

# Puerto Rico Draft Actions and Alternatives.



148<sup>th</sup> Caribbean Fishery Management Council Meeting  
St. Thomas, U.S. Virgin Islands

December 11-12, 2013



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# Puerto Rico-Draft Actions and Alternatives

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## Action 1. Identify Fishery Management Units (FMUs) to be Included in the Puerto Rico Fishery Management Plan (FMP).

**Alternative 1.** No action. The Puerto Rico FMP is comprised of all FMUs historically managed under the Spiny Lobster FMP, Reef Fish FMP, Queen Conch FMP, and the Corals and Reef Associated Plants and Invertebrates FMP.

Discussion: This alternative would transfer FMUs from the current species-based FMPs to the Puerto Rico FMP (i.e., queen conch, parrotfish, snapper units 1-4, grouper, angelfish, boxfish, goatfishes, grunts, wrasses, jacks, scups and porgies, squirrelfish, surgeonfish, triggerfish and filefish, spiny lobster, tilefish, and aquarium trade species). Therefore, no other species (e. g., dolphin fish) would be incorporated in the Puerto Rico FMP.

**Alternative 2.** Include FMUs in the Puerto Rico FMP for which annual landings are reported and FMUs for which harvest is prohibited.

Discussion: This alternative would include any FMU for which landings data are available (e.g., ballyhoo, crabs, octopus, snappers, groupers) regardless if it has been managed in the past by the Council. The Puerto Rico FMP would also include FMUs that include species for which harvest is prohibited (e.g., prohibited corals, queen conch, Nassau grouper).

**Alternative 3.** Include FMUs in the Puerto Rico FMP with state and federal (combined) annual average landings, equal to or greater than X pounds, including species for which harvest is prohibited (Figure 1.1. through Figure 1.4.).

Discussion: This alternative would include FMUs with average annual landings, based on a pre-determined set of years (e.g., average annual landings based on the longest year sequence of most reliable landings data or average annual landings based on the most recent five years of available landings data) that equal or exceed a pre-determined minimum number of pounds. In addition, species for which harvest is prohibited would also be included in the new plan. For example, the Council could establish a limit of 20,000 pounds and only include FMUs with average landings higher than this limit. In this example, FMUs such as squirrelfishes, aquarium trade species, tilefish, angelfish, and surgeonfish would not be included in the new Puerto Rico FMP (Figure 1.1.). In addition, species not currently managed by the Council, such as king mackerel and dolphinfish, would be added, individually, or within the context of a newly developed FMU as their commercial landings exceed the 20,000 pound limit (Figure 1.2.). The choice of minimum average landings would be made by the Southeast fisheries Science Center in consultation with the Council and its Scientific and Statistical Committee.



Figure 1.1. Mean historical (1983-2011) commercial landings (lbs) in Puerto Rico for FMUs currently managed by the Caribbean Council.

