

Triggering Accountability Measures for Reef Fish in the Puerto Rico Exclusive Economic Zone



An Amendment to the Reef Fish Fishery Management Plan of Puerto Rico and the U.S. Virgin Islands: Scoping/Options Paper (DRAFT)



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Table of Contents

Chapter 1. Introduction	3
1.1 What action is being proposed?	3
1.2 Who is proposing the action?.....	4
Purpose for Action	5
Need for Action.....	5
1.3 Where will the action have an effect?.....	5
1.4 Why is the Council considering action?	5
Chapter 2. Management Options for Triggering Accountability Measures	8
ACTION 1: Select the trigger for applying accountability measure-based closures to the commercial or recreational reef fish fishery in Puerto Rico.	8
Option 1: No action. The AM is triggered for a particular sector when the average of the three most recent years of available landings exceeds the sector-specific annual catch limit (ACL).	8
Option 2: The AM would be triggered only if the total ACL is exceeded, but the overage would be assigned to each fishing sector in proportion to their individual overage. If only one of the two sectors exceeds its ACL, the AM will be applied only to that sector.	8
Option 3: The AM would be triggered only if the total ACL is exceeded, but the overage would be assigned to each fishing sector equally regardless of the extent to which either sector exceeded their sector-specific ACL.....	8
Chapter 3. References	9

List of Figures

Figure 1.1. Jurisdictional boundaries of the Caribbean Fishery Management Council, the Commonwealth of Puerto Rico, and the Territory of the U.S. Virgin Islands, including management areas.....	4
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Chapter 1. Introduction

1.1 What action is being proposed?

Both recreational and commercial fishers harvest fish from U.S. Caribbean waters. In the U.S. Virgin Islands (USVI), harvest data for reef fish species managed by the Caribbean Fishery Management Council (Council) are collected for the commercial sector. However, recreational sector harvest data are not collected due to the lack of a recreational data collection program. As an outcome of this data limitation, commercial harvest data alone were used to establish annual catch limits (ACLs) for federal waters surrounding the USVI and are similarly used to monitor harvest relative to the ACL. In Puerto Rico, where harvest data for each of the commercial and recreational sectors are available for most managed species, the two sectors are governed by separate ACLs and sector-specific data are used to monitor harvest relative to the ACL.

Presently, if total landings (state and federal waters combined) from either of the two Puerto Rico fishing sectors exceeds the sector-specific ACL for any species or species complex (group of similar species managed together), an accountability measure (AM) is triggered for that sector. The AM requires accounting for that overage by having the length of that sector's fishing season for that species or complex reduced in the year following the determination. The length of the reduction

Annual catch limits (ACLs) are the amount of a particular fish species, stock or stock complex that can be caught in a given year.

Accountability measures (AMs) are management controls to prevent ACLs from being exceeded and to correct or mitigate overages of the ACLs if they occur.

Optimum yield (OY) is the amount of harvest of a species or complex that provides the greatest overall benefit to the U.S., particularly with respect to food production and recreational opportunities. OY takes into account the protection of marine ecosystems and is considered within the context of maximum sustainable yield from the fishery reduced by relevant economic, social, or ecological factors. Achieving OY is a primary goal of fisheries management.

reflects the extent to which the ACL was exceeded.

This AM-based reduction is applied even if the total ACL summed over both sectors, which equates to the optimum yield (OY) from the fishery, is not exceeded. The Council wants to ensure to the extent practicable that OY, a key measure of the health and value of the fishery, is achieved. To accomplish this, the Council is considering revisions to the fishing

regulations governing implementation of AM-based closures for reef fish in the Puerto Rico exclusive economic zone (EEZ). One proposed option is to implement AM-based fishing season reductions in response to an overage of the *total* ACL rather than in response to a *sector-specific* overage, as is the present case. These options are more fully described in Chapter 2. Input on these options, and on other possible options to address the issue, are solicited from the public via the scoping process.

1.2 Who is proposing the action?

At their August 2016 meeting, the Council proposed the action considered in this Scoping/Options Paper. The proposed action would be implemented through an amendment to the Council's Reef Fish Fishery Management Plan (FMP) of Puerto Rico and the USVI (Reef Fish FMP). The Council develops plan amendments and submits them to the National Marine Fisheries Service (NMFS), who ultimately approves, disapproves, or partially approves the actions in the amendment on behalf of the Secretary of Commerce, and then implements the regulations.

Through the Scoping/Options process, NMFS and the Council work with the public to consider potential management options to address issues identified in the current approach to implementing AMs. This may result in changes to the management of federal fisheries in the U.S. Caribbean. This Scoping/Options Paper is the first step to

gather additional information and discuss management options with the public before further development of an amendment to the Council's Reef Fish FMP.

