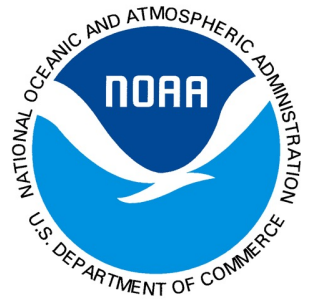


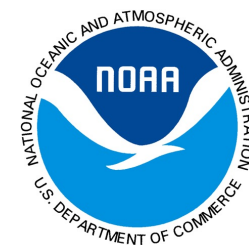


Outreach and Education Advisory Panel (OEAP)

November 22, 2022, Hybrid Meeting
Marriot Courtyard Hotel Isla Verde, Carolina, PR



Agenda



November 22, 2022

9:30 a.m.–9:45 a.m.

- Call to Order
- Adoption of Agenda

9:45 a.m.–10:15 a.m.

- OEAP Chairperson's Report
- Updates:
 - Meetings and Webinars Attended: NOAA Caribbean, FEP–TAP, DAPs, CFMC Meeting
 - Calendar 2023
 - Recipe Book
 - Illustrated Booklet on Climate Change and U.S. Caribbean Fisheries
 - MREP update
 - Update status of O & E products approved by the CFMC: Bulletin boards with Fisheries Information for Fish Markets/Restaurants and Signs on MPAs, St. Croix MPAs Poster and Fact Sheet.

10:15 a.m.–10:20 a.m.

- Break

10:20 a.m.–11 a.m.

- Status of Fishery Ecosystem Plan (FEP)—Update
- Outreach and Education Strategies Needed
- OEAP Recommendations

11 a.m.–12 p.m.

- Island-Based Fishery Management Plans Update
- Island-Based FMPs Fact Sheets

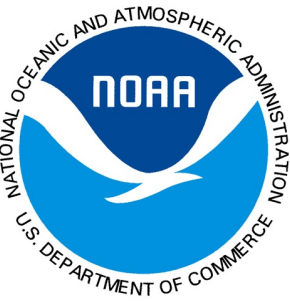
12 p.m.–1 p.m.

- Lunch

1 p.m.–5 p.m.

- OEAP Recommendation for Outreach Strategies on IBFMPs for Puerto Rico, St. Thomas/St. John, and St. Croix,
- Liaisons Recommendations
- Liaisons Reports: Wilson Santiago/Puerto Rico, Nicole Greaux/St. Thomas/St. John, Mavel Maldonado/St. Croix,
- CFMC Facebook, Instagram and YouTube Communications with Stakeholders

—Other Business



OEAP Chair Report



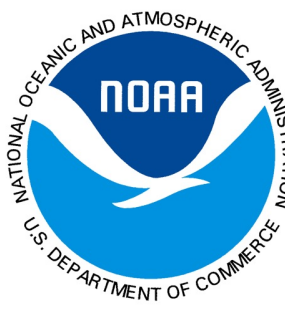
Virtual Meetings and Webinars attended



- Several Marine Resource Education Program (MREP) meetings of the Steering Committee to review the content of the fishers' workshop in 2022.
The MREP Workshop August 26-28, 2022. La Parguera; Commercial, Recreational fishers and.... 40 participants from different areas of PR.
- Zoom meetings with María del Mar and Miguel Rolón for IBFMPs Fact Sheets.
- Zoom meetings with DAP Chairs and Liaisons to get important questions from each Island for the Fact Sheets.*
- Presentation to the SSC on the Outreach products and receive suggestions for new products.



Virtual Meetings and Webinars attended



- CFMC August Meeting
- Reef Fish Extension meeting
- Best Practices for Chairing Meetings webinar- Katharine Zamboni, NOAA
- Zoom with Helena Antoun for fisheries video interview
- GCFI 75 important presentations and discussions on Women in fisheries, EBFM and other issues related to U.S. Caribbean fisheries.

Adyan Ríos

There were many other zoom meetings and calls to discuss O & E initiatives on different topics for O & E.

Communication and Outreach Goal of the CFMC 5YSP:

Engage, educate, and inform a variety of audiences to improve public understanding and participation in the Council process.

1. Communication of sound science and data on (i) fish and fisheries; (ii) productivity; (iii) ecosystem health; (iv) governance; and (v) socioeconomics and decision-making.
2. Improvement of public understanding of the processes and interconnections in the marine ecosystem that impact the fisheries through the use of locally relevant education and communication strategies to increase understanding of the public and policy makers on various aspects of fishing.
3. Work with the existing legislative, regulatory and institutional frameworks that often is insufficient or fragmented and lack the coordination needed to effectively or coherently address the myriad issues facing fisheries.
4. Design and production of education materials that translate scientific research to the public.
5. Support existing partnerships and build new ones between local, state, federal, and nongovernmental entities to identify, leverage, and apply financial and other resources to facilitate improved coastal ecosystems from different impacts.
6. Increase political awareness and understanding of the ecological and socioeconomic impacts of fisheries to promote better stewardship and informed decisions.

