Southeast Fisheries Science Center and Regional Partners Update Presentation

August 11, 2026

Presentation Topics – Lightning Talks

Collaborative research

Puerto Rico recreational fishery port sampling

Improved efficiency

Lobster survey coordination

Social science and stakeholder engagement

SSRG

Stakeholder survey

Fishery independent surveys

Conch survey

ROV camera array

NCRMP survey - SEAFISH index

Electronic monitoring and cooperative research

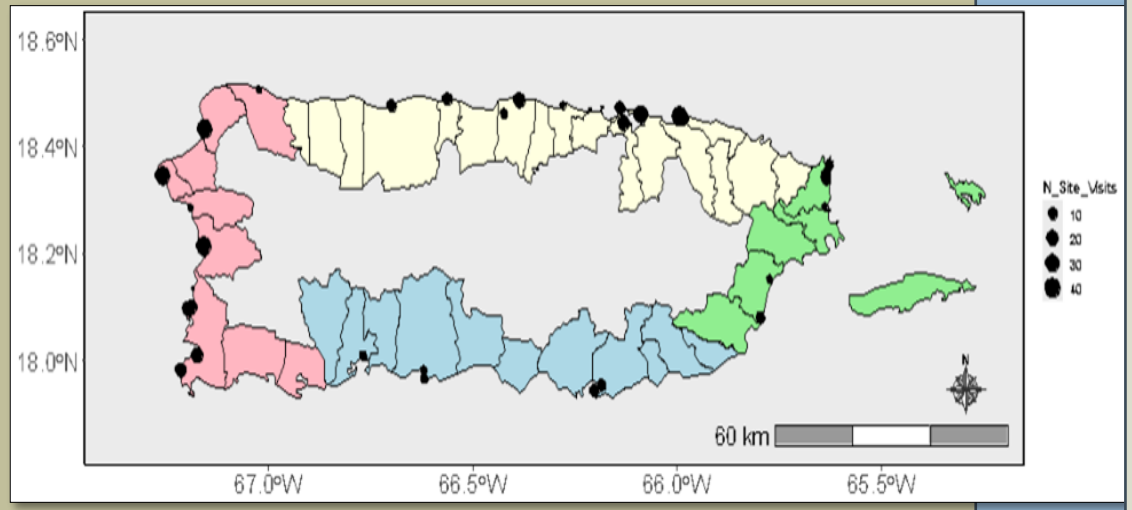
Deep water reef fish and GFISHER

NOAA FISHERIES

Results of improvements to recreational fisheries data collection

Grisel Rodríguez -Ferrer, David Behringer, Rachel Banton, Steven Smith, Kevin McCarthy