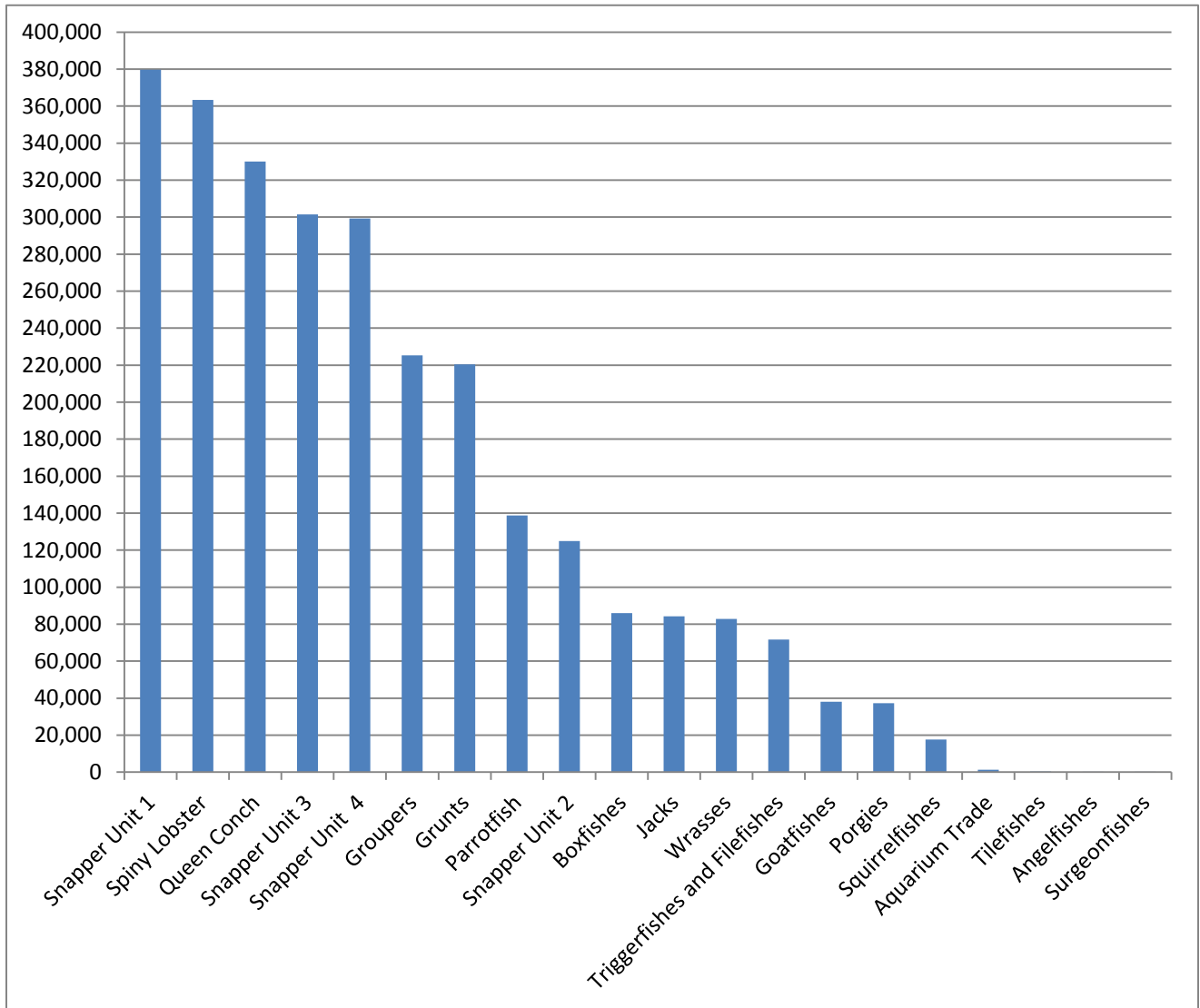




Figure 1.2. Mean historical (1983-2010) commercial landings (lbs) in Puerto Rico for species not currently managed by the Caribbean Council.

