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Generic Amendment 2 to the FMPs for Puerto Rico, St. Thomas and St. John, and St. Croix: Trawling and Net Gear and Descending Devices

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Issues Addressed in this Amendment

- **Action 1:** Prohibition on the use of all trawl gear in U.S. Caribbean federal waters as a precautionary approach to prevent potential negative impacts on sensitive habitats (coral habitat, sponge habitats) and on target and non-target species (i.e., direct harvest and bycatch).
- **Action 2:** Prohibition on the use of gillnets, trammel nets, and purse seines There are no federal regulations regarding the use of gillnets or trammel nets for the harvest of Council-managed pelagic species, which are new to management under the island-based FMPs.
- **Action 3:** Require descending devices to minimize bycatch mortality of Council-managed reef fish



Background

Trawls

- Trawls (any type) are an authorized gear type in the U.S. Exclusive Economic Zone (EEZ) around St. Croix, St. Thomas, St. John and Puerto Rico for use in the commercial fisheries that are not managed under the St. Croix Fishery Management Plan (FMP), St. Thomas and St. John FMP, and Puerto Rico FMP (i.e., non-federally managed species).
- No evidence trawl gear is or has been used for fishing in federal waters of the U.S. Caribbean (except exploratory fishing/research).
- Puerto Rico territorial fishing regulations prohibit the use of trawl gear and drift nets in its jurisdictional waters.
- USVI do not have specific regulations prohibiting the use of trawl gear in their territorial waters.

The Council is interested in a potential prohibition on the use of any trawls in Council Marine Managed Areas (MMAs) and/or in the EEZ around Puerto Rico, St. Thomas and St. John, and St. Croix for several reasons.



Background (Trawls)

(1) In the U.S. Caribbean, the complex mosaic of coral on the insular shelf leaves little space available for trawling that would not have direct impacts on coral, thus potential for damaging coral habitat including deep-water corals, as well as sponge habitat and deep-water sponges present in the area (Discussion at CFMC Meeting, Dec 2021);

(2) trawls could entangle protected species present in the U.S. Caribbean EEZ such as sea turtles; and

(3) Direct impact the use of trawls in the U.S. Caribbean EEZ has the potential to negatively affect certain habitats designated as essential fish habitat (EFH) and habitat areas of particular concern for managed species under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act).

There are also economic considerations related to the use of certain trawling gear types (e.g., damage or loss of gear) as well as implications for the bycatch of managed and unmanaged species in the U.S. Caribbean EEZ.

Interest in potential implications (if any) that continuing to allow trawling for non-FMP species as an authorized gear type in the EEZ (including in Council MMAs) may have on the whether the existing Council MMAs qualify as conservation areas under Executive Order (E.O.) 14008.



Background

Gillnets and Trammel Nets (drift nets): Gillnets and trammel nets (in *Spanish*: filete (gillnet/single wall), trasmallo o mallorquín (trammel net, tremall (3-paned), chinchorro de ahorque) hang vertically in the water column (can or cannot be fixed to the bottom).

Purse Seines: large wall of netting deployed around an entire area or school of fish.

Federal regulations at 50 CFR 600.725 list **gillnets** as an authorized gear type in the U.S. EEZ around St. Croix, St. Thomas, St. John and Puerto Rico only for

- (1) the commercial harvest of federally managed and non-federally managed pelagic species and for
- (2) the commercial harvest of other non-federally managed species in each of the island management areas.

Purse seines and Trammel Nets are not authorized for any fishery in any of the three island-management areas.