Methodology

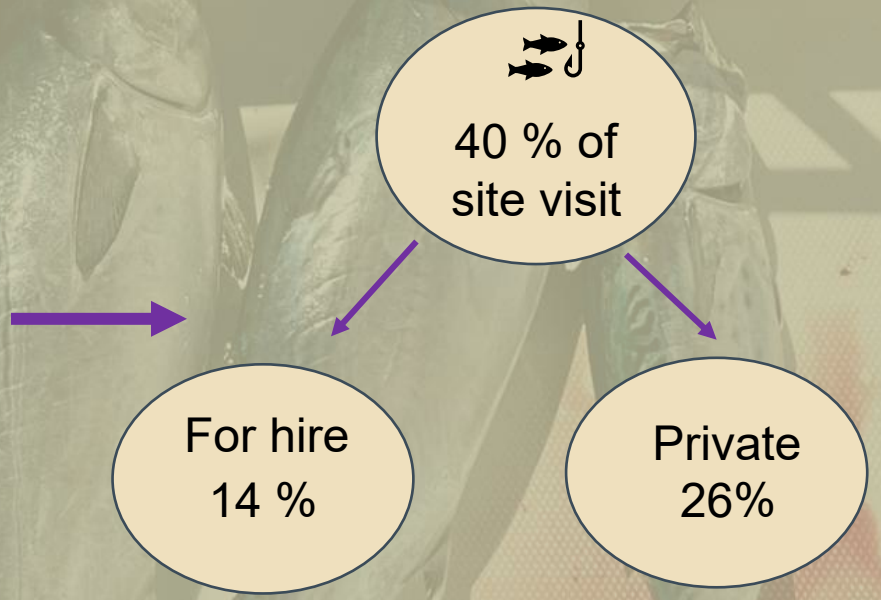


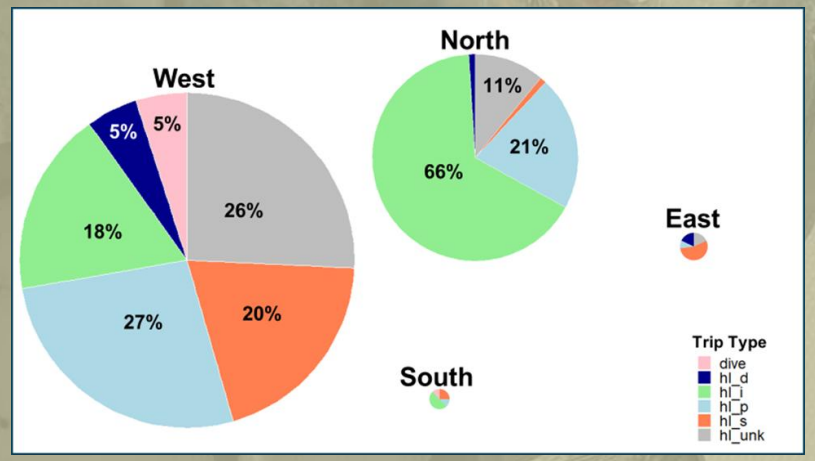
- Sampling started January 2024.
- Site selection was non-random until November.
- Randomized sites and time shifts began in November 2024.
- Most sampling occurred on the north and west coasts. Two samplers.
- Captains of all returning vessels were interviewed; all landed catch was measured.
- Trips were classified into seven types based on species, gear, depth, and location:
  - deep hookline → (greater than 400 ft) queen & silk snappers
  - pelagic hookline → dolphifish and tunas
  - shallow hookline → lane and yellowtail snappers
  - inshore hookline → tarpon and snook
  - unknown hookline → trips used hookline but a more specific trip type was undetermined
  - dive → scuba or free diving

RESULTS

Number of site visits, number of fishing trips, categorized as for-hire vs. private recreational trips, number of non-fishing trips, and total number of trips per region.

		Number of Recreational Trips			
	N site visits	Fishing (for-hire, private)		Non-fishing	Total
North	241	82	(40, 42)	333	415
West	218	133	(35, 98)	318	451
South	54	8	(4, 4)	38	46
East	78	11	(6, 5)	231	242
Total	591	234	(85, 149)	920	1,154

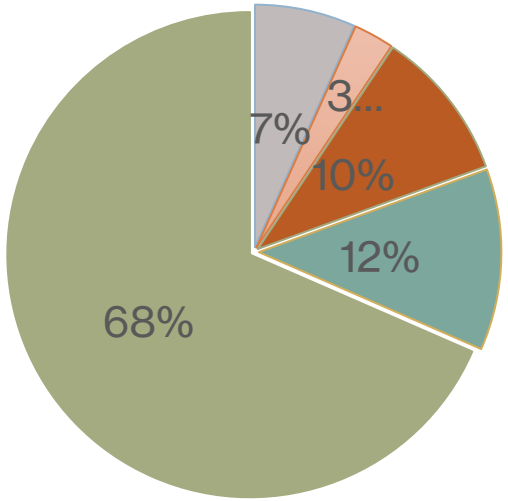




Percentage of trips by trip-type by region. Size of each pie is representative of the number of trips sampled in each region.