5YSP Communication objectives that we are following

- Basic concepts of **Ecosystem Based Management** and their application to the management measures. The objective is to help fishers and consumers in general to understand the components of the marine ecosystem, the importance of the **Fishery Ecosystem Plan** for the marine fishery ecosystem and their responsibility in keeping it healthy and sustainable.
- **Island Based Fishery Management Plans (IBFMP) for Puerto Rico, St. Thomas/St. John and St. Croix**. The objective is for fishers and consumers to recognize the species being managed, their natural function in the marine ecosystem and the importance of management measures to keep the ecosystem healthy and the fishery resources sustainable.
- **Sustainable Fish and Seafood consumption** to educate consumers on the importance to consume these products and, at the same time be aware of the impact of removing those species from the ecosystem.
- **Marine Protected Areas in Puerto Rico, St. Thomas/St. John and St. Croix**. Their importance as instruments for the protection of fishes spawning aggregation and the regulations applied to these areas from territorial and federal government agencies.

O & E Products Fact Sheets

Island Based Fisheries Management Plans

FACT SHEET
ISLAND BASED FISHERY MANAGEMENT PLANS

What is an IBFMP?

Two Island Based Fishery Management Plans are management updates of Federal Fisheries in the U.S. Caribbean. There will be three IBFMPs: one for Puerto Rico, one for St. Thomas-St. John and one for St. Croix.

For each island there are management measures for Reef Fish, Snappers, Spiny Lobster, Fishery Quota, Catch Quotas and for the Guano and Seal species (St. John) and for the Seal species (St. Croix). These are identified by the coastal states that have been managed in the United States Caribbean (USC).

What are the changes in the new IBFMPs?

Each of the Island Based Fishery Management Plans (IBFMPs) will be managed under the U.S. Caribbean-wide fishery management plan (FMP) in the Caribbean Sea. The IBFMPs will be managed under the U.S. Caribbean-wide fishery management plan (FMP) in the Caribbean Sea. The IBFMPs will be managed under the U.S. Caribbean-wide fishery management plan (FMP) in the Caribbean Sea.

What are the benefits of the IBFMPs?

WMA Fisheries and the Caribbean Fishery Management Council support IBFMP-based approaches to manage fisheries in the Caribbean Sea. The IBFMPs will be managed under the U.S. Caribbean-wide fishery management plan (FMP) in the Caribbean Sea. The IBFMPs will be managed under the U.S. Caribbean-wide fishery management plan (FMP) in the Caribbean Sea.

Otra Pregunta?

When will the IBFMPs be initiated?

On October 13, 2022, the Puerto Rico Fishery Management Plan, the St. Thomas-St. John, and the St. Croix will be the legal document to be followed in the US Caribbean.

Where can you get more information on each IBFMP?

You can visit the CFMC website: www.caribbeanfmc.com

O & E Products

Fact Sheets

Biodiversity in the U.S. Caribbean marine fisheries

FORAGE FISH

FACT SHEET

FEBRUARY 2021

The NOAA Fisheries definition of Forage fish "are small schooling species that serve as prey for larger commercially and recreationally important fish, as well as for marine mammals and sea birds. Anchovies, herring, chub mackerel, and sardines are some common forage fish".

Forage fish are a fundamental part of marine food webs but are also used by humans for a variety of purposes. Ninety percent of the forage fish catch in the World is used to produce fishmeal or fish oil for use in the agriculture, aquaculture, pet food, and other industries. **Forage fish** also serve as bait or attractant for larger commercially and recreationally important fish. Forage species used to fish are also called **baitfish**.

The marine fishery ecosystem in the Caribbean has a great biodiversity that goes beyond the species caught and served in our plates. Due to the great number of species present on the Caribbean Region the definition of forage species can be complex.

SOME OF THE MOST COMMON FORAGE FISH SPECIES IN THE CARIBBEAN



Ballyhoo (*Hemiramphus brasiliensis*) are nearshore surface-swimming species that form dense schools, often in association with each other.



Scaled Herring (*Harengula jaguana*) is a gregarious species inhabiting the neritic environment and commonly schools around mangrove shorelines, seagrass beds, and surf zones.



