

# Puerto Rico Draft Actions and Alternatives.



Scoping Meetings

April 2014





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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 composed of all species within the FMUs historically managed under the Spiny Lobster FMP, Reef Fish FMP, Queen Conch FMP, and the Corals and Reef Associated Plants and Invertebrates FMP.

**Alternative 2.** Include in the Puerto Rico FMP species with available landings information from the Southeast Fisheries Science Center. In addition, prohibited harvest species in the current Reef Fish FMP, Queen Conch FMP, and the Corals and Reef Associated Plants and Invertebrates FMP will be included.

**Alternative 3.** Include in the Puerto Rico FMP only those species with annual average landings equal to or greater than X pounds (Figure 1.1. through Figure 1.4.). In addition, prohibited harvest species in the current Reef Fish FMP, Queen Conch FMP, and the Corals and Reef Associated Plants and Invertebrates FMP will be included.

**Alternative 4.** Include species in the Puerto Rico FMP that meet a pre-determined set of criteria established in consultation with the Southeast Fisheries Science Center and the Caribbean Council Scientific and Statistical Committee.

Discussion: **Alternative 1** would transfer all species within the existing FMUs from the current species-based FMPs to the Puerto Rico FMP (i.e., corals and reef associated plants and invertebrates, 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). No additional species would be added to the Puerto Rico FMP. **Alternative 2** would include any species with available landings information provided by the Southeast Fisheries Science Center (e.g., dolphinfish, ballyhoo, crabs, octopus, snappers, groupers) regardless if currently included in any of the current FMPs. The Puerto Rico FMP would also include species prohibited for harvest in the current FMPs. **Alternative 3** would include species within the 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 species within the 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 if their commercial landings exceed the 20,000 pound limit during a pre-determined set of years (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. **Alternative 4** would include any species that meet pre-determined set of criteria establish by the Council in collaboration with the Southeast Fisheries Science Center and the Caribbean Council’s Scientific and Statistical Committee. Criteria used to determine if a species is included or excluded in the new Puerto Rico FMP could include biology, habitat, average historical landings during a pre-determined set of years, economic importance, depth distribution, and/or range of the species, among others.

