APPENDIX 3. OVERFISHING DEFINITIONS CONTAINED IN FEDERAL FISHERY MANAGEMENT PLANS

Fishery Management Plan	ATLANTIC SEA SCALLOP					
Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Sea scallop - Northwestern Atlantic Coast	If stock biomass is equal or greater than Bmsy as measured by an absolute value of scallop meat (mt), overfishing occurs when fishing mortality exceeds Fmsy. If the total stock biomass is below Bmsy, overfishing occurs when fishing mortality exceeds the level that has a 50 percent probability to rebuild stock biomass to Bmsy in 10 years.	0.38	A scallop stock is in an overfished condition when stock biomass is below ½Bmsy.	125,358 mt	62,679 mt
Fishery Management Plan	ATLANTIC SALMON				
Atlantic salmon - Gulf of Maine	Overfishing is currently not defined (fishing mortality is set equal to zero).	Undefined	A stock is overfished when the stock biomass falls below the Conservation Spawning Escapement (CSE).	54,000	29,199
Fishery Management Plan	NORTHEAST MULTISPECIES				
Atlantic cod - Gulf of Maine	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.24	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	58,248 mt	29124 mt
Atlantic cod - Georges Bank	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.25	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	148,084 mt	74,042 mt
Haddock - Gulf of Maine	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.43	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	5900 mt	2950 mt

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Haddock - Georges Bank	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.35	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	158,873 mt	79,437 mt
American plaice - Gulf of Maine / Georges Bank	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.19	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	21,940 mt	10,970 mt
Acadian redfish - Gulf of Maine / Georges Bank	Overfishing occurs when F exceeds F at 50% maximum spawning potential.	0.04	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	271,000 mt	135,500 mt
Witch flounder - Northwestern Atlantic Coast	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.20	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	11,447 mt	5723 mt
Yellowtail flounder - Georges Bank	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.25	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	43,200 mt	21,600 mt

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Yellowtail flounder - Southern New England / Mid-Atlantic	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.25	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	27,400 mt	13,700 mt
Yellowtail flounder - Cape Cod / Gulf of Maine	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.24	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	7790 mt	3895 mt
White hake - Gulf of Maine / Georges Bank	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.13	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	56,254 mt	28,127 mt
Pollock - Gulf of Maine / Georges Bank	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.25	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	91,000 mt	45,500 mt
Ocean pout - Northwestern Atlantic Coast	Overfishing occurs when the exploitation ratio is less than the median exploitation ratio from 1977-1985.	0.76 catch/ survey index	The stock is overfished when the 3-year moving average of the NEFSC spring survey is less than ½ B_{MSY} proxy; where B_{MSY} proxy = average observed 1977-1985.	4.94 kg/tow	2.47 kg/tow

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Atlantic halibut - Northwestern Atlantic Coast	Overfishing occurs when F exceeds $F_{0.1}$.	0.07	The stock is overfished when the total stock biomass is less than ½ Btarget.	49,000 mt	24,500 mt
Windowpane - Gulf of Maine / Georges Bank	Overfishing occurs when the exploitation ratio is less than the median exploitation ratio from 1975-2007.	0.5 catch/ survey index	The stock is overfished when the 3-year moving average of the fall survey is less than ½ B_{MSY} proxy; where B_{MSY} proxy = average observed 1975-2007.	1.4 kg/tow	0.7 kg/tow
Windowpane - Southern New England / Mid-Atlantic	Overfishing occurs when the exploitation ratio is less than the median exploitation ratio from 1975-2007.	1.47 catch/ survey index	The stock is overfished when the 3-year moving average of the fall survey is less than ½ B_{MSY} proxy; where B_{MSY} proxy = average observed 1975-2007.	0.34 kg/tow	0.17 kg/tow
Winter flounder - Gulf of Maine	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.28	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	not estimated	not estimated
New criteria were adopted and used to determine stock status in the most recent stock assessment, and are now regarded as the best scientific information available by the Scientific and Statistical Committee. However, the criteria have not yet been implemented in the FMP.	Overfishing occurs when F exceeds the annual exploitation rate.	0.23	Currently undefind		