Red Ear Herring (*Harengula humeralis*) is a gregarious species inhabiting the neritic environment and commonly schools around mangrove shorelines and seagrass beds.



Threadfin Herring (*Opisthonema oglinum*), commonly found forming dense schools in the upper 3m of the water column; feeding primarily by filtering copepods from the water column, shrimps and prawns, small finfish and benthos including copepods, crabs, worms, sponges and tunicates and detritus.



11/20/22 caribbeanfmc.com

Fact Sheet SEA URCHINS *Echinoderms/Echinodermata*

Biodiversity in the U.S. Caribbean marine fisheries ecosystem goes beyond the fish and seafood species.

Sea urchins belong to the Phylum Echinodermata, along with sea cucumbers, starfish, brittle stars, and crinoids. Sea urchins (*class Echinoidea*) are typically round and spiny, with tests (bodies) generally 1-4 in (3-10 cm).

Sea urchins are abundant, and ecologically important components of coral reef communities for the U.S. Caribbean marine fisheries.

They are common in shallow and deep waters around Puerto Rico. Sea urchins have a complex life history, which consists of external fertilization of an egg and planktonic larval dispersal.



Long-spined urchin
Diadema antillarum
Photo: Stacey Williams

The Essential Fish Habitat (EFH) for the sea urchins stock complex included in the IBFMPs consists of all waters from mean low water to the outer boundary of the U.S. Caribbean Exclusive Economic Zone (EEZ). Habitats used by eggs and larvae, are the mangroves and seagrass beds. Habitats used by juveniles and adults are the coral reef, hard bottom, sand, mud, and algal plain substrates.

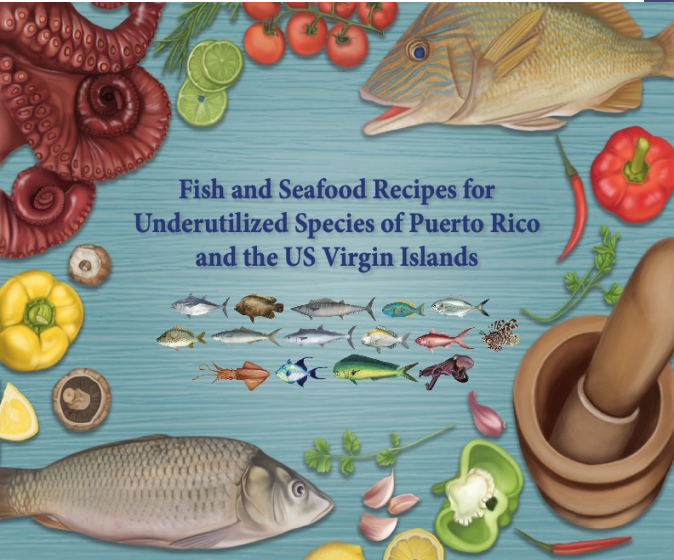
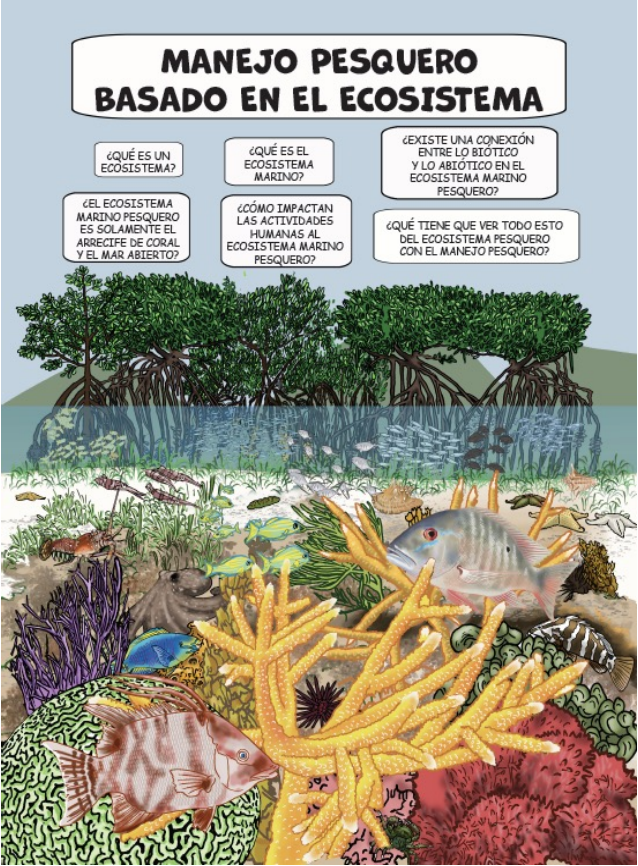