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

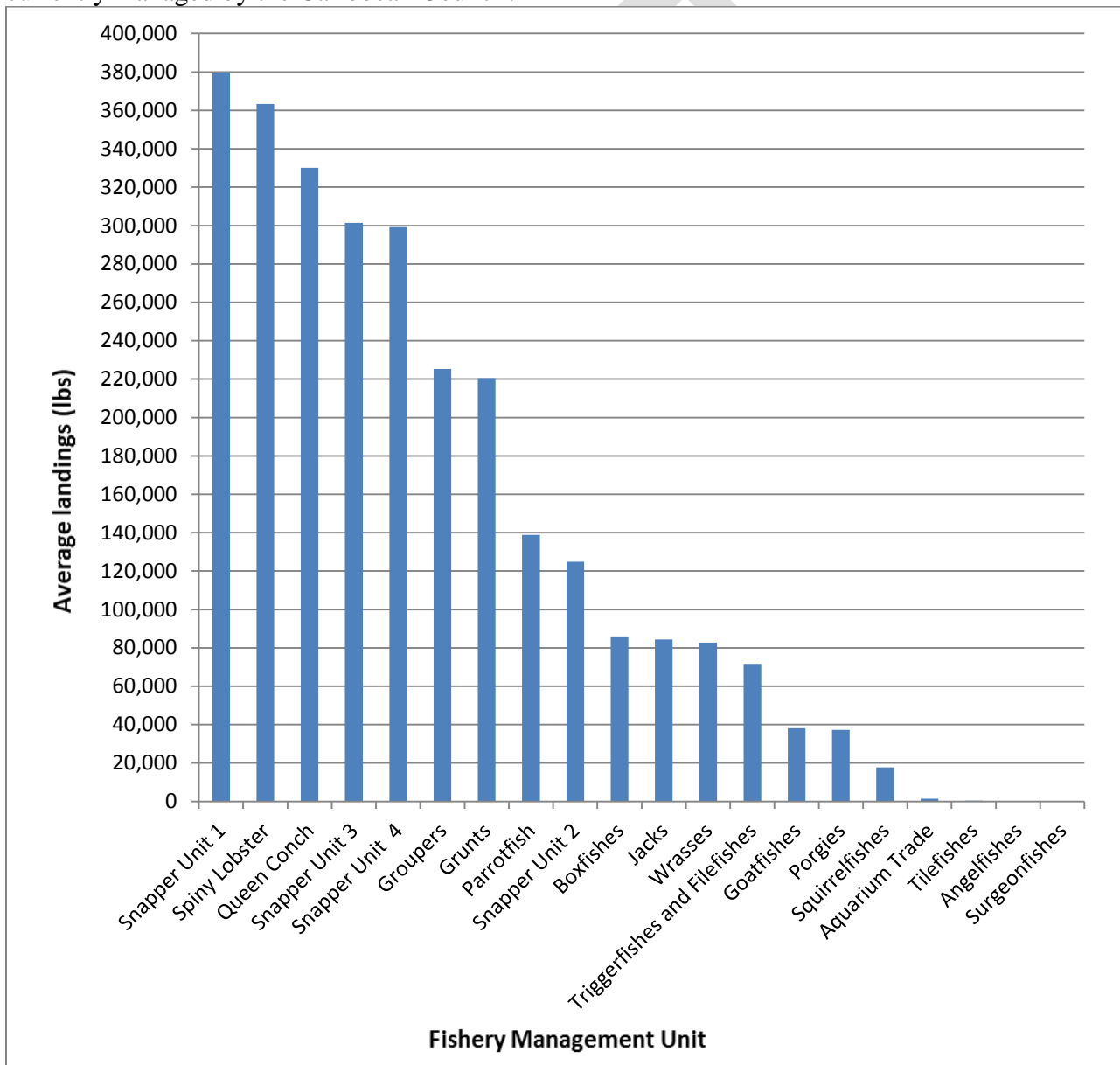


Figure 1.2. Mean historical (1983-2011) commercial landings (lbs) in Puerto Rico for species not currently managed by the Caribbean Council.