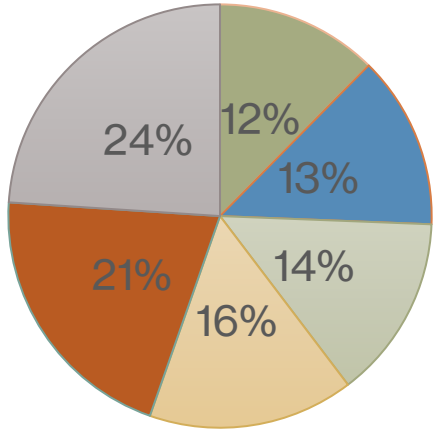
SPECIES RELEASED ALIVE

Species released alive for-hire mode



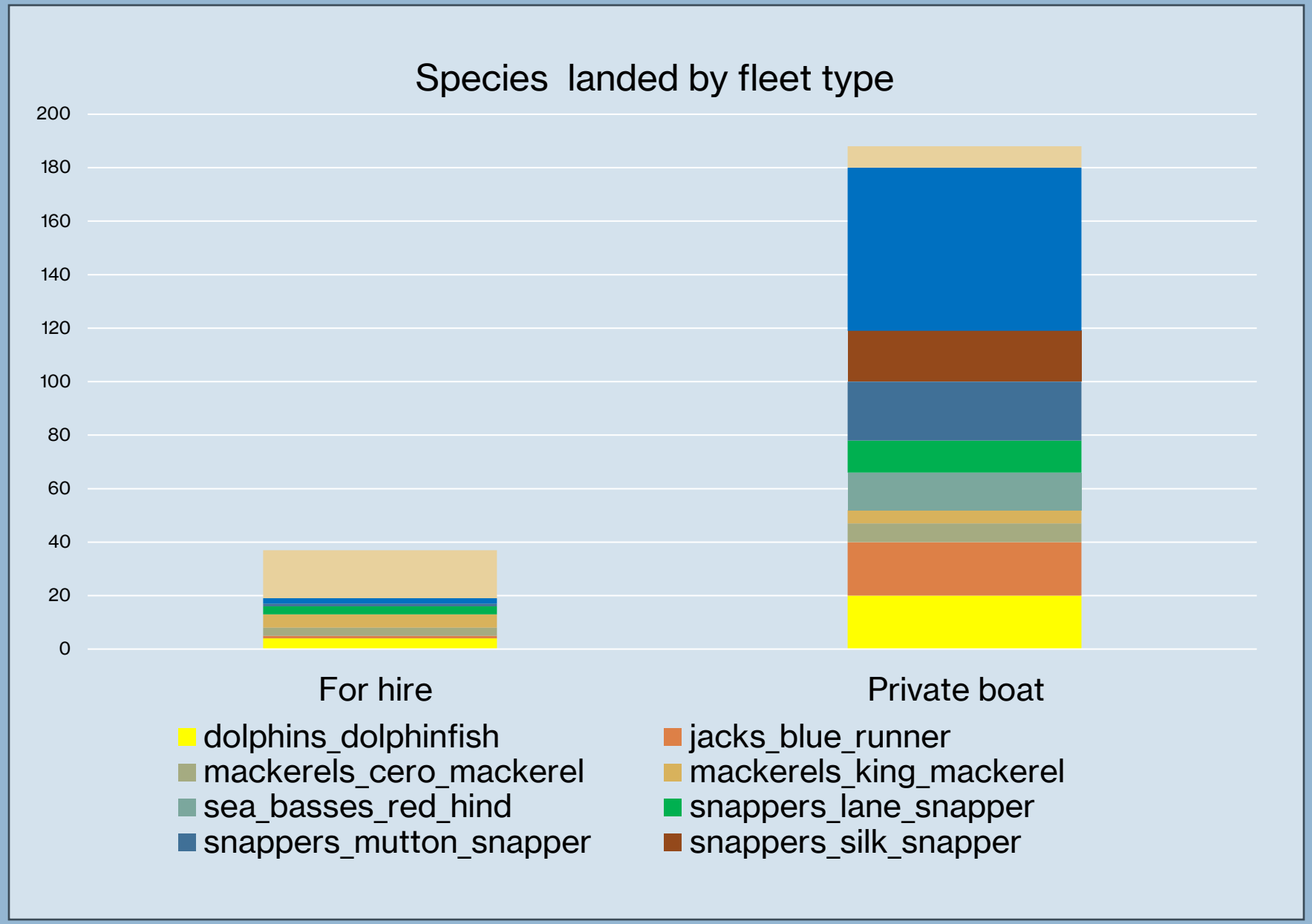
- Other
- billfishes_blue marlin
- barracudas_great_barracuda
- snooks_common_snook
- tarpons_atlantic_tarpon