Background

- The use of gillnets, trammel nets, as well as pots, traps, or bottom longlines is currently prohibited year-round in the seven Council-managed seasonally closed areas (also called Marine Managed Areas (MMAs) in this document): Puerto Rico – (1) Bajo de Sico; (2) Abrir La Sierra; (3) Tourmaline; in U.S. Virgin Islands – (4) Grammanik Bank; (5) Mutton Snapper Spawning Aggregation Area; 6) Hind Bank; and (7) Red Hind Spawning Aggregation Area East of St. Croix.
- There are no specific prohibitions on the use of trawl gear in these or other areas, with the exception of the Hind Bank Marine Conservation District in St. Thomas, where all fishing is prohibited year-round (Appendix A).
- The use of gillnets and trammel nets has been prohibited for the harvest of federally managed reef fish and spiny lobster since 2005 due to the potential for bycatch (CFMC 2005) (50 CFR 622.433(c) and 50 CFR 622.452(b)).
- Surface gillnets and trammel nets are allowed for the harvest of other species (e.g., baitfish [where baitfish refers to species other than federally managed reef fish]) in federal waters but they must be tended at all times (50 CFR 622.437(a)(3) & (c)(2); 50 CFR 622.477(a)(3) & (c)(2); 50 CFR 622.512(a)(3), (c)(2)).



Background

For purse seines and trammel nets (and other non-authorized gear), a person could petition the Council to use these gear types. At that time, the Council and NMFS could take action whether to allow or prohibit the use of the gear.

50 CFR 600.725(v): A person or vessel is prohibited from engaging in fishing or employing fishing gear when such fishing gear is prohibited or restricted by regulation under an FMP or other applicable law. However, after December 1, 1999, an individual fisherman may notify the appropriate Council, or the Director, in the case of Atlantic highly migratory species, of the intent to use a gear or participate in a fishery not already on the list. Ninety days after such notification, the individual may use the gear or participate in that fishery unless regulatory action is taken to prohibit the use of the gear or participate in the fishery (*e.g.*, through emergency or interim regulations).



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Background

Descending Devices

- August 2022 Meeting: Council discussed concerns from fishermen about reef fish that are released (i.e., regulatory and/or economic discards) but do not survive, focusing on injuries from barotrauma.
 - Barotrauma is the rapid expansion of gases in a fish as it is quickly reeled up from depth. Signs include bulging eyes, stomach protruding from the mouth, and bubbling scales.
- To improve the survivorship of released reef fish, the Council considered a measure that would encourage the use of best fishing practices to minimize impacts from capture, and thus discussed the use of descending devices as tools to reduce fishing mortality for reef fish from barotrauma.



Background

Descending Devices

- The Council was interested in following the steps taken by the Gulf of Mexico Fishery Management Council and the South Atlantic Fishery Management Council to require that descending devices be available and ready for use for certain fisheries to reduce bycatch mortality.
- Council passed a motion for staff to develop Action 3, proposing to add a requirement to have a descending device available and ready for use on a vessel when fishing for or possessing Council-managed reef fish.
- The Council decided that it would also work on education and outreach activities with fishing communities regarding descending devices development and use.



Generic Amendment 2 to the Island-based FMPs: Trawl and Net Gear, and Descending Devices

Statement of Purpose and Need

- The purpose of this amendment is to prevent potential damage to habitats from certain gear types, including essential fish habitat, protect species associated with such habitats, as well as to promote best fishing practices, and enhance the survival of released fish in the EEZ around Puerto Rico, St. Croix, and St. Thomas and St. John.
- The need for this amendment is to minimize potentially adverse effects of fishing to habitats and associated species, and to minimize the mortality of bycatch species.



Action 1: Use of trawl Gear in the U.S. Caribbean Exclusive Economic Zone (EEZ) around Puerto Rico, St. Croix, and St. Thomas and St. John

Alternative 1. No action. Retain the authorized trawl gear for commercial and recreational harvest in federal waters around St. Croix, St. Thomas and St. John, and Puerto Rico. Trawl gear is an authorized gear type only for the commercial harvest of non-federally managed species in each island management area.

Alternative 2. Prohibit the use of trawling gear for all fishing in Caribbean Fishery Management Council (Council) seasonally closed areas/marine managed areas (MMA) year-round in federal waters around St. Croix, St. Thomas and St. John, and Puerto Rico.