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Winter flounder - Georges Bank	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.26	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	16,000 mt	8,000 mt
New criteria were adopted and used to determine stock status in the most recent stock assessment, and are now regarded as the best scientific information available by the Scientific and Statistical Committee. However, the	Overfishing occurs when F exceeds Fmsy.	0.42	Overfished is defined as spawning stock biomass less than ½ Btarget.	11,800 mt	5900 mt
Winter flounder - Southern New England / Mid-Atlantic	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.25	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	38,761 mt	19,380 mt
New criteria were adopted and used to determine stock status in the most recent stock assessment, and are now regarded as the best scientific information available by the Scientific and Statistical Committee. However, the	Overfishing occurs when F exceeds Fmsy.	0.29	Overfished is defined as spawning stock biomass less than ½ Btarget.	43,661 mt	21,831 mt
Atlantic wolffish - Gulf of Maine / Georges Bank	Overfishing occurs when F exceeds F at 40% maximum spawning potential.	0.185	Overfished is defined as spawning stock biomass less than ½ Btarget; Btarget is defined as 40% MSP	1,747 mt	874 mt
Silver Hake - Gulf of Maine/Northern Georges Bank	Overfishing occurs when F exceeds $F_{0.1}$, proxy exploitation index	2.57	The stock is overfished when the total stock biomass is less than ½ $B_{MSY\ proxy}$.	6.63 kg/tow	3.315 kg/tow

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Silver Hake - Southern Georges Bank/Middle Atlantic	Overfishing occurs when F exceeds $F_{0.1}$, proxy exploitation index	34.39	The stock is overfished when the total stock biomass is less than ½ $B_{MSY\ proxy}$.	1.78 kg/tow	0.89 kg/tow
Offshore hake - Northwestern Atlantic Coast	Undefined	undefined	Undefined	undefined	undefined
	Note: The overfishing definition is the approved definition from Amendment 12 to the NE Multispecies FMP; however, there is an error in this definition that needs to be corrected by the New England Fishery Management Council in the next FMP amendment. The overfishing definition in the FMP should read that "overfishing is occurring when . . ." not that offshore hake is overfished. Thus, the approved overfishing definition contains a B component but not an F component. In this case, overfishing, per se, is undefined. In practice, the correct overfishing definition should contain an F component, leaving the B component undefined.				
Red Hake - Gulf of Maine/Northern Georges Bank	Overfishing occurs when F exceeds F_{MSY}.	0.65	The stock is overfished when the total stock biomass is less than ½ $B_{MSY\ proxy}$.	1.6 kg/tow	0.8 kg/tow
Red Hake - Southern Georges Bank/Middle Atlantic	Undefined	undefined	The southern stock of red hake is in an overfished condition when the 3-year moving average weight per individual in the autumn survey falls below the 25th percentile of the average weight per individual from the autumn survey time series 1963-1997 (0.12) and when the 3-year moving average of the abundance of immature fish less than 25 cm falls below the median value of the 1963-1997 autumn survey abundance of fish less than 25 cm (4.72).	not available	0.12 and 4.72
Fishery Management Plan	**NORTHEAST SKATE COMPLEX**				
Winter skate - Georges Bank / Southern New England	Overfishing occurs when the 3-year moving average of the autumn survey mean weight per tow declines 20% or more, or when the autumn survey mean weight per tow declines for 3 consecutive years.	See Overfishing Definition	The stock is in an overfished condition when the 3-year moving average of the autumn survey mean weight per tow is less than one-half of the mean weight per tow observed in the autumn trawl survey from 1967-2007.	5.6 kg/tow	2.8 kg/tow