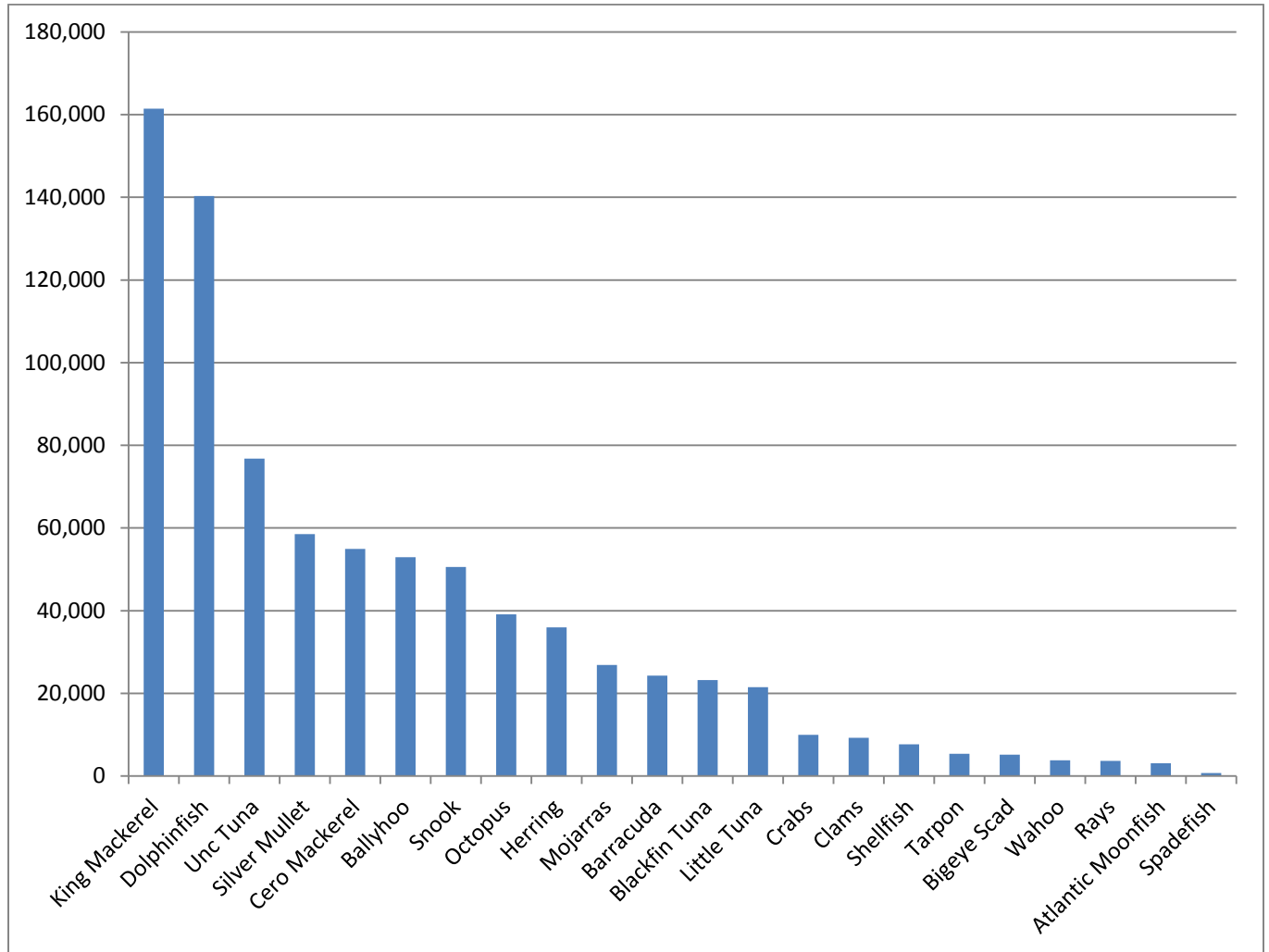




Figure 1.3. Mean historical (2000-2012) recreational landings (lbs) in Puerto Rico for FMUs currently managed by the Caribbean Council.