Alternative 3. Prohibit the use of trawling gear for all fishing in federal waters around St. Croix, St. Thomas and St. John, and Puerto Rico.

CFMC Seasonally Closed Areas/Marine Managed Areas (MMAs) are: in Puerto Rico – (1) Bajo de Sico; (2) Abrir La Sierra; (3) Tourmaline; in U.S. Virgin Islands – (4) Grammanik Bank; (5) Mutton Snapper Spawning Aggregation Area; (6) Hind Bank; and (7) Red Hind Spawning Aggregation Area East of St. Croix.



Action 1: Use of trawl Gear in the U.S. Caribbean Exclusive Economic Zone (EEZ) around Puerto Rico, St. Croix, and St. Thomas and St. John

Comparison of Alternatives

Alternative 1 is the status quo and would not change any regulations applicable to the use of trawls in federal waters around Puerto Rico, St. Thomas and St. John, or St. Croix.

Alternative 2 would prohibit all trawl gear year-round in all Council MMAs, while **Alternative 3** would prohibit the use of trawl gear year-round applicable to all components of three island-management areas.

Because trawl gear has not historically been used in the U.S. Caribbean EEZ and is not currently used, **Alternative 2** and **Alternative 3** are both administrative actions and are not expected to have any additional physical, biological/ecological, social, and economic effects when compared to **Alternative 1**.

However, by preventing any future use of the trawl gear, both **Alternatives 2** and **3** could be more beneficial to the physical and biological environment by preventing potential bycatch and/or habitat effects from trawling activities in all federal waters around the three island-management areas (**Alternative 3**) or in Council MMAs (**Alternative 2**), with the former being more beneficial in protective fishery and habitat resources throughout the U.S. Caribbean EEZ.

Prohibiting the use of trawl gear applicable to all fishery components of the island management areas (**Alternative 3**) would prevent future use through a petition for its use, which could occur under **Alternative 1** and **Alternative 2**, thus providing more benefits to the physical, biological/ecological environment.



Action 2: Use of Gillnets, Trammel Nets, and Purse Seines in the EEZs around Puerto Rico, St. Croix, and St. Thomas and St. John

Alternative 1. No action. Retain the authorized net gear types for commercial and recreational harvest in federal waters around St. Croix, St. Thomas and St. John, and Puerto Rico. Gillnets are an authorized gear type for the commercial harvest of managed and non-managed pelagic species and the commercial harvest of non-federally managed species in each of the island management areas. Trammel nets and purse seines are not listed as an authorized gear type for any fisheries in the U.S. Caribbean EEZ.

Alternative 2. Prohibit the use of gillnets in federal waters around St. Croix, St. Thomas and St. John, and Puerto Rico.

Sub-alternative 2a. For all fishing in the EEZ.

Sub-alternative 2b. For all fishing in the EEZ, except for the following fish species belonging to the halfbeaks (Family Hemiramphidae), gar (Family Belonidae), and flyingfish (Family Exocoetidae). A surface gillnet used in the EEZ around Puerto Rico, St. Croix, or St. Thomas and St. John to fish for any baitfish must be tended at all times.

Action 2: Use of Gillnets, Trammel Nets, and Purse Seines in the EEZs around Puerto Rico, St. Croix, and St. Thomas and St. John (Cont.)

Alternative 3. Prohibit the use of trammel nets for all fishing in federal waters around St. Croix, St. Thomas and St. John, and Puerto Rico.

Alternative 4. Prohibit the use of purse seines for all fishing in federal waters around St. Croix, St. Thomas and St. John, and Puerto Rico.

Action 2: Use of Gillnets, Trammel Nets, and Purse Seines in the EEZs around Puerto Rico, St. Croix, and St. Thomas and St. John (Cont.)