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Thorny skate - Gulf of Maine	Overfishing occurs when the 3-year moving average of the autumn survey mean weight per tow declines 20% or more, or when the autumn survey mean weight per tow declines for 3 consecutive years.	See Overfishing Definition	The stock is in an overfished condition when the 3-year moving average of the autumn survey mean weight per tow is less than one-half of the mean weight per tow observed in the autumn trawl survey from 1963-2007.	4.12 kg/tow	2.06 kg/tow
Little skate - Georges Bank / Southern New England	Overfishing occurs when the 3-year moving average of the spring survey mean weight per tow declines 20% or more, or when the spring survey mean weight per tow declines for three consecutive years.	See Overfishing Definition	The stock is in an overfished condition when the 3-year moving average of the spring survey mean weight per tow is less than one-half of the mean weight per tow observed in the spring trawl survey from 1982-2008.	7.03 kg/tow	3.51 kg/tow
Barndoor skate - Georges Bank / Southern New England	Overfishing occurs when the 3-year moving average of the autumn survey mean weight per tow declines 30% or more, or when the autumn survey mean weight per tow declines for 3 consecutive years.	See Overfishing Definition	The stock is in an overfished condition when the 3-year moving average of the autumn survey mean weight per tow is less than one-half of the mean weight per tow observed in the autumn trawl survey from 1963-1966.	1.62 kg/tow	0.81 kg/tow
Smooth skate - Gulf of Maine	Overfishing occurs when the 3-year moving average of the autumn survey mean weight per tow declines 30% or more, or when the autumn survey mean weight per tow declines for 3 consecutive years.	See Overfishing Definition	The stock is in an overfished condition when the 3-year moving average of the autumn survey mean weight per tow is less than one-half of the mean weight per tow observed in the autumn trawl survey from 1963-2007.	0.29 kg/tow	0.145 kg/tow
Clearnose skate - Southern New England / Mid-Atlantic	Overfishing occurs when the 3-year moving average of the autumn survey mean weight per tow declines 30% or more, or when the autumn survey mean weight per tow declines for 3 consecutive years.	See Overfishing Definition	The stock is in an overfished condition when the 3-year moving average of the autumn survey mean weight per tow is less than one-half of the mean weight per tow observed in the autumn trawl survey from 1975-2007.	0.77 kg/tow	0.38 kg/tow

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Rosette skate - Southern New England / Mid-Atlantic	Overfishing occurs when the 3-year moving average of the autumn survey mean weight per tow declines 60% or more, or when the autumn survey mean weight per tow declines for 3 consecutive years.	See Overfishing Definition	The stock is in an overfished condition when the 3-year moving average of the autumn survey mean weight per tow is less than one-half of the mean weight per tow observed in the autumn trawl survey from 1967-2007.	0.048 kg/tow	0.024 kg/tow
Fishery Management Plan	**ATLANTIC HERRING**				
Atlantic herring - Northwestern Atlantic Coast	If the stock biomass is equal to or greater than B_{MSY}, overfishing occurs when F exceeds F_{MSY}. If the stock biomass is less than B_{MSY}, overfishing occurs when F exceeds the level that has a 50-percent probability of rebuilding the stock biomass to B_{MSY} in 5 years ($F_{THRESHOLD}$).	0.27	The stock is overfished when stock biomass is less than ½ B_{MSY}.	670,600 mt	335,300 mt
Fishery Management Plan	**DEEP-SEA RED CRAB**				
Red deepsea crab - Northwestern Atlantic	Overfishing is defined as any rate of exploitation such that the ratio of current exploitation to an idealized exploitation under MSY conditions exceeds a value of 1.0 (the actual measure of exploitation used is determined by the availability of suitable data).	2830 mt	The stock is overfished if current biomass is below ½ Bmsy, annual fleet average CPUE continues to decline below a baseline level for three or more consecutive years, or annual fleet average CPUE falls below a minimum threshold level in any single year.	not estimated	not estimated
Fishery Management Plan	**MONKFISH**				
Monkfish - Gulf of Maine / Northern Georges Bank	Overfishing occurs when F exceeds $F_{THRESHOLD}$, which is set equal to F_{MAX}.	0.43	The stock is overfished when total stock biomass is less than 1/2 Bmax.	52,930 mt	26,465 mt
Monkfish - Southern Georges Bank / Mid-Atlantic	Overfishing occurs when F exceeds $F_{THRESHOLD}$, which is set equal to F_{MAX}.	0.46	The stock is overfished when total stock biomass is less than 1/2 Bmax.	74,490 mt	37,245 mt