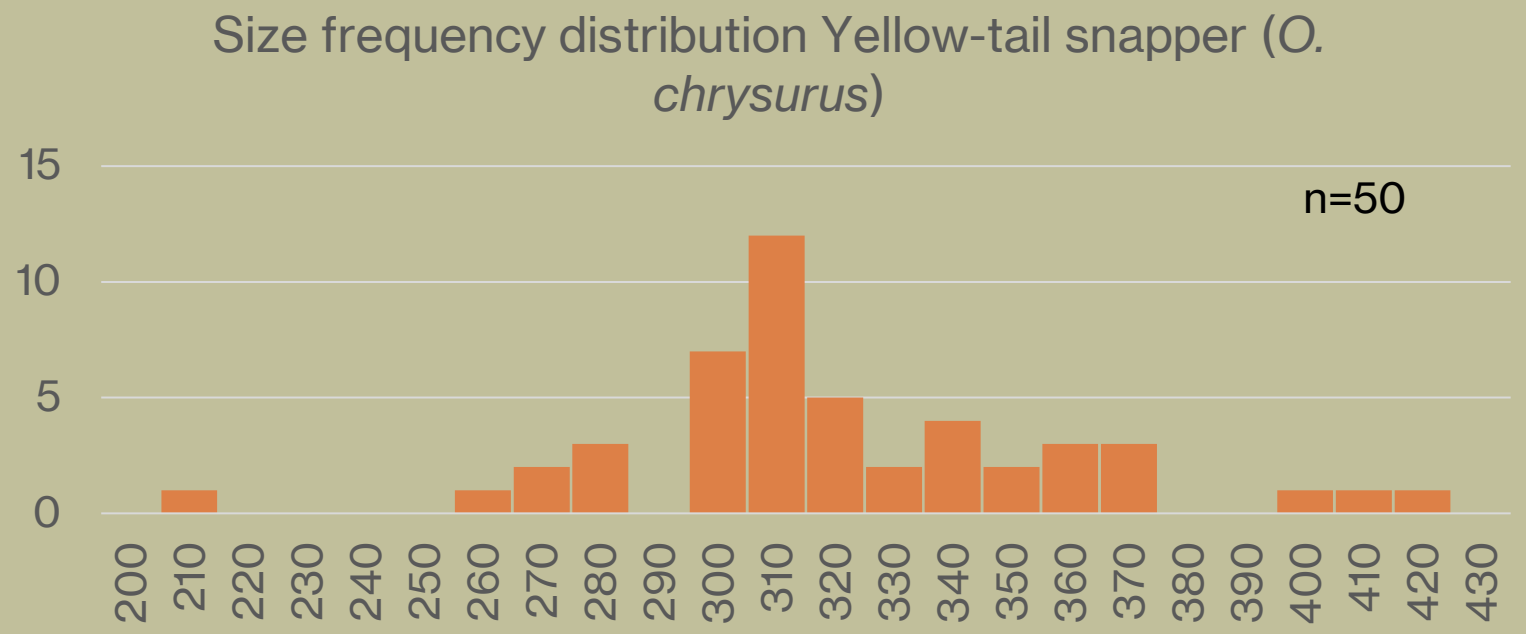
Species released alive private boat

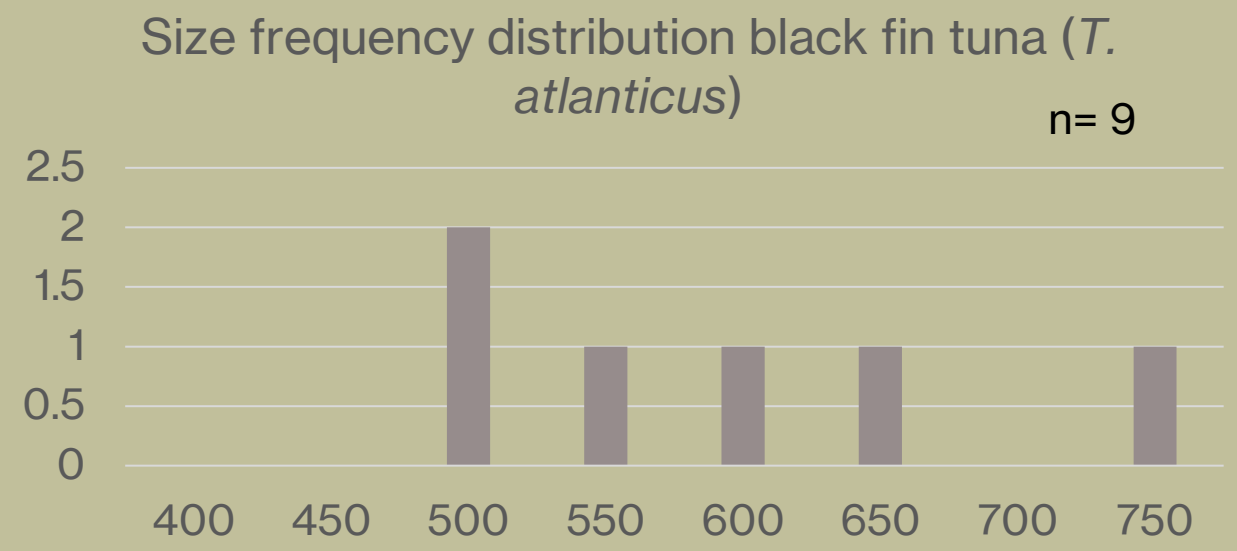


- tarpons_atlantic_tarpon
- dolphins_dolphinfish
- jacks
- sea_basses
- barracudas_great_barracuda
- Other