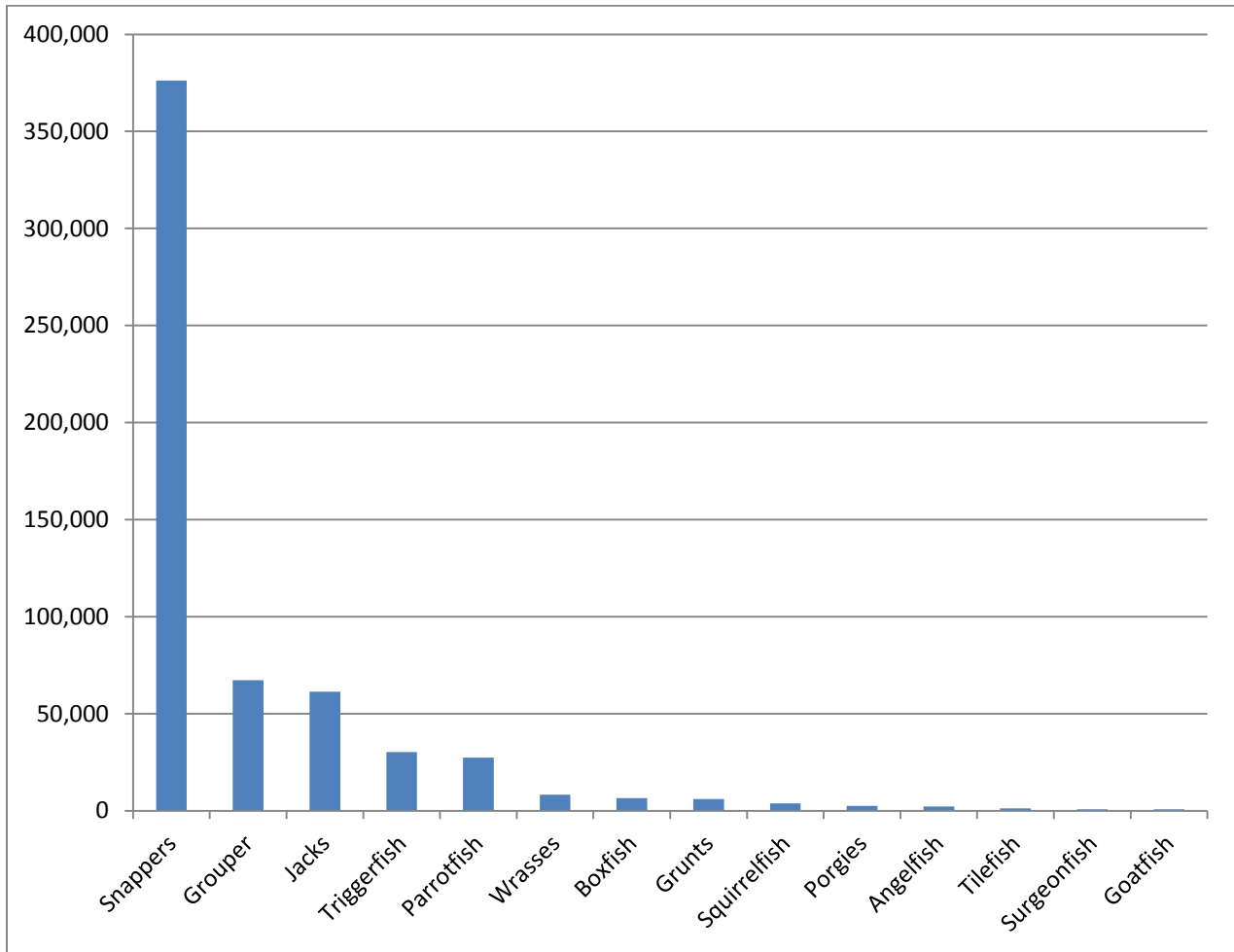
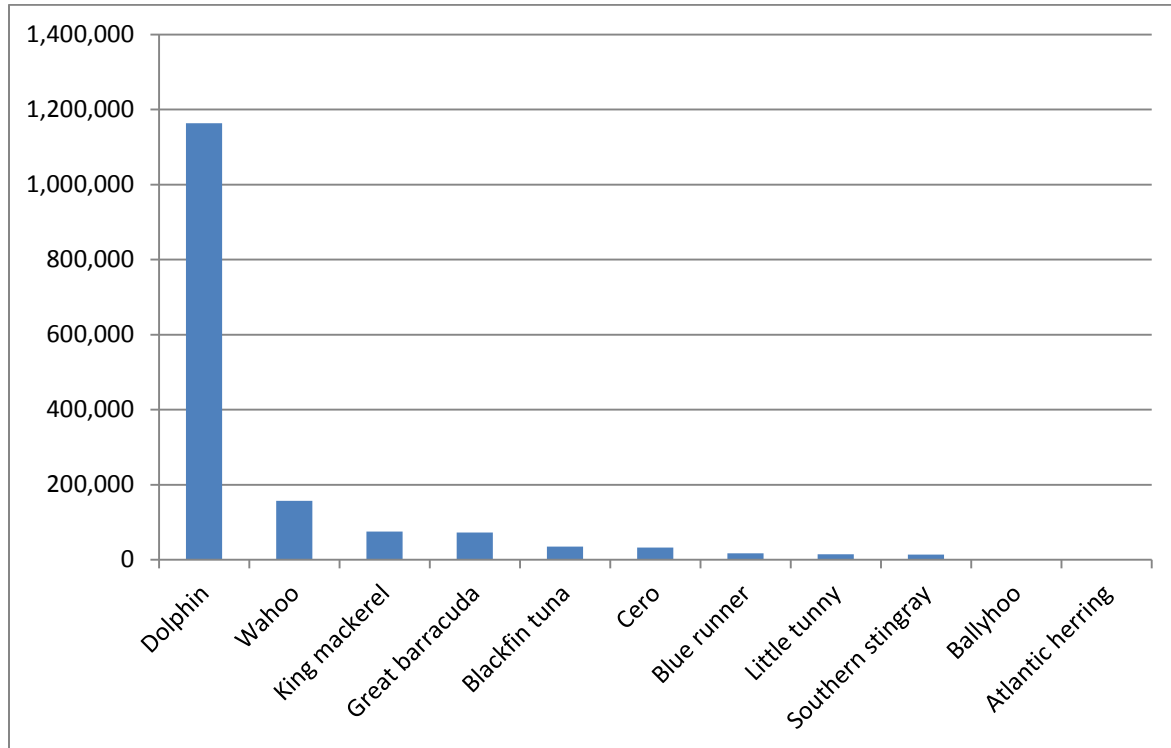




Figure 1.4. Mean historical (2000-2012) recreational landings (lbs) in Puerto Rico for species not currently managed by the Caribbean Council.