Gillnets and Trammel Nets

- Council-managed species reported in Puerto Rico commercial landings with gillnet from federal waters include barracuda, cero and king mackerels, blackfin, and little tunny (Table 2.2.1) (Note that “federal waters” may also include harvest from waters around offshore islands belonging to Puerto Rico’s jurisdiction).
- Commercial landings from 2012-2021 of Council-managed species from EEZ waters around St. Thomas and St. John caught with gillnet include some reports for red hind, coney, yellowtail snapper, blue runner (all landings are minor and confidential).
- For the EEZ around St. Croix, species reported commercially with gillnet from 2012-2021, the only Council managed species is redbtail parrotfish (confidential data), and two non-managed species, ballyhoo (6,211 pounds [lbs]) and needlefish (100 lbs)).



Table 2.2.1. Adjusted landings in pounds for the top species (managed and non-managed) reported for gillnet gear and trammel net gear in Puerto Rico Commercial Landings for 2014-2019 by State, Federal, or Unknown waters*.

| Management Status | Species | GILL NET | | | TRAMMEL NET | | |
|---------------------------------|---------------------|----------|---------|---------|-------------|---------|---------|
| | | State | Federal | Unknown | State | Federal | Unknown |
| Managed | BARRACUDA | 2,251 | Conf | 429 | . | . | . |
| Managed | DOLPHINFISH | Conf | . | . | Conf | . | Conf |
| Managed | MACKEREL,CERO | 11,641 | 733 | 593 | Conf | . | . |
| Managed | MACKEREL,KING | 8,756 | 1,117 | 933 | 62 | . | Conf |
| Managed | TUNA,BLACKFIN | 1,222 | . | 241 | . | . | Conf |
| Managed | TUNNY,LITTLE | 1,460 | Conf | Conf | 449 | . | Conf |
| Managed | WAHOO | Conf | . | . | . | . | . |
| Not-managed | BALLYHOO | 214,720 | 2,608 | 42,371 | 832 | Conf | Conf |
| Not-managed | BARBU | 142 | . | . | . | . | . |
| Not-managed | BARRACUDA,SOUTHERN | Conf | . | . | . | . | . |
| Not-managed | JACK,BAR | 36,374 | 1,767 | 3,907 | 530 | . | 38 |
| Not-managed | JACK,HORSE-EYE | 3,845 | 105 | 796 | . | . | . |
| Not-managed | JACK,YELLOW | 258 | . | 83 | . | . | . |
| Not-managed | JACKS | 7,002 | 297 | 821 | 200 | . | . |
| Not-managed | MOJARRA,YELLOWFIN | 1,014 | . | 750 | . | . | . |
| Not-managed | MOJARRAS,UNSPECIFIE | 26,100 | 1,136 | 1,725 | Conf | . | . |
| Not-managed | MULLET,WHITE | 42,196 | 1,164 | 4,875 | Conf | . | Conf |
| Not-managed | SNOOK,COMMON | 55,871 | 2,733 | 4,966 | Conf | Conf | Conf |
| Not-managed | STINGRAYS,UNSPECIFI | Conf | Conf | Conf | 3,115 | . | Conf |
| Not-managed | TUNA AND MACKERELS, | 312 | . | . | . | . | . |
| Not-managed | TUNA,ALBACORE | 2,792 | . | Conf | . | . | . |
| Not-managed | TUNA,SKIPJACK | 725 | Conf | . | . | . | . |
| Not-managed | TUNA,YELLOWFIN | Conf | . | Conf | . | . | . |
| Conf = confidential information | | | | | | | |

*The values for the federal waters and unknown categories may include landings from waters around Puerto Rico jurisdictional offshore islands that are within the 9-200 nm.

Action 2: Use of Gillnets, Trammel Nets, and Purse Seines in the EEZs around Puerto Rico, St. Croix, and St. Thomas and St. John (Cont.)