Results


Species landed by fleet type
200
180
160
140
120
100
80
60
40
20
0
For hire
Private boat
dolphins_dolphinfish
jacks_blue_runner
mackerels_cero_mackerel
mackerels_king_mackerel
sea_basses_red_hind
snappers_lane_snapper
snappers_mutton_snapper
snappers_silk_snapper


Size frequency distribution Yellow-tail snapper (O. chrysurus)
n=50
15
10
5
0
200
210
220
230
240
250
260
270
280
290
300
310
320
330
340
350
360
370
380
390
400
410
420
430


Size frequency distribution black fin tuna (T. atlanticus)
n= 9
2.5
2
1.5
1
0.5
0
400
450
500
550
600
650
700
750

Discussion

- First recreational port sampling since 2017 when MRIP ended in Puerto Rico
- Regional habitat differences drive variation in trip types and targeted species.
- The lack of shallow-water reef habitat in the north explains low catches of snappers and groupers.
- Recreational fishing is mostly hook-and-line, but dive effort—more common in the south and east—remains underrepresented, indicating a current data gap that could affect management accuracy.
- Survey results will provide landings estimation, estimation of discards, catch size composition, and CPUE for use in stock assessments

NOAA FISHERIES

Coordinated effort to improve data collection from multiple fishery-independent surveys of spiny lobster, *Panulirus argus*

NPS Conference Room, St. John, USVI
April 23-24, 2026

Co-Hosts: Kevin McCarthy[1] & Derek Soto[2]
Planning Committee: Jay Grove[1], Eric Hoffmayer[1], Dione Swanson[2]
[1]NOAA, SEFSC
[2]University of Miami, RSMAS, CIMAS

UNIVERSITY OF MIAMI
COOPERATIVE INSTITUTE for MARINE & ATMOSPHERIC STUDIES

Workshop Rationale and Goal

- Multiple agencies currently conduct fishery independent (FI) surveys of spiny lobster
- Held the meeting to determine whether programs can move toward a unified or highly complementary survey design.

NOAA FISHERIES

Participating Organizations

- NOAA Southeast Fisheries Science Center (SEFSC)
- National Coral Reef Monitoring Program (NCRMP)
- Southeast Area Monitoring and Assessment Program - Caribbean (SEAMAP-C)
- National Park Service (NPS)
- Florida Fish and Wildlife Conservation Commission (FWC)
- Puerto Rico Department of Natural and Environmental Resources (DRNA)
- USVI Division of Fish & Wildlife (DPNR)
- University of Miami (CIMAS/RSMAS)
- Caribbean Fishery Management Council (CFMC)
- Stock Assessment Scientists
- Survey Design Experts

Results: Collaborative Lobster Assessment Survey-Caribbean, aka CLAS-C

- No single program can fully address all regional lobster data collection alone
- The workshop established a collaborative framework for Caribbean spiny lobster surveys
- Refine the regional survey design
- Integration of diver and trap-based data streams
- The workshop identified the need for continued regional coordination
- **CLAS-C represents a significant step forward for monitoring lobster abundance in the US Caribbean through multiagency collaboration**


Thank you!

Social Science Updates

Social Value Assessment

- **Purpose:** Assess the social value of U.S. Caribbean fisheries to support species prioritization and regulatory review (risk/value matrix).
- **Background:**
  - Based on expert knowledge
  - Geographic scope entire U.S. Caribbean.
  - Evaluated seven species groups using five social value dimensions on a Likert scale (0=none to 3=high).
- **Status:**
  - Pilot survey of 12 experts completed.
  - Draft results and report prepared.
  - Southeast Region working group currently reviewing subregional survey results.
  - U.S. Caribbean-specific review process scheduled for discussion with CFMC staff this week.

GEOGRAPHIC SCOPE

U.S. Caribbean

SPECIES GROUPS

- Shallow water reef fish
- Queen conch
- Spiny lobster
- Small pelagics
- Bluefin tuna/billfish
- Deepwater bottomfish
- HMS Swordfish

SOCIAL VALUE DIMENSIONS

- Heritage and traditions
- Community identity
- Subsistence and food security
- Recreational well-being
- Teaching and knowledge

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Stakeholder Priorities for Management
Colleen O'Brien

- Insights from interviews with stakeholders will inform future management strategy evaluation (MSE)
- Provide the CFMC with additional perspectives that may help guide decision-making.
- Interviews conducted August and November 2024 and June–August 2026.
- Unstructured interviews to continue with fishery stakeholders throughout the U.S. Caribbean.
- Preliminary observations will be available by January 1, 2027. Results will be presented during the Spring 2027 CFMC meeting.
- Get involved! Many of you are fishery stakeholders: share your opinions in a 30-minute interview with Colleen.