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Fishery Management Plan	**SPINY DOGFISH**				
Spiny dogfish - Atlantic Coast	Overfishing occurs when F exceeds Fmsy or a reasonable proxy thereof.	0.244	The stock is overfished when the biomass is less than ½Bmsy or a reasonable proxy thereof.	159,288 mt	79,644 mt
Fishery Management Plan	**SUMMER FLOUNDER, SCUP, AND BLACK SEA BASS**				
Summer flounder - Mid-Atlantic Coast	Overfishing occurs when F exceeds the threshold of Fmsy or reasonable proxy thereof.	0.31	The stock is overfished when the spawning stock biomass falls below the minimum biomass threshold of ½Bmsy or reasonable proxy thereof.	60,074 mt	30,037 mt
Scup - Atlantic Coast	Overfishing occurs when F exceeds the threshold of Fmsy or reasonable proxy thereof.	0.177	The stock is overfished when the spawning stock biomass falls below the minimum biomass threshold of ½Bmsy or reasonable proxy thereof.	92,044 mt	46,022 mt
Black sea bass - Mid-Atlantic Coast	Overfishing occurs when F exceeds the threshold of Fmsy or reasonable proxy thereof.	0.42	The stock is overfished when the spawning stock biomass falls below the minimum biomass threshold of ½Bmsy or reasonable proxy thereof.	12,537 mt	6,268 mt
Fishery Management Plan	**BLUEFISH**				
Bluefish - Atlantic Coast	Overfishing occurs when F exceeds the threshold F_{MSY}.	0.19	The stock is overfished when the minimum biomass is less than ½B_{MSY}.	147,052 mt	73,526 mt
Fishery Management Plan	**ATLANTIC SURFCLAM AND OCEAN QUAHOG**				
Atlantic surfclam - Mid-Atlantic Coast	Overfishing occurs when F exceeds F_{MSY} = M (the natural mortality rate).	0.15	The stock is overfished when the current biomass estimate is less than ½ of the Bmsy proxy.	543,000 mt (meat weight)	272,000 mt (meat weight)
Ocean quahog - Atlantic Coast	Overfishing occurs when F exceeds F25% MSP.	0.02	The stock is overfished when the minimum biomass is less than the biomass threshold of ½B_{MSY} or ¼ of the virgin biomass.	1.79 million mt (meat weight).	1.43 million mt (meat weight)

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Fishery Management Plan	**ATLANTIC MACKEREL, SQUID, AND BUTTERFISH**				
Northern shortfin squid - Northwestern Atlantic Coast	Overfishing occurs when fishing mortality exceeds FThreshold	1.22	Undefined	not estimated	not estimated
Longfin inshore squid - Georges Bank / Cape Hatteras	Overfishing occurs when fishing mortality exceeds FThreshold	undefined	The stock is overfished when biomass is less than $\frac{1}{2}B_{MSY}$.	80,000 mt	40,000 mt
Atlantic mackerel - Gulf of Maine / Cape Hatteras	Overfishing occurs when F exceeds the fishing mortality threshold of F_{MSY}.	0.16	A stock is overfished when biomass falls below ½ BMSY.	644,000 mt	322,000 mt
Butterfish - Gulf of Maine / Cape Hatteras	Overfishing occurs when F exceeds the fishing mortality threshold of F_{MSY}.	0.38	The stock is overfished when the minimum biomass is less than the biomass threshold of $\frac{1}{2}B_{MSY}$.	22,800 mt	11,400 mt
Fishery Management Plan	**TILEFISH**				
Tilefish - Mid-Atlantic Coast	Overfishing occurs when the catch associated with a threshold F of F_{MSY} is exceeded.	0.16	The stock is overfished when the total stock biomass falls below the minimum biomass threshold ($B_{THRESHOLD}$) of $\frac{1}{2}B_{MSY}$.	11,400 mt	5,700 mt