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## Action 2. Establish Management Reference Points for FMUs in the Puerto Rico Fishery Management Plan (FMP).

**Alternative 1.** No action. Retain the existing management reference points or proxies for FMUs currently managed by the Council.

**Alternative 2.** Revise existing management reference points or proxies for FMUs managed by the Council.

**Alternative 3.** Establish management reference points or proxies for new FMUs.

Discussion: Selection of **Alternative 1** would retain the existing management reference points or proxies for FMUs currently managed by the Council. However, this alternative would not provide the option to the Council to establish reference points or proxies for any new FMU added to the Puerto Rico FMP (e.g., dolphin fish). Selection of **Alternative 2** would revise existing management reference points or proxies for FMUs in the following FMPs: Spiny Lobster, Reef Fish, Queen Conch, Corals and Reef Associated Plants and Invertebrates FMPs. **Alternative 3** would establish management reference points or proxies for new FMUs added to the Puerto Rico FMP (e.g., dolphin fish). Both **Alternative 2** and **Alternative 3** would require that the Council selects a year sequence of landings data as the basis to revise or establish the management reference points or proxies. The alternatives selected by the Council in the 2010 and 2011 Caribbean Annual Catch Amendments could be used as baseline when revising or establishing the management reference points or proxies for the FMUs in the Puerto Rico FMP (Table 1.1.).





Table 1.1. Management Reference Points or Proxies for all Caribbean Managed Species selected by the Council in the 2010 and 2011 Caribbean Annual Catch Limit Amendments (CFMC 2011a, b).