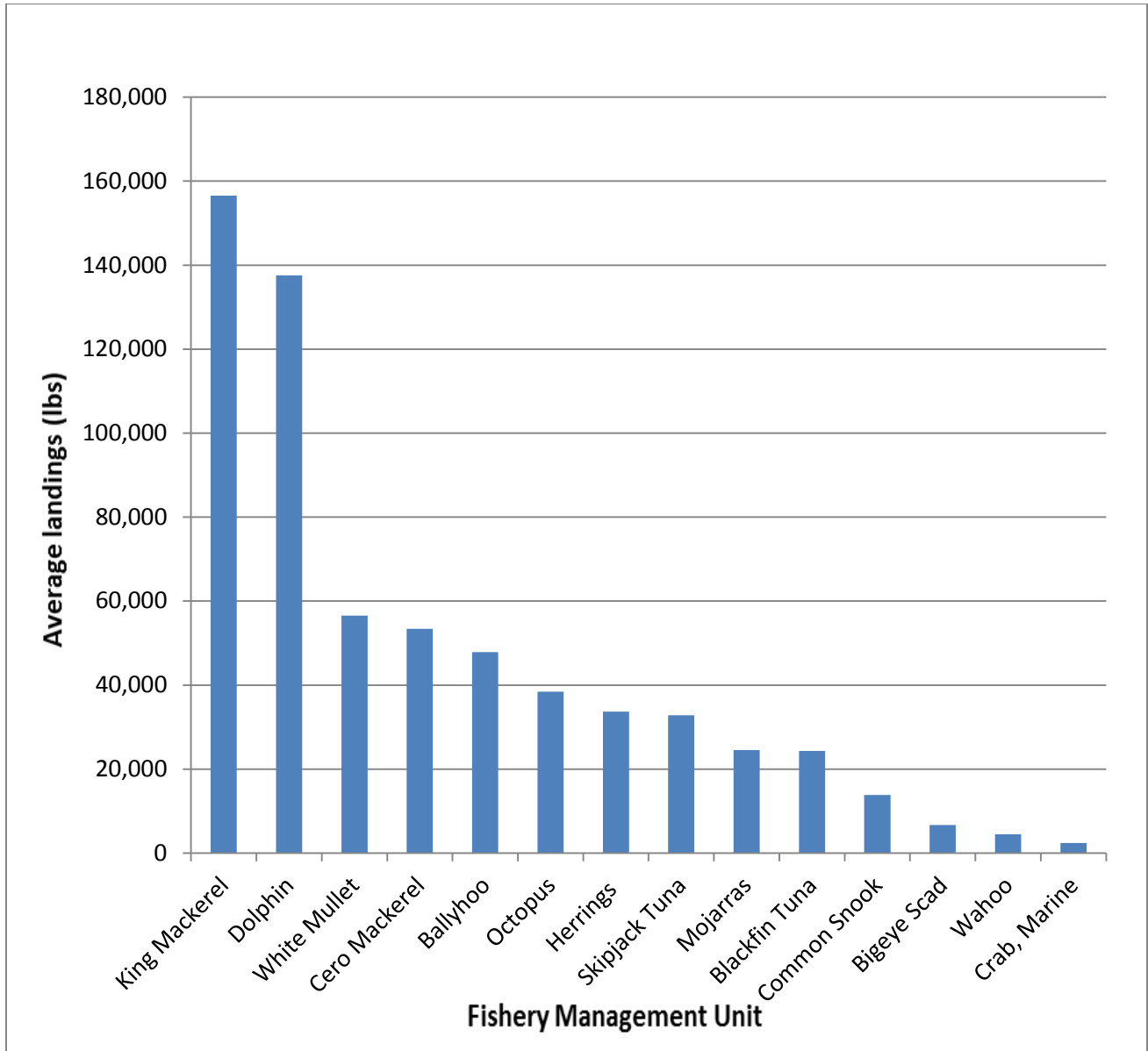




Figure 1.3. Mean historical (2000-2012) recreational landings (lbs) in Puerto Rico for FMUs currently managed by the Caribbean Council.