Fishery Management Plan	GOLDEN CRAB FISHERY OF THE SOUTH ATLANTIC REGION					
Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Golden deepsea crab - Southern Atlantic Coast	Overfishing occurs when the F associated with the fishing mortality rate that produces maximum sustainable yield (F_{MSY}) is exceeded.	0.21	A stock is overfished when the current biomass ($B_{CURRENT}$) is less than the minimum stock size threshold (MSST). The MSST is defined as a ratio of current biomass ($B_{CURRENT}$) to biomass at MSY or $(1-M)* B_{MSY}$, where 1-M should never be less than 0.5.	837,000 lbs	753,000 lbs
Fishery Management Plan	SHRIMP FISHERY OF THE SOUTH ATLANTIC					
White shrimp - Southern Atlantic Coast	Overfishing (MFMT) is a fishing mortality rate that diminishes the stock below the designated MSY stock abundance (BMSY) for two consecutive years.	14,500,000 lbs. tails	MSST is established with two thresholds: (1) if the stock diminishes to ½ MSY abundance (½ B_{MSY}) in one year, or (b) if the stock is diminished below MSY abundance (B_{MSY}) for two consecutive years. In addition a stock is overfished when the overwintering white shrimp population within a state's water declines by 80% or more following severe winter resulting in prolonged cold water temperatures. A proxy for B_{MSY} would be established for each species using CPUE information from SEAMAP-SA data as the lowest values in the 1990-2003 time period that produced catches meeting MSY the following year.	CPUE = 5.868 individuals per hectare	The proxy for B_{MSY} is CPUE = 5.868 individual per hectare.

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Brown rock shrimp - Southern Atlantic Coast	MSY/OY for rock shrimp is the mean total landings for the South Atlantic during 1986 through 2000 (4,912,927 pounds heads on), where overfishing (MFMT) for rock shrimp is a fishing mortality rate that leads to annual landings larger than two standard deviations (9,774,848 pounds heads on) above MSY (4,912,927 + 9,774,848 = 14,687,775 //pounds heads on) for two consecutive years.	14,687,775 pounds heads on) for two consecutive years.	A stock is overfished when it falls below MSST, which is the parent stock size less than ½ (B_{MSY}) for two consecutive years. A proxy for B_{MSY} has not been defined.	not estimated	MSST would be parent stock size less than ½ (Bmsy) for two consecutive years.
Brown shrimp - Southern Atlantic Coast	Overfishing (MFMT) is a fishing mortality rate that diminishes the stock below the designated MSY stock abundance (B_{MSY}) for two consecutive years.	9,200,000 lbs. tails	MSST is established with two thresholds: (1) if the stock diminishes to ½ MSY abundance (½ B_{MSY}) in one year, or (b) if the stock is diminished below MSY abundance (BMSY) for two consecutive years. A proxy for B_{MSY} would be established for each species using CPUE information from SEAMAP-SA data as the lowest values in the 1990-2003 time period that produced catches meeting MSY the following year.	CPUE = 2.000 individuals per hectare	The proxy for B_{MSY} is CPUE = 2.000 individuals per hectare.
Pink shrimp - Southern Atlantic Coast	Overfishing (MFMT) is a fishing mortality rate that diminishes the stock below the designated MSY stock abundance (B_{MSY}) for two consecutive years.	1,800,000 lbs. tails	MSST is established with two thresholds: (1) if the stock diminishes to ½ MSY abundance (½ B_{MSY}) in one year, or (b) if the stock is diminished below MSY abundance (B_{MSY}) for two consecutive years. A proxy for B_{MSY} would be established for each species using CPUE information from SEAMAP-SA data as the lowest values in the 1990-2003 time period that produced catches meeting MSY the following year.	CPUE = 0.461 individuals per hectare	The proxy for B_{MSY} = 0.461 individuals per hectare.
Fishery Management Plan	**SNAPPER-GROUPER FISHERY OF THE SOUTH ATLANTIC REGION**				
Tilefish - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY}.	0.185	Overfished is defined as a stock size less than MSST. MSST = SSBMSY(0.75).	25.304 mt	22.564 mt