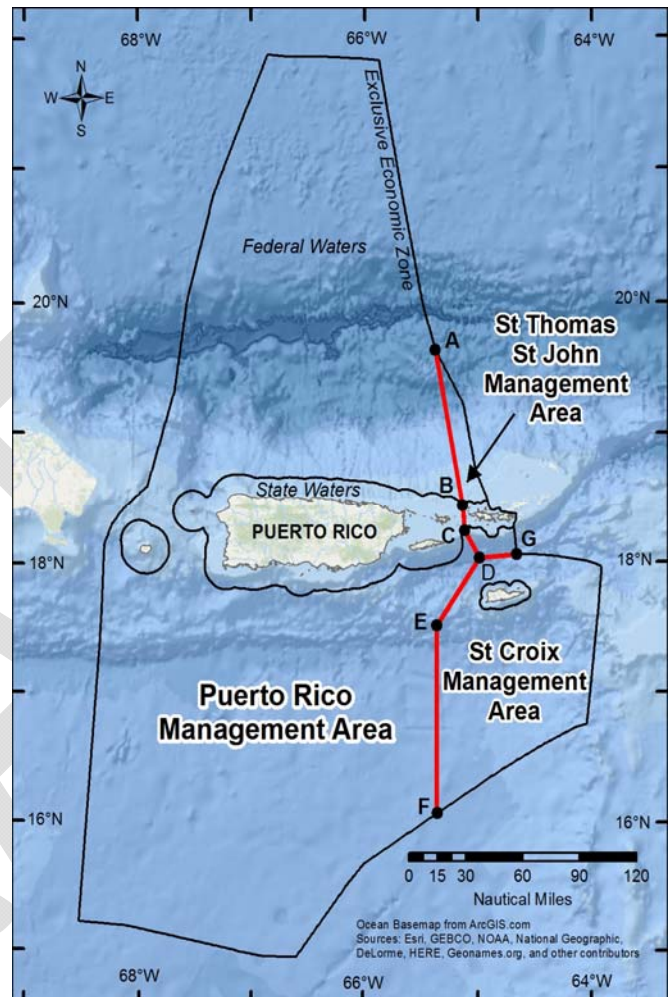


Figure 1.1. Jurisdictional boundaries in the U.S. Caribbean, including the EEZ managed by the Caribbean Fishery Management Council, and state waters managed by the Commonwealth of Puerto Rico and the Territory of the U.S. Virgin Islands.

1.3 Where will the action have an effect?

The Council is responsible for managing fishery resources in federal waters of the U.S. Caribbean (Figure 1.1), which includes Puerto Rico and the USVI. Because sector-based management presently only occurs in the Puerto Rico EEZ, this action is specific to the Puerto Rico EEZ. Puerto Rico EEZ waters are those waters located from 9 - 200 nautical miles (17 - 370 kilometers) from the coast of the island.

1.4 Why is the Council considering action?

As previously discussed, and as further described in the paragraphs that follow, there are separate ACLs and AMs for the recreational and commercial reef fish fishing sectors in the Puerto Rico EEZ (but not the USVI EEZ). Presently, if one of the two Puerto Rico reef-fish fishing sectors exceeds the ACL assigned to that sector, for a particular species or complex, the resultant AM is applied only to that sector. If the other sector did not exceed its assigned ACL for that species or complex, no AM is applied to that sector. However, it is possible that either the recreational or commercial sector may exceed their assigned ACL and be subject to an AM, even though the total ACL (i.e., the total for both sectors), and thus the OY, for that species or complex was not exceeded. The focus of the present action is to optimize the likelihood that OY will be achieved through

Purpose for Action

To revise the manner in which accountability measures are triggered and applied in order to minimize the risk of fishery closures of the Puerto Rico reef fish fishery and reduce negative socio-economic impacts.

Need for Action

To ensure to the greatest degree practicable that optimum yield is achieved for federally managed reef fish fisheries while preventing the fishery from exceeding the overfishing limit.

the consideration of a different approach to triggering the application of an AM.

In the EEZ management areas surrounding the islands of the USVI, there are not separate ACLs and AMs for the commercial and recreational fishing sectors due to the absence of an operational data collection program for the recreational sector. Because USVI recreational harvest data are not available, ACLs cannot be determined for the recreational sector and AMs are set using commercial harvest data alone.

In the EEZ management area surrounding Puerto Rico, by contrast, both recreational and commercial harvest data are collected for Council-managed reef fish such as snapper, grouper, and surgeonfish, although not for invertebrates such as spiny lobster and queen conch. In the case of Council-managed reef fish, this allows for the

establishment of separate ACLs and AMs for each of the commercial and recreational fishing sectors.

The ACL is a key benchmark in the management of federal fishery resources, as described in the FMP amendments that established ACLs in the U.S. Caribbean (CFMC 2011a, 2011b). As the name implies, an ACL defines an allowable harvest level, for a species or complex of species, which should not be exceeded during a defined period of time. For Council managed resources in the U.S. Caribbean, that time period is composed of the most recent three years for which landings data are available. The datum for comparison against the ACL is the average of those three years of landings, as described in the 2010 and 2011 Caribbean ACL Amendments (CFMC 2011a, 2011b). The average landings cannot exceed the established ACL.

If the three-year landings average for a species or complex does exceed the sector ACL (Puerto Rico) or total ACL (USVI), AMs are applied. The AM states that if, within a management area, the average landings for a species or complex exceeds the applicable ACL, the length of the January 1-December 31 fishing season for that species or complex will be reduced in the year following the determination. The length of the reduction reflects the extent of the overage. The greater the overage, the longer the AM-based closure must be.