NOAA FISHERIES

Southeast Fisheries Science Center

Evaluation of Queen Conch Populations in the U.S. Caribbean

Jennifer C. Doerr
Juan Agar
Orian Tzadik

August 11, 2026

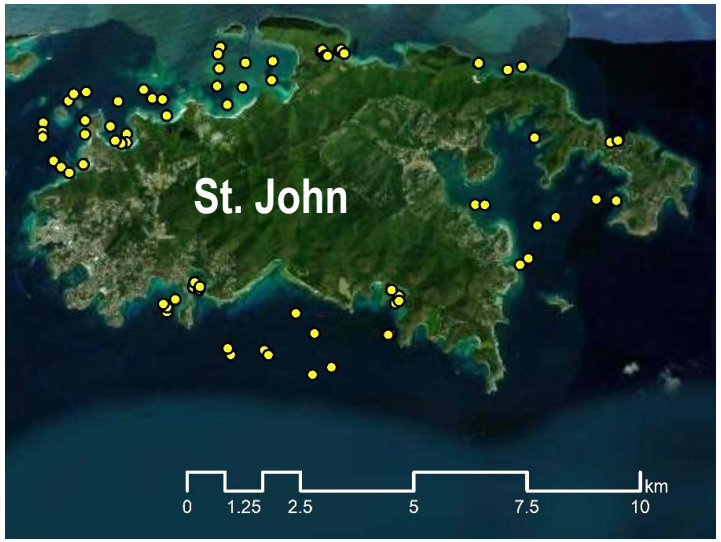
Background and Goals

- **Management Needs**:
  - Current, temporally replicated, spatially explicit, fishery-independent population information

- **Project Goals**:
  - Combined biological and socio-economic approach
  - Develop standardized survey approach to quantify abundance, assess population structure, identify critical habitat areas including nursery and aggregation areas
  - Generate island-wide abundance estimates to support assessment efforts and inform species recovery actions

Population Surveys

- 10-m radial surveys
- Randomly stratified by depth (5-m bins) and benthic habitat type



- Surveys completed in St. Thomas, St. John, St. Croix, and Puerto Rico, 2023 – 2026

Project Status

- Surveys nearly finished, 397 completed to date
- Data compiled and initial deliverables in progress:
  - ➢ Population structure
  - ➢ Spatial distribution
  - ➢ Abundance estimates

Preliminary Results:

St. Thomas - 75.5 conch ha-1 (80% adults)
St. John - 61.0 conch ha-1 (30% adults)
St. Croix - 266.0 conch ha-1 (30% adults)
Puerto Rico - 62.8 conch ha-1 (80% adults)

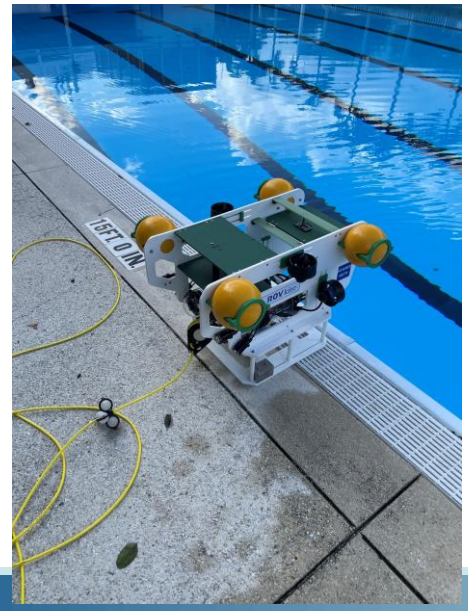
From Surveys to Management

- Updated regional stock information:
  - Improve evaluation of management and recovery plans
  - Prioritize protection of critical nursery and aggregation areas
  - Inform hatchery and outplanting decisions
  - Support rebuilding to support fishing and livelihoods
  - SEAMAP-C data, combined with the SEFSC data, will provide a comprehensive picture of the Puerto Rico conch population

