSC Exploration of Alternative Assessment Methods

- Length Based Risk Assessment
 - Data limited approach being conducted by UM scientist in parallel with SEDAR 84
- Stock Assessment Continuum Tool exploratory analyses in parallel with S91
 - Allows for implementation of several standard data-limited assessment methods
- MSE complementary to S84 stock assessment
 - Tests management options against stakeholder objectives and long-term uncertainty (will present results during May Caribbean Seminar)

SEDAR 2025-26 Workshop

- March/April 2026
- Review and recommend options for alternative approaches to providing scientific advice to managers
 - Approaches likely to differ among species and species groups
- Strategic planning toolbox working group to form organizing committee
- Need CFMC staff participation*
- Prepare ToRs and SOW*
- Consider including Pacific Islands staff

SEDAR 2025-26 Workshop Draft Terms of Reference

- Review and discuss alternative approaches to single species assessments as outlined in the literature or as applied in other data-limited regions and explore novel ecosystem-based fishery management approaches that have not yet been applied or published. Review where ecosystem-based fishery management approaches have been successfully applied in other regions.
- Review data availability in the U.S. Caribbean and determine what types of alternative methods may be feasible for implementation.
- Provide research recommendations to advance development and implementation of methods; i.e., tools that are alternative or complementary to conventional stock assessment.

SEDAR 2025-26 Workshop Draft Terms of Reference

- Provide guidance on processes for developing management advice that will meet legal mandates when using tools that are alternative to or complementary to conventional stock assessment.
- Provide recommendations on methods that could be most easily applied in the U.S. Caribbean, in the present scenario or under future improved data collection scenarios.
- Prepare a SEDAR procedures document addressing recommendations that will be used to guide future SEDAR assessments.



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A Review of Proposed SEDAR Changes

Background Information

- There is a need to increase the timeliness and throughput of fisheries management advice
- Resources are not increasing and are likely to decrease; more efficient assessment processes are required
- The duration of SEDAR projects has increased substantially

Recommended Changes – February 2025

SEFSC takes responsibility for the assessment modeling component of SEDAR process

Impetus for change:

- Assessment webinars are inefficient and often do not produce useful and consistent scientific advice
 - Overall, we rarely gain technical insights during webinars
 - Create logistic workload that could be better spent on model work
 - Not an efficient or useful way to engage stakeholders
 - Difficult to find times when all can attend

Proposal for SEFSC SEDAR Projects for SAFMC, GFMC, and CFMC

- The SEDAR process will be limited to those assessments with sufficient new information to require external participation/review
- The SEFSC proposes to take responsibility for the assessment component of the SEDAR process. Data and review components remain unchanged
- Specific components of the assessment process will be negotiated between the Center and Council Staff with input from SSC/Council. A Council may elect to prepare a statement of work or communicate verbally
- ***The Councils will establish a Technical Team with diverse scientific expertise and fishing experience as appropriate for the analyses to be reviewed and the species being assessed. Additional consideration should be given to the ability of named Technical Team members to attend and participate in meetings and discussions.***

How to maintain transparency if the assessment process is run by the SEFSC?

- The Data Workshop is a public meeting
- If there is no DW, we can hold a data webinar if requested by the Council
 - The SSC meetings and their public comment opportunities
 - The Review Workshop is a public meeting
- Technical input of the SSC is important, include SSC in the process
- Provide progress report(s)
- Seek input from the technical team as needed



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** CFMC action requested*

Questions??