The initial calculation of species- or complex-specific reef fish ACLs was based

on combined state and federal landings (CFMC 2011a, b). Calculating the landings average for a species or species complex, for comparison against the ACL, also relies on combined state and federal landings.

However, an AM that results from an overage is only legally applicable within waters subject to federal jurisdiction, in the case of this action the Puerto Rico EEZ. The government of Puerto Rico may choose to adhere to the federal closure, but they are under no legal obligation to do so.

Determining the ACL for a reef fish species or complex within the Puerto Rico management area was a stepwise process. The process is fully explained for snapper, grouper and parrotfish in the 2010 Caribbean ACL Amendment (CFMC 2011a) and for all other reef fish species in the 2011 Caribbean ACL Amendment (2011b). Briefly, a proxy for maximum sustainable yield (MSY) was determined based on mean or median landings during a defined period of time, which varied depending on the species or complex being considered. The overfishing limit (OFL), and in most cases the acceptable biological catch (ABC), were then equated to that MSY proxy. The only exception to this approach was for parrotfish, for which the Council's Scientific and Statistical Committee set an ABC of 80,000 pounds. As a precautionary approach to managing reef fish resources, a reduction reflecting species ecology and vulnerability was then applied to the ABC to determine the ACL. In all cases, the OY was set equal to the ACL.

For Puerto Rico, the sector-specific ACL for each species or complex was then determined based on the percentage of catch contributed by each sector during the same time period used to develop the ACL. If, for example, the commercial and recreational sectors each contributed 50 percent of the average landings, the total ACL would be divided evenly and 50 percent assigned to each sector. However, OY continues to equal the total ACL.

As noted previously, sector-based AMs such as those presently in place in the Puerto Rico EEZ may act to prevent OY from being achieved. This could be the case when harvest from one sector exceeds its ACL by a small amount, while harvest from the other sector is well below that sector's ACL. This could result in the total harvest from both sectors being less than the total ACL (= OY) for that species or complex. Such an outcome has occurred in Puerto Rico, most recently with the Snapper Unit 2 (SU2) complex composed of queen (*Etelis oculatus*) and cardinal (*Pristipomoides macrophthalmus*) snappers. Average annual commercial landings during 2012-2014 were 155,889 pounds, exceeding the 145,916 pound ACL by 6.4 percent. This resulted in an AM-based closure, implemented in the 2016 fishing year, of 36 days (closure initiated November 26, 2016). Contemporaneous average annual recreational landings were 2,460 pounds, considerably below the 34,810 pound ACL assigned to Puerto Rico's recreational

sector. In total, average annual landings for the Puerto Rico SU2 fishery during 2012-2014 were 158,349 pounds, well below the 180,726 pound total ACL. As a result, over 22,000 pounds of sustainable fishery yield was foregone. If, for example, a dockside value of \$6 US per pound was applied to queen snapper, that foregone yield would equal approximately \$132,000 of lost ex-vessel revenue.

To address this situation, the Council is considering options for changing the trigger for implementing an AM. One option of interest would reduce the length of a fishing season for the commercial and/or recreational sectors only when the total ACL is exceeded, rather than when a sector ACL is exceeded. Such an approach could increase the likelihood that OY is achieved, and ex-vessel revenues are maintained or increased, while still protecting the biological sustainability and ecological functionality of the species or complex. This document proposes some optional approaches to accomplish this objective. These options are designed to provide a start point for developing a solution that best meets the needs of the resource and the Council's constituents. Public input will be essential to establishing a final list of options and to identifying the preferred solution. The public will be provided with multiple opportunities to submit written or verbal comments regarding this proposed amendment to the Council's Reef Fish FMP.

Chapter 2. Management Options for Triggering Accountability Measures

ACTION: Select the trigger for applying accountability measure-based closures to the commercial or recreational reef fish fishery in Puerto Rico.

Option 1: No action. The AM is triggered for a particular sector when the average of the three most recent years of available landings exceeds the sector-specific annual catch limit (ACL).

Option 2: The AM would be triggered only if the average of the three most recent years of available landings exceeds the total ACL, but the overage would be assigned to each fishing sector in proportion to their individual overage of the sector ACL. If only one of the two sectors exceeds its ACL, the AM would be applied only to that sector.

Option 3: The AM would be triggered only if the average of the three most recent years of available landings exceeds the total ACL, but the overage would be assigned to each fishing sector equally regardless of the extent to which either sector exceeded their sector-specific ACL.

Chapter 3. 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. September 22, 2011. 523 pp + Appendices. Available at: http://sero.nmfs.noaa.gov/sustainable_fisheries/caribbean/2010_acl/index.html.

CFMC. 2011b. Comprehensive Annual Catch Limit (ACL) Amendment for the Fishery Management Plans of the U.S. Caribbean. Caribbean Fishery Management Council, San Juan, Puerto Rico. October 25, 2011. 407 pp. Available at: http://sero.nmfs.noaa.gov/sustainable_fisheries/caribbean/2011_acl/index.html.