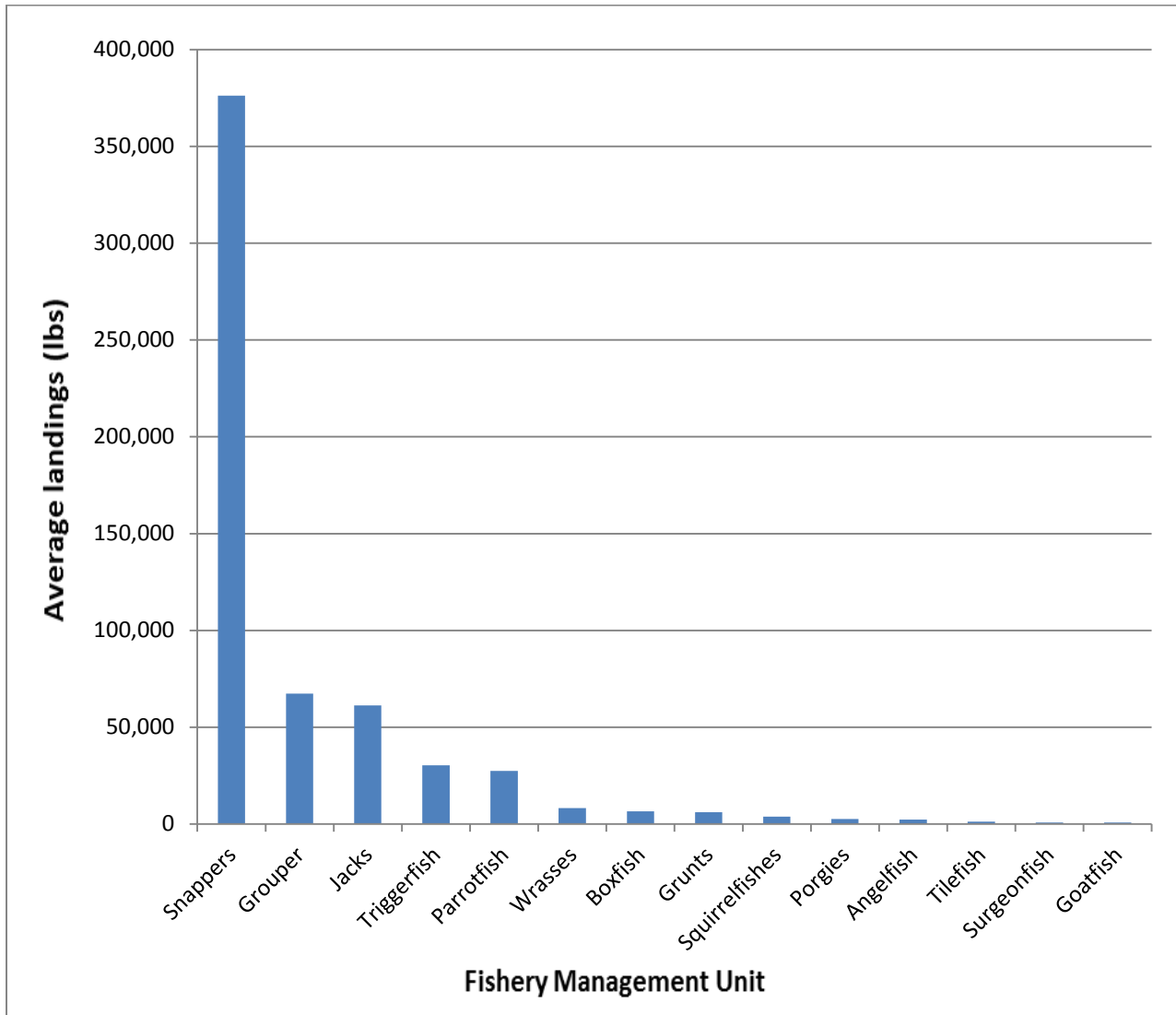
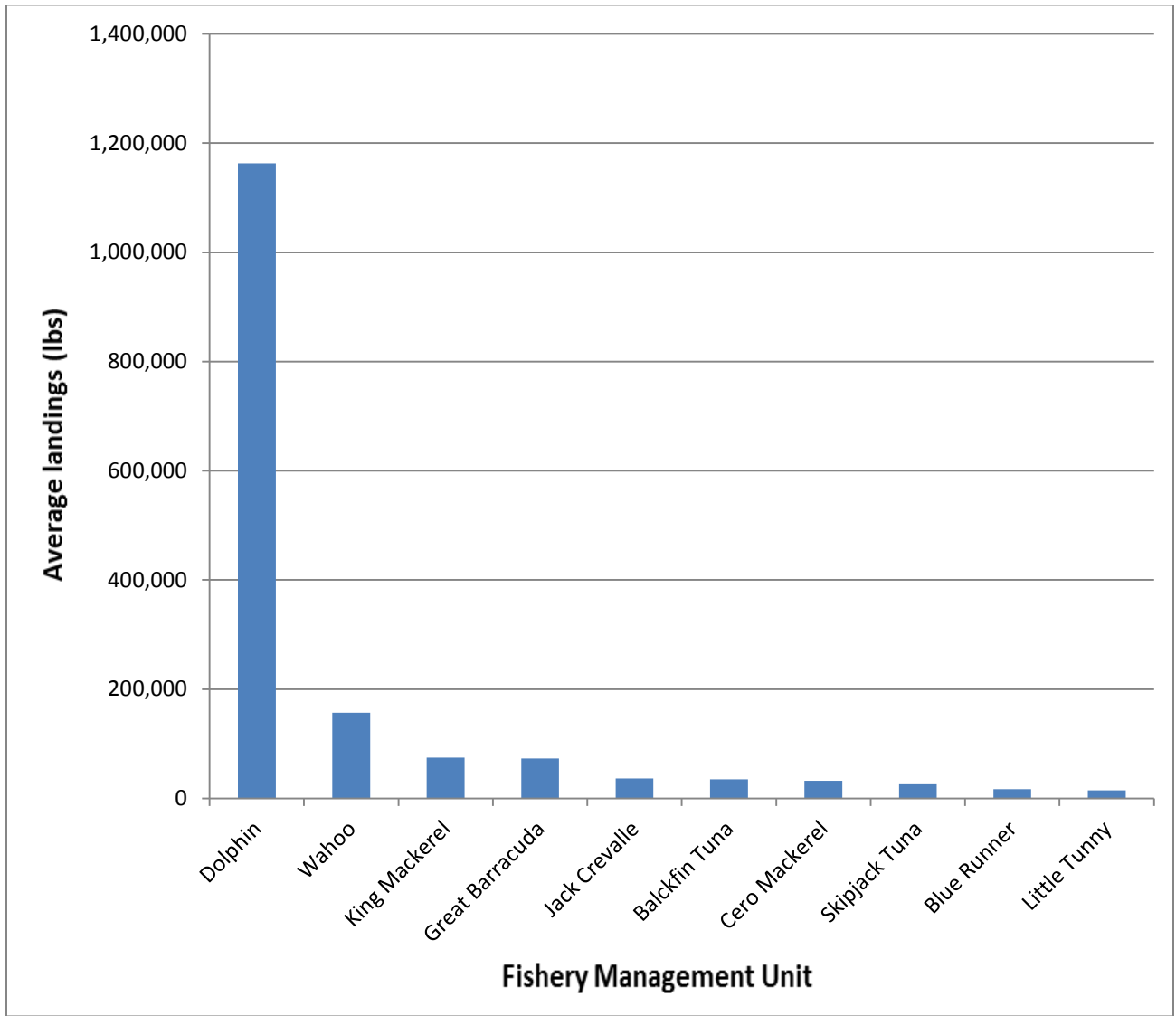