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Snowy grouper - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY}.	0.05	Overfished is defined as a stock size less than MSST. MSST = SSBMSY(0.75).	4.37 million lbs.	3.50 million lbs.
Black sea bass - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY}.	0.698	Overfished is defined as a stock size less than MSST. MSST = 1-M(B_{MSY}) and M = 0.30.	248	154
Red porgy - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY}.	0.20	Overfished is defined as a stock size less than MSST. MSST = (1-M)B_{MSY} and M = 0.225.	7.13 million lbs or 3,236 mt	5.53 million lbs. or 2,508 mt
Gag - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY}.	0.237	Overfished is defined as a stock size less than MSST, where MSST = 1-M*SSB_{MSY}.	7,925,000 lbs	6,816,000
Greater amberjack - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.424	Overfished is defined as a stock size less than MSST, where MSST = 1-M*B_{MSY} and M = 0.25.	1,940 mt	1,455 mt
Vermilion snapper - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY}.	0.386	Overfished is defined as a stock size less than MSST = (1-c)B_{MSY}, where c is the lesser of M or 0.5. M = 0.25; the best estimate of MSST is 0.75B_{MSY}.	9.157 trillion eggs	7.142 trillion eggs
Red snapper - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = $F_{MSY.}$	0.178	Overfished is defined as a stock size less than MSST. MSST = 1-M*B_{MSY}.	156 mt	144 mt
Speckled hind - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.14	Overfished is defined as a stock size less than MSST. MSST = 1-M*B_{MSY}.	not estimated	not estimated
Scamp - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.23	Overfished is defined as a stock size less than MSST. MSST = 1-M*B_{MSY}.	not estimated	not estimated
White grunt - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.26	Overfished is defined as a stock size less than MSST. MSST = 1-M*B_{MSY}.	not estimated	not estimated
Gray triggerfish - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.80	Overfished is defined as a stock size less than MSST. MSST = 1-M*B_{MSY}.	not estimated	not estimated
Red grouper - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.221	Overfished is defined as a stock size less than MSST. MSST = 1-M*SSB_{MSY}.	2592 mt	2229 mt
Black grouper - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.25	Overfished is defined as a stock size less than MSST. MSST = 1-M*B_{MSY}.	not estimated	not estimated
Yellowedge grouper - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.20	Overfished is defined as a stock size less than MSST. MSST = 1-M*B_{MSY}.	not estimated	not estimated
Warsaw grouper - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.18	Overfished is defined as a stock size less than MSST. MSST = 1-M*B_{MSY}.	not estimated	not estimated

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Wreckfish - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where $F_{MSY} = F_{30\%SPR}$.	0.36	Overfished is defined as a stock size less than MSST. MSST = $1-M*B_{MSY}$.	not estimated	not estimated
Lane snapper - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where $F_{MSY} = F_{30\%SPR}$.	0.67	Overfished is defined as a stock size less than MSST. MSST = $1-M*B_{MSY}$.	not estimated	not estimated
Remaining stocks in South Atlantic Snapper-Grouper FMP	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where $F_{MSY} = F_{30\%SPR}$.	not estimated	Overfished is defined as a stock size less than MSST, where MSST = $1-M*B_{MSY}$.	not estimated	not estimated
Fishery Management Plan	**SOUTH ATLANTIC SNAPPER-GROUPER AND REEF FISH RESOURCES OF THE GULF OF MEXICO**				
Goliath grouper - Southern Atlantic Coast / Gulf of Mexico	Overfishing is defined as an F in excess of the fishing mortality rate corresponding to a 40% Static SPR in the South Atlantic and 50% Static SPR in the Gulf of Mexico.	Unknown	South Atlantic - Overfished is defined as a stock size less than MSST