Reef urchin
Eucidaris viridis
Photo: Stacey Williams

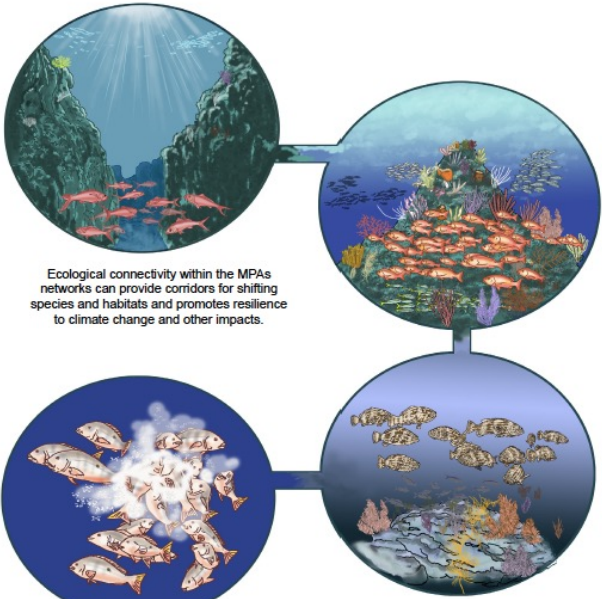


Sea egg
Tripneustes ventricosus
Photo: Stacey Williams

O & E Products

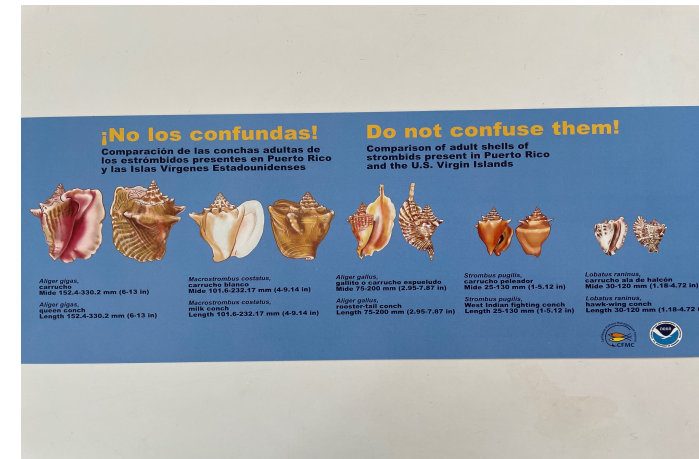
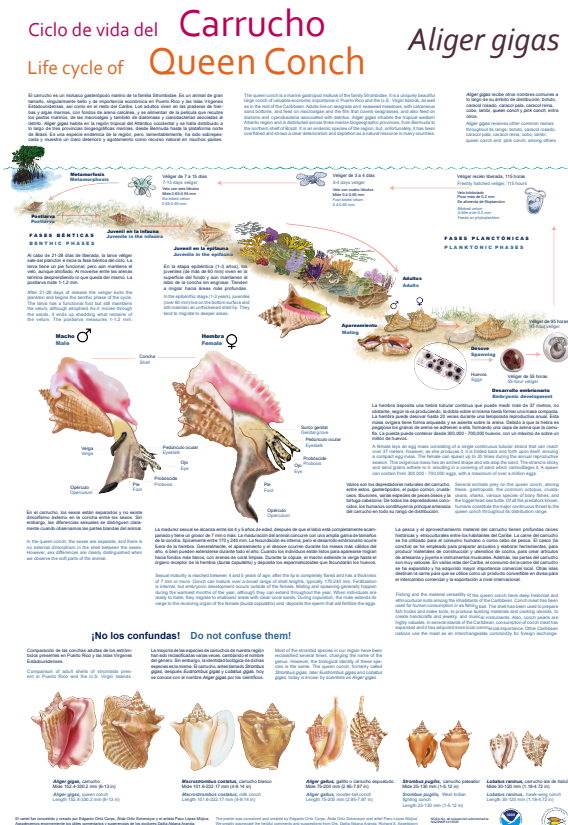
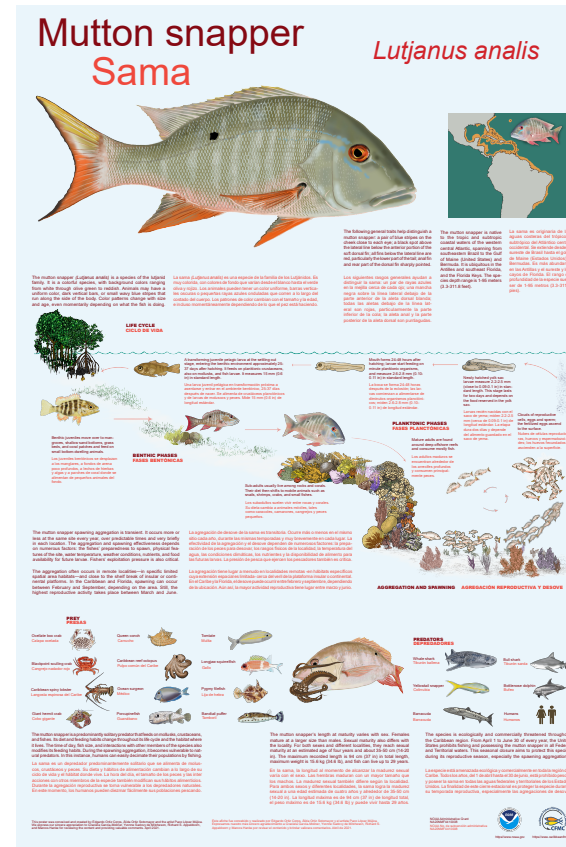
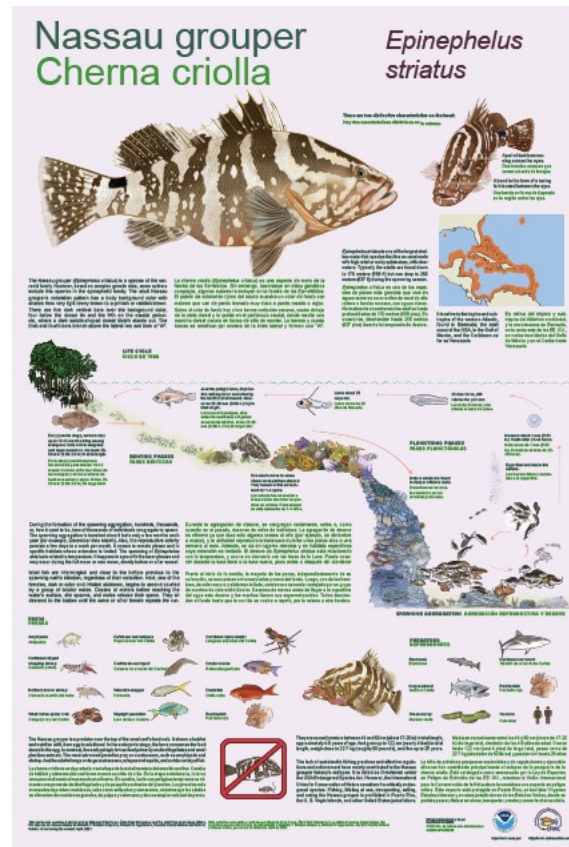