Thank You

ROV Camera Array for Queen Conch Surveys

- Improve efficiency of conch surveys
- Fully implement a two-stage survey design
- Designed to be deployed from a small boat
- Will use AI/ML to identify conch
- October 2026 - Field testing and training software with UPR graduate student beginning



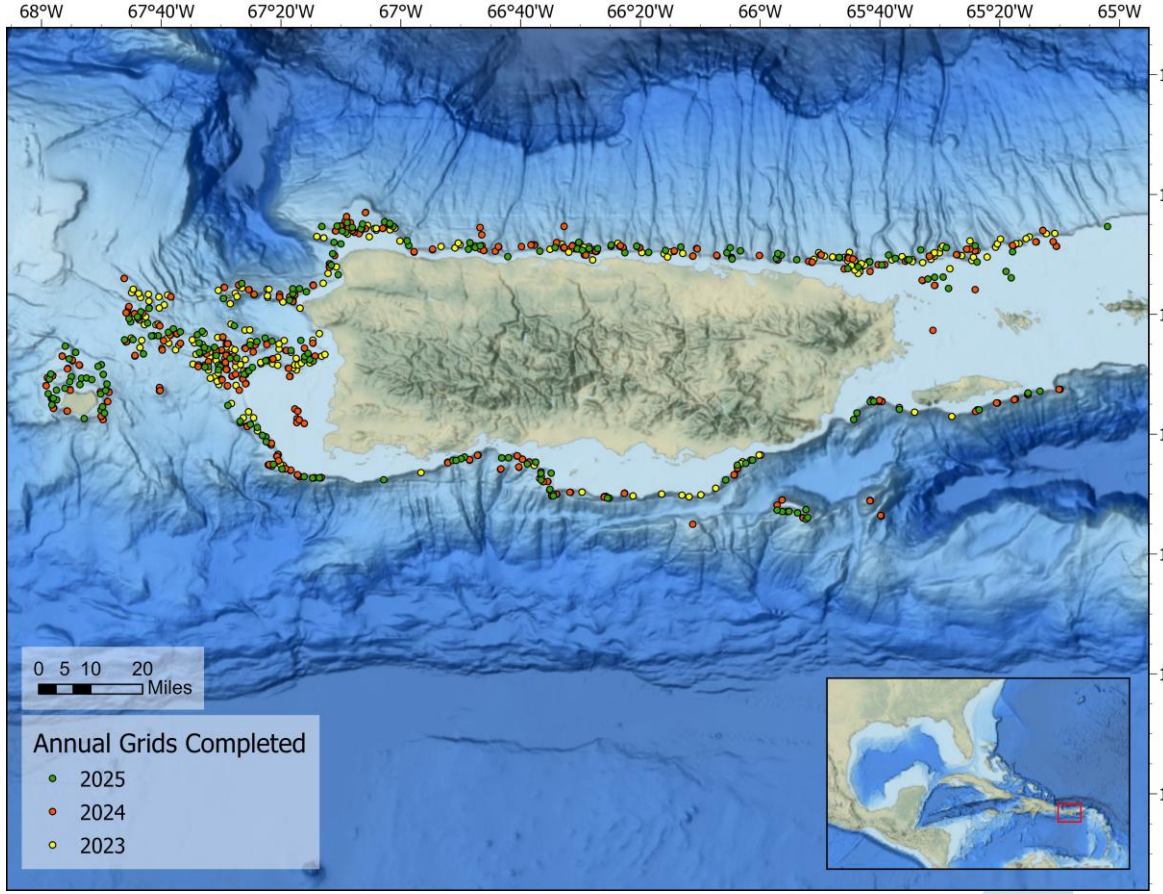
NOAA FISHERIES

National Coral Reef Monitoring Program

- Diver survey collecting abundance and size composition data of reef fish
- In 2027 the survey will extend to 50 meters in depth and will also include sampling for lobsters
- Extension of NCRMP to 50 meters, coupled with habitat maps, will allow us to get estimates of absolute abundance for some species, and at least minimum abundance estimates for more cryptic species. *This will allow us to compute OFL directly, elevating the Caribbean from data limited to data moderate, almost data rich for some species*
- Past abundance indices can be viewed at: https://www.fisheries.noaa.gov/data-tools/southeast-abundance-fish-and-shrimp-data-visualizer