Figure 1.4. Mean historical (2000-2012) recreational landings (lbs) in Puerto Rico for species not currently managed by the Caribbean Council.





## **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 species in the Puerto Rico FMP.

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 species added to the Puerto Rico FMP. Selection of **Alternative 2** would revise management reference points or proxies for the currently established FMUs. **Alternative 3** would establish management reference points or proxies for new species added to the Puerto Rico FMP. Both **Alternative 2** and **Alternative 3** would require the Council to select 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 baselines when revising or establishing the management reference points or proxies for the FMUs in the Puerto Rico FMP (Table 1.1.). In addition, selection of **Alternative 3** would allow the Council to revise the existing management reference points for the currently managed FMUs.





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 (PR): snapper, grouper, parrotfish	<b>MSY proxy =</b> Commercial: average annual landings from 1999-2005 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 (STX) and St. Thomas/St. John STT/STJ: snapper, grouper, parrotfish, and queen conch	<b>MSY proxy =</b> average annual commercial landings from: 1999-2005 for St. Croix 2000-2005 for St. Thomas/St. John
<b>OFL<sup>1</sup></b>	All FMUs, for PR, STT/STJ, and STX	<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) St. Croix = 300,000 lbs St. Thomas/St. John = 50,000 lbs
	Queen Conch	<b>ABC =</b> 50,000 lbs for St. Croix = 0 lbs for St. Thomas/St. John = 0 lbs for Puerto Rico
	Snapper and grouper (PR, STT/STJ, and STX)	<b>ABC = OFL</b>
<b>OY and ACL</b>	Snapper and grouper (PR, STT/STJ, and STX)	<b>OY = ACL = [OFL x (0.85)]</b>
	Parrotfish (all islands)	<b>OY = ACL = [ABC specified by SSC x (0.85)]</b> 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> 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: Commercial: 1988-2009 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: 1999-2008 for St. Croix 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 and tilefish FMUs (Caribbean-wide)	<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.
<b>ABC</b>	All FMUs, for PR, STT/STJ, and STX	<b>ABC = OFL</b>



OY and ACL	Grunts, goatfishes, squirrelfish, scups & porgies, jacks, triggerfish & filefish, boxfish, wrasses, spiny lobster FMUs (PR, STT/STJ, and STX ); 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 species in the Puerto Rico FMP.

**Alternative 1.** No Action. Do not identify essential fish habitat for new species 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.

Discussion: **Alternative 1** would prevent the Council from designating EFH for any new species added to the Puerto Rico FMP. Therefore, if **Alternative 1** is selected, the Council would not comply with the Magnuson-Stevens Act requirement of designating EFH for all managed species. **Alternative 2** would specify functional relationships for life stages (e.g., eggs and larvae) and the habitat types that might be regarded as meriting special attention for their importance to managed species. The Magnuson-Stevens Act defines EFH as “those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.” These are the functions that marine and estuarine habitats support. Under this alternative, the distribution of species and life stages is inferred from information on these functional relationships. For example, the reef fish fishery in the U.S. Caribbean consists of all waters from mean high water to the outer boundary of the EEZ including habitats used by eggs and larvae, and all substrates from mean high water to 100 fathoms depth used by other life stages. **Alternative 3** would allow the Council to establish habitat areas of particular concern (HAPCs) for any new species in the Puerto Rico FMP. The EFH regulations encourage regional Fishery Management Councils to designate these HAPCs within areas identified as EFH in order to focus conservation priorities on specific habitat areas that play a particularly important role in the life cycles of federally managed fish species. For example, the Council has identified the Tourmaline Bank and Abrir La Sierra Bank west of Puerto Rico as HAPCs based on the occurrence of confirmed red hind spawning aggregations.



## 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.

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