

Action 1: Management Reference Points

Alternative 1: No action (status quo). Maintain current management reference points:

MANAGEMENT REFERENCE POINT	STATUS QUO DEFINITION
Maximum Sustainable Yield	
Queen Conch, Spiny Lobster & Reef Fish	$MSY = C / [(F_{CURR}/F_{MSY}) \times (B_{CURR}/B_{MSY})]$; where C is calculated based on commercial landings for the years 1997-2001 for Puerto Rico and 1994-2002 for the USVI, and on recreational landings for the years 2000-2001.
Corals	$MSY = 0$
Optimum Yield	
Queen Conch, Spiny Lobster & Reef Fish	OY = average yield associated with fishing on a continuing basis at F_{OY} ; where $F_{OY} = 0.75F_{MSY}$
Corals	$OY = 0$
Overfishing Threshold	
Queen Conch, Spiny Lobster & Reef Fish	$MFMT/ABC/ACL = F_{MSY}(B)$; F_{MSY} proxy is the natural mortality rate (M)
Corals	$MFMT/ABC/ACL = 0$
Overfished Threshold	$MSST = B_{MSY}(1-c)$; where c = the natural mortality rate (M) or 0.50, whichever is smaller

Alternative 2: Redefine management reference points for queen conch, spiny lobster and reef fish based on longest reliable time series of pre-SFA catch data.

MANAGEMENT REFERENCE POINT	STATUS QUO DEFINITION
Maximum Sustainable Yield	MSY = average annual catch from 1999-2005 for Puerto Rico and from 2000-2005 for the USVI
Optimum Yield	OY = 0.75(MSY)
Overfishing Threshold	
Alternative 2(a)	OFL = MSY; overfishing occurs when annual catches exceed the OFL.
Alternative 2(b)	OFL = MSY; overfishing occurs when annual catches exceed the OFL and the Caribbean Fishery Management Council in consultation with its Scientific and Statistical Committee and NMFS' Southeast Fisheries Science Center determine the overage occurred because catches increased versus because reporting improved.
Overfished Threshold	
Alternative 2(c)	A species/species group is overfished if annual catch < 0.50(ACL).
Alternative 2(d)	A species/species group is overfished if annual catch < 0.50(ACL) and the Caribbean Fishery Management Council in consultation with its Scientific and Statistical Committee and NMFS' Southeast Fisheries Science Center determine the decline in catch is not caused by a reduction in effort.
Annual Catch Limit	ACL = OFL x (uncertainty factor)

Alternative 3: Redefine management reference points for queen conch, spiny lobster and reef fish based on longest reliable time series of catch data.

MANAGEMENT REFERENCE POINT	STATUS QUO DEFINITION
Maximum Sustainable Yield	MSY = average annual catch from 1999-2007 for Puerto Rico and from 2000-2007 for the USVI
Optimum Yield	OY = 0.75(MSY)
Overfishing Threshold	
Alternative 3(a)	OFL = MSY; overfishing occurs when annual catches exceed the OFL.
Alternative 3(b)	OFL = MSY; overfishing occurs when annual catches exceed the OFL and the Caribbean Fishery Management Council in consultation with its Scientific and Statistical Committee and NMFS' Southeast Fisheries Science Center determine the overage occurred because catches increased versus because reporting improved.
Overfished Threshold	
Alternative 3(c)	A species/species group is overfished if annual catch < 0.50(ACL).
Alternative 3(d)	A species/species group is overfished if annual catch < 0.50(ACL) and the Caribbean Fishery Management Council in consultation with its Scientific and Statistical Committee and NMFS' Southeast Fisheries Science Center determine the decline in catch is not caused by a reduction in effort.
Annual Catch Limit	ACL = OFL x (uncertainty factor)

Alternative 4: Redefine management reference points for queen conch, spiny lobster and reef fish based on recent catch data.

MANAGEMENT REFERENCE POINT	STATUS QUO DEFINITION
Maximum Sustainable Yield	MSY = average annual catch from 2003-2007 for Puerto Rico and the USVI
Optimum Yield	OY = 0.75(MSY)
Overfishing Threshold	
Alternative 4(a)	OFL = MSY; overfishing occurs when annual catches exceed the OFL.
Alternative 4(b)	OFL = MSY; overfishing occurs when annual catches exceed the OFL and the Caribbean Fishery Management Council in consultation with its Scientific and Statistical Committee and NMFS' Southeast Fisheries Science Center determine the overage occurred because catches increased versus because reporting improved.
Overfished Threshold	
Alternative 4(c)	A species/species group is overfished if annual catch < 0.50(ACL).
Alternative 4(d)	A species/species group is overfished if annual catch < 0.50(ACL) and the Caribbean Fishery Management Council in consultation with its Scientific and Statistical Committee and NMFS' Southeast Fisheries Science Center determines the decline in catch is not caused by a reduction in effort.
ACL	ACL = OFL x (uncertainty factor)

Action 2: Annual Catch Limit Allocation/Management

Alternative 1: No Action (status quo). Maintain Caribbean-wide annual catch limits.

Alternative 2: Divide and manage annual catch limits by platform (i.e., Puerto Rico and STT/STJ, STX).

Alternative 3: Divide and manage annual catch limits by island group (i.e., Puerto Rico, STT/STJ, STX).

Action 3: Accountability Measures

Action 3(a): Triggering Accountability Measures

Alternative 1: No Action (status quo). Do not trigger accountability measures.

Alternative 2: Trigger accountability measures if the annual catch limit is exceeded based upon:

Sub alternative A: A single year of landings.

Sub alternative B: A 2-year average of landings.

Sub alternative C: A 3-year average of landings.

Alternative 3: Trigger accountability measures if the annual catch limit is exceeded as defined below and the Caribbean Fishery Management Council in consultation with its Scientific and Statistical Committee and NMFS' Southeast Fisheries Science Center determines the overage occurred because catches increased versus because reporting improved:

Sub alternative A: A single year of landings.

Sub alternative B: A 2-year average of landings.

Sub alternative C: A 3-year average of landings.

Action 3(b): Applying Accountability Measures

Alternative 1: If accountability measures are triggered for a species or species group, then reduce the length of the fishing season for that species or species group the first calendar year in which such action is possible by the amount needed to account for the overage.

Alternative 2: If accountability measures are triggered for a species or species group, then reduce the annual catch limit for that species or species group the first calendar year in which such action is possible by the amount needed to account for the overage and adjust management measures as appropriate.

Alternative 3: If accountability measures are triggered for a species or species group, then establish trip limits for that species or species group the first calendar year in which such action is possible by the amount needed to account for the overage and adjust management measures as appropriate.

Alternative 4: If accountability measures are triggered for a species or species group, then implement a limited entry program for the species or species group the first calendar year in which such action is possible by the amount needed to account for the overage and adjust management measures as appropriate.

Action 4: Establish Framework Measures for Annual Catch Limits and Accountability Measures

Alternative 1: No Action. Do not revise the framework to address annual catch limit and accountability measures.

Alternative 2: Revise the framework to authorize setting, adjusting and implementing annual catch limits and accountability measures.