Many MPAs are established to protect a particular feature, like a canyon, a sea mount, a hard-bottom reef, a fish-spawning/breeding or feeding area for important species.



By maintaining vibrant and healthy ecosystems, MPAs support coastal communities and economies through opportunities for recreation and tourism, research, and education. Most MPAs in the US also allow fishing. Using MPAs to protect natural and cultural resources ensures the benefits and services they provide are available for future generations to enjoy.

Posters





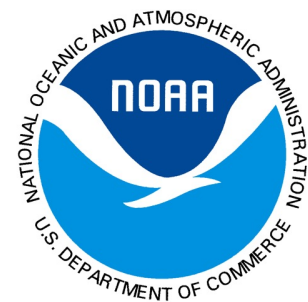
O & E Products...

- **2023 Calendar: Fishing Families**
 - 5 PR
 - 5 ST. Croix
 - - St. Thomas/St. John
- **Materials for snapper/grouper deep-water fishing**

Gerson Martínez, Mavel Maldonado and Edward Schuster
- **Materials for PR IBFMP, ST. Thomas St. John IBFMP and St. Croix IBFMP**
- **Calendars 2024, 2025**



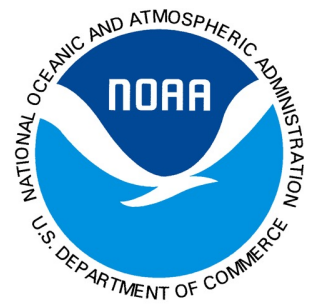
Liaison Reports: Update on status of Fisher's communities in PR, ST. Thomas/St. John and St. Croix.



- **Liaisons:**
 - **Nicole Greaux** – St. Thomas/St. John
 - **Wilson Santiago** - Puerto Rico
 - **Mavel Maldonado** – St. Croix



Recommendations from OEAP members





CFMC Social Media Update



- Facebook, Instagram and YouTube. **Cristina Olán**