Comparison of alternatives

Gillnets:

- **Alternative 1** is the status quo alternative (no changes to gillnet regulations in the EEZ around Puerto Rico, St. Thomas/St. John, and St. Croix) and would be less beneficial to the biological and ecological environment, but more beneficial the socio-economic environment than **Alternative 2 (Sub-alternative 2a)**. This is because **Alternative 1** would continue to allow the use of gillnets for the commercial harvest of pelagic species and non-federally managed species, increasing the potential of adverse effects from use of the gear, but allowing fishermen that use gillnet for harvesting these species to continue to do so.
- Administrative effects would be slightly higher under **Sub-alternative 2a** than **Alternative 1**.
- With respect to certain species of baitfish, **Alternative 1** and **Sub-alternative 2b** are not different, as both would continue to allow gillnets for catching those species, with no additional effects to the biological environment, socio-economic environment, or administrative environment.
- Physical effects are not expected from the use of gillnets for any of the alternatives.



Action 2: Use of Gillnets, Trammel Nets, and Purse Seines in the EEZs around Puerto Rico, St. Croix, and St. Thomas and St. John (Cont.)



Comparison of alternatives

Trammel nets and Purse seines:

- Effects to the physical, biological/ecological, and socio-economic environments from **Alternatives 3** and **4** are not expected to be different from those of **Alternative 1** because both trammel nets and purse seines are currently not authorized for use in federal waters for any fishing.
- In addition, landings for trammel nets seem to be constrained to Puerto Rico state waters, where this gear type is allowed (no significant landings history in federal waters).
- However, **Alternatives 3** and **4** could be slightly more beneficial to the biological/ecological environment of the three island management areas because they further restrict potential future use of these gear types through a petition to the Council.
- Administrative effects are expected to be slightly higher for **Alternatives 3** and **4** than for **Alternative 1**.



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Action 3: Requirements for the Use of Descending Devices in the Reef Fish Component of the Puerto Rico, St. Croix, and St. Thomas and St. John FMPs

Alternative 1. No action. Descending devices are not required to be on board a vessel fishing for or possessing species in the reef fish component of the Puerto Rico, St. Croix, and St. Thomas and St. John FMPs.

Alternative 2. Require a descending device* be on board a commercial or recreational vessel and readily available for use while fishing for or possessing species in the reef fish component of the Puerto Rico, St. Croix, and St. Thomas and St. John FMPs.

* For the purpose of this requirement, a “descending device” means an instrument to which is attached a minimum of a 16-ounce weight and a length of line that will release the fish at the depth from which the fish was caught or a minimum of 50 feet. The descending device attaches to the fish’s mouth or is a container that will hold the fish. The device **MUST** be capable of releasing the fish automatically, by the actions of the operator of the device, or by allowing the fish to escape on its own. Since minimizing surface time is critical to increasing survival, descending devices shall be readily available for use while engaged in fishing.



Action 3: Requirements for the Use of Descending Devices in the Reef Fish Component of the Puerto Rico, St. Croix, and St. Thomas and St. John FMPs