| <b>Snapper, Grouper, Parrotfish and Queen Conch FMUs (CFMC 2011a)</b>  |   |   |
|--|---|---|
| <b>MSY</b>   | Puerto Rico: snapper, grouper, parrotfish   | <b>MSY proxy =</b><br>Commercial: average annual landings from 1999-2005<br>Recreational: average annual catch from MRFSS during 2000-2005  |
|  | Puerto Rico: queen conch  | <b>MSY proxy =</b> average annual commercial landings from 1999-2005  |
|  | St. Croix and St. Thomas/St. John: snapper, grouper, parrotfish, and queen conch  | <b>MSY proxy =</b> average annual commercial landings from:<br>1999-2005 for St. Croix<br>2000-2005 for St. Thomas/St. John   |
| <b>OFL<sup>1</sup></b>   | All FMUs, all islands/island groups   | <b>OFL = MSY proxy</b> ; overfishing occurs when annual catches exceed the OFL, unless NMFS' Southeast Fisheries Science Center (in consultation with the Council and its SSC) determines the overage occurred because data collection/monitoring improved, rather than because catches actually increased.   |
| <b>ABC</b>   | Parrotfish  | <b>ABC =</b> Puerto Rico = 80,000 pounds (lbs)<br>St. Croix = 300,000 lbs<br>St. Thomas/St. John = 50,000 lbs   |
|  | Queen Conch   | <b>ABC =</b> 50,000 lbs for St. Croix<br>= 0 lbs for St. Thomas/St. John<br>= 0 lbs for Puerto Rico   |
|  | Snapper and grouper (all islands)   | <b>ABC = OFL</b>  |
| <b>OY and ACL</b>  | Snapper and grouper (all islands)   | <b>OY = ACL = [OFL x (0.85)]</b>  |
|  | Parrotfish (all islands)  | <b>OY = ACL = [ABC specified by SSC x (0.85)]</b><br>St. Croix: an additional 5.8822% reduction   |
|  | Grouper Units 1 (Nassau) and 2 (goliath), midnight parrotfish, blue parrotfish, rainbow parrotfish (All islands)  | <b>OY = ACL = 0</b>   |
|  | Queen conch   | St. Croix: <b>OY = ACL = ABC specified by SSC</b><br>Puerto Rico and STT/STJ: <b>OY = ACL = 0</b>   |
| <b>Angelfish, Boxfish, Goatfish, Grunts, Wrasses, Jacks, Scups and Porgies, Squirrelfish, Surgeonfish, Triggerfish and Filefish, Spiny Lobster, Tilefish, Aquarium Trade FMUs (CFMC 2011b)</b> |   |   |
| <b>MSY</b>   | Puerto Rico: grunts, goatfishes, squirrelfish, scups & porgies, jacks, triggerfish & filefish, boxfish, and wrasses FMUs  | <b>MSY proxy =</b> Median annual landings from:<br>Commercial: 1988-2009<br>Recreational: 2000-2009   |
|  | Puerto Rico: spiny lobster FMU  | <b>MSY proxy =</b> Median annual landings from 1988-2009  |
|  | Puerto Rico: surgeonfish, angelfish, and tilefish FMUs (Caribbean wide)   | <b>MSY proxy =</b> Maximum of a single year of recreational landings x 3.   |
|  | St. Croix and St. Thomas/St. John: grunts, goatfishes, squirrelfish, scups & porgies, jacks, triggerfish & filefish, boxfish, wrasses, angelfish, and surgeonfish, and spiny lobster FMUs | <b>MSY proxy =</b> Mean annual landings from:<br>1999-2008 for St. Croix<br>2000-2008 for St. Thomas/St. John   |
|  | Aquarium trade species FMU (Caribbean wide)   | <b>MSY proxy =</b> median annual landings from years 1988-2009 obtained from Puerto Rico commercial and recreational landings.  |
| <b>OFL<sup>2</sup></b>   | Puerto Rico (all FMUs)  | <b>OFL = MSY proxy</b> adjusted using the ORCS scalar; overfishing occurs when annual landings exceed the OFL, unless NOAA Fisheries' Southeast Fisheries Science Center (in consultation with the Council and its SSC) determines the overage occurred because data collection/monitoring improved, rather than because landings actually increased. |
|  | USVI (all FMUs); aquarium trade FMU (all islands)   | <b>OFL = MSY proxy</b> ; overfishing occurs when annual landings exceed the OFL, unless NOAA Fisheries' Southeast Fisheries Science Center (in consultation with the Caribbean Fishery Management Council and its SSC) determines the overage occurred because data collection/monitoring improved, rather than because landings actually increased.  |



|            |   |                           |
|------------|---|---------------------------|
| ABC        | All FMUs, all islands   | ABC= OFL                  |
| OY and ACL | Grunts, goatfishes, squirrelfish, scups & porgies, jacks, triggerfish & filefish, boxfish, wrasses, spiny lobster FMUs (all islands), and tilefish FMU (Caribbean wide) | OY = ACL = [ABC x (0.90)] |
|            | Surgeonfish and angelfish FMUs (all islands); aquarium trade FMU (Caribbean wide)   | OY = ACL = [ABC x (0.75)] |

<sup>1</sup>OFLs defined for the entire Caribbean Region. <sup>2</sup>OFLs defined per island/island group

### Action 3. Identify/Describe Essential Fish Habitat (EFH) for new FMUs in the Puerto Rico FMP.

**Alternative 1.** No Action. Do not identify essential fish habitat for new FMUs added to the Puerto Rico FMP.

**Alternative 2.** Describe and identify EFH according to functional relationships between life history stages of federally-managed species and U.S. Caribbean marine and estuarine habitats.

**Alternative 3.** Designate habitat areas of particular concern in the Puerto Rico FMPs based on confirmed spawning locations and on areas or sites identified as having particular ecological importance to managed species.

### References

CFMC. 2011a. Amendment 2 to the Fishery Management Plan for the Queen Conch Fishery of Puerto Rico and the U.S. Virgin Islands and Amendment 5 to the Reef Fish Fishery Management Plan of Puerto Rico and the U.S. Virgin Islands. Caribbean Fishery Management Council, San Juan, Puerto Rico. 523 pp + Appendices.

CFMC. 2011b. Comprehensive annual catch limit amendment for the Fishery Management Plans of the U.S. Caribbean. Caribbean Fishery Management Council, San Juan, Puerto Rico. 407 pp.