Puerto Rico Deepwater Reef Fish Survey

- Collaborative fishery-independent (FI) survey with multiple commercial fishers in Puerto Rico
  - Full island-wide sampling; 50 – 450 m
    - Including 20 – 50 m as of 2025 to provide overlap
  - Low cost, high impact
- No other FI sampling at depths > 50 m
- Catch effort data on deepwater species limited in Puerto Rico
- Provides FI size structured abundance index
  - Ready for use in data limited assessment approaches (SEDAR 103)
- Leveraged funding from other sources to expand and optimize survey
  - Funds to build standardized stereo video array
    - Includes future incorporation of AI/ML in video reading
  - Calibration between diving survey and stereo video systems in progress to reduce effort



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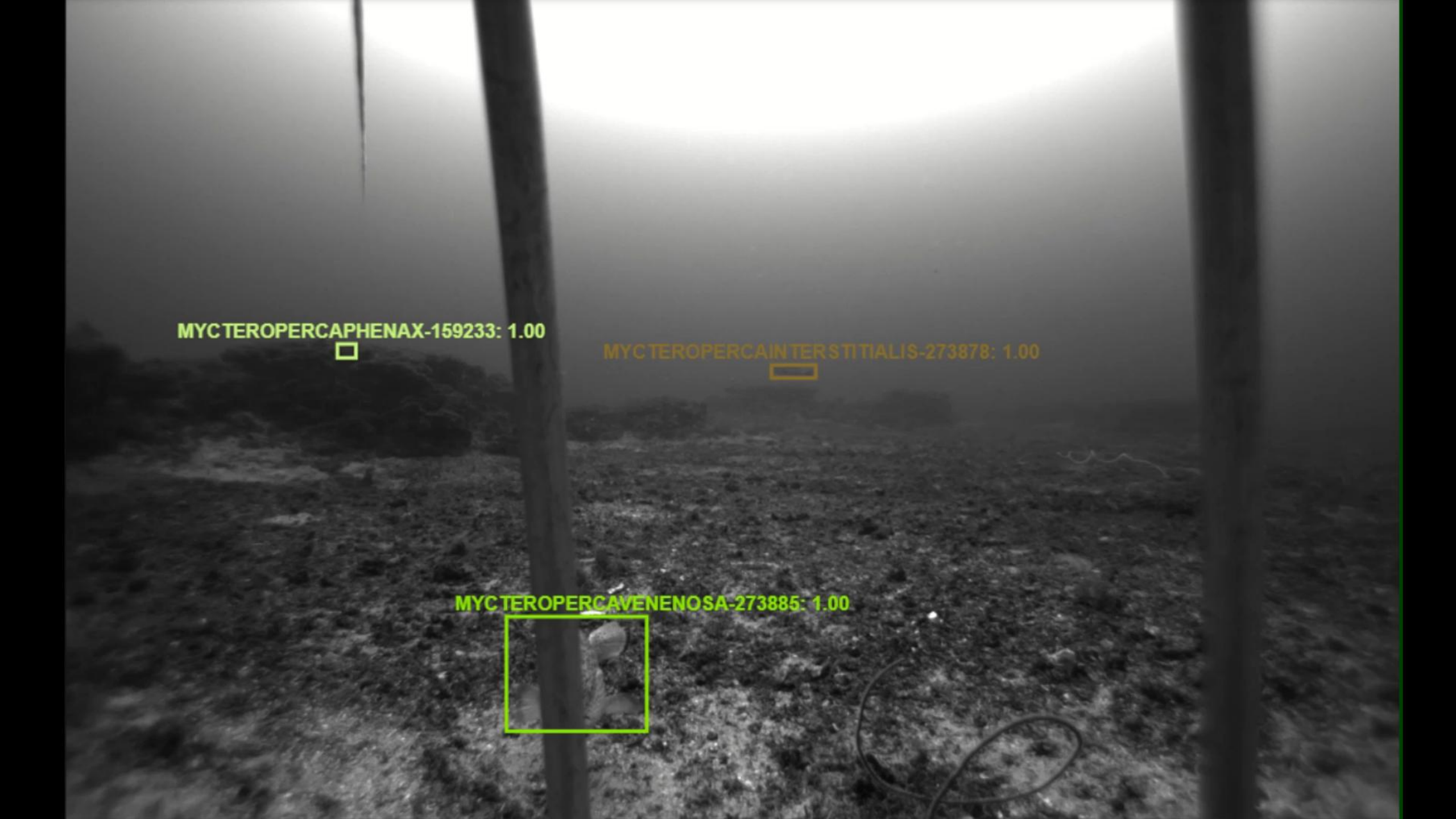
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Thank you!

¡Gracias!

Questions?

¿Preguntas?