Comparison of alternatives

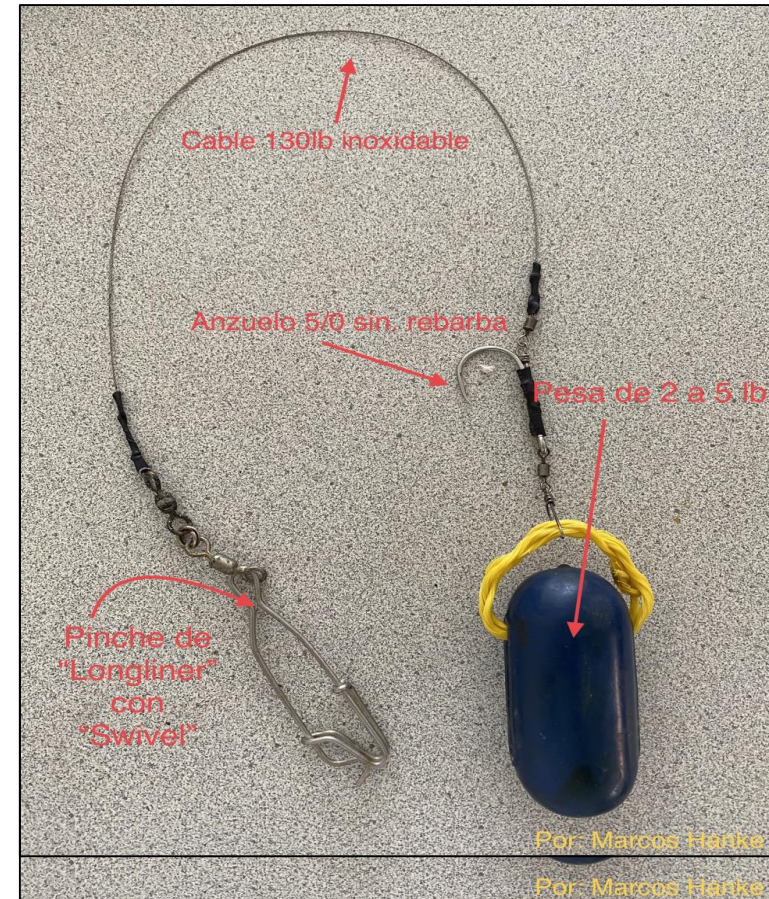
- **Alternative 2** would be more beneficial to the biological and ecological environment of reef fish than **Alternative 1**, as it would require a descending device to be rigged and ready for use, which could decrease fishing mortality of Council-managed reef fish from barotrauma.
- In the short-term, socio-economic effects from **Alternative 2** are expected to be larger than from **Alternative 1** due to the cost and effort for fishers to obtain and keep onboard a descending device.
- Administrative effects from **Alternative 2** would also be higher than **Alternative 1** because of the regulations to effect the requirement and the additional efforts to enforce these regulations for all reef fish fishermen (commercial and recreational), in federal waters of the three management areas, and to conduct outreach and education activities.



Action 3: Requirements for the Use of Descending Devices in the Reef Fish Component of the Puerto Rico, St. Croix, and St. Thomas and St. John FMPs

Popular Types of Descending Devices

- The *Seaqualizer*
- Inverted Hook or Shelton Fish Descender
- Weighted basket
- Others



Source: M. Hanke, fishermen, presentation at 178th Caribbean Council Meeting

See practical "how-to" video on rigging and using descending devices from NC Division of Marine Fisheries': <https://youtu.be/xul9Sd8nzNw> (Source: SAFMC)

Also See Florida Fish and Wildlife Commission for an educational video on how to make an effective homemade descending device <https://www.youtube.com/watch?v=Y0o9lxCxEAM>



Next Steps:

- Indicate if any changes are needed to the scope of the action and/or alternatives
- Select Preferred Alternatives
- Task IPT to continue development of the amendment for final action in April 2023.



Additional Slides



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Appendix A. List of Managed Reef Fish and Pelagic Stocks Included in each of the Island-based FMPs

Puerto Rico Reef Fish

- **Snappers:** black, blackfin, silk, vermillion, wenchman, cardinal, queen, lane, mutton, dog, schoolmaster, yellowtail, cubera*
- **Groupers:** Nassau, goliath, coney, graysby, black, red, tiger, yellowfin, yellowmouth*, yellowedge, misty, red hind, rock hind
- **Parrotfishes:** blue, midnight, rainbow, queen, princess, redband, stoplight, redband, striped
- **Surgeonfishes:** blue tang, ocean surgeonfish, doctorfish
- **Triggerfishes:** ocean, queen, gray*
- **Wrasses:** hogfish, puddingwife, Spanish hogfish
- **Angelfishes:** queen, grey, French
- **Grunts:** white grunt
- **Jacks:** crevalle jack*, African pompano*, rainbow runner*

* New to management

Puerto Rico Pelagics

* *All new to management*

- **Tripletail:** tripletail
- **Dolphinfish:** dolphin, pompano dolphin
- **Mackerels and Tunas (Scombridae):** little tunny, blackfin tuna, king mackerel, cero mackerel, wahoo
- **Barracudas:** great barracuda



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Appendix A. List of Managed Reef Fish and Pelagic Stocks Included in each of the Island-based FMPs

St. Thomas and St. John Reef Fish

- **Snappers:** black, blackfin, silk, vermilion, queen, lane, mutton, yellowtail
- **Groupers:** Nassau, goliath, coney, red hind, black, red, tiger, yellowfin, yellowmouth*, yellowedge, misty
- **Parrotfishes:** blue, midnight, rainbow, queen, princess, redtail, stoplight, redband, striped, redfin
- **Surgeonfishes:** blue tang, ocean surgeonfish, doctorfish
- **Triggerfishes:** queen
- **Wrasses:** hogfish
- **Angelfishes:** queen, grey, French
- **Grunts:** white grunt, bluestriped, margate
- **Jacks:** Blue runner
- **Porgies:** jolthead, saucereye, sheepshead, sea bream

** New to management*

St. Thomas and St. John Pelagics

**All new to management*

- **Dolphinfish:** dolphin
- **Mackerels and Tunas (Scombridae):** wahoo



Appendix A. List of Managed Reef Fish and Pelagic Stocks Included in each of the Island-based FMPs

St. Croix Reef Fish

- **Snappers:** black, blackfin, silk, vermilion, queen, lane, gray, mutton, schoolmaster, yellowtail
- **Groupers:** Nassau, goliath, graysby, coney, red hind, rock hind, black, red, tiger, yellowfin, misty
- **Parrotfishes:** blue, midnight, rainbow, queen, princess, redband, stoplight, redtail, striped, redfin
- **Surgeonfishes:** blue tang, ocean surgeonfish, doctorfish
- **Triggerfishes:** queen
- **Angelfishes:** queen, grey, French
- **Grunts:** white grunt, bluestriped
- **Squirrelfish:** longspine squirrelfish

St. Croix Pelagics

**All new to management*

- **Dolphinfish:** dolphin
- **Mackerels and Tunas (Scombridae):** wahoo



Bait Nets Regulations in PR and USVI Waters

In the USVI, the only type of gillnet allowed are single-wall surface gillnets targeting baitfish.

- Nets may not be more than 1,800 ft in length as measured by the float line, and may not be used within 20 ft of the bottom.
- Mesh size may not be smaller than 0.75-inch square or 1.5-inch stretch.
- Only one bait net is permitted per boat and all other prohibited nets may not be possessed onboard vessels in territorial waters.
- St. Croix baitfish species caught: ballyhoo, gar, flying fish, round Jack, and big eye scad.
- Approx. number of fishers that use these nets: 3

In Puerto Rico, this fishery uses bottom and surface gillnets (*trasmallo or filete*) and trammel nets (*mallorquín*) consisting of a trammel with three net cloths tied to a line of buoys.

- Gillnets or trammel nets cannot have mesh size greater than 6 inches (as measured from knot to knot of extension).
- For trammel nets, the outer cloths may not have a mesh larger than 6 inches (from knot to knot). Additionally, trammel nets used for bait fishing may not be more than a quarter 0.25 inch (knot-to-knot opening).
- DRNA Regulation 7949, permits the use of gillnets and trammel nets, except in inner water and rivers mouths. Additionally, it prohibits the use of gillnets and trammel nets in conjunction with diving equipment (“Scuba”), except by written authorization from the Secretary for the capture of lionfish⁷.

| Gear Type | Authorized Fisheries (PR, STT, STX) | Notes |
|---------------|--|---|
| Trawl Gear | Commercial Non-FMP Species | Not Used. Banned in PR waters |
| Gillnets | Commercial Pelagic Species Commercial Non-FMP Species Commercial Non-FMP Pelagic Species | Not allowed for CFMC Reef Fish, Spiny Lobster, MMAs. Allowed in Puerto Rico waters Not Allowed in USVI waters Specific gillnets used for baitfish allowed |
| *Trammel Nets | Not Authorized | |
| *Purse Seines | Not Authorized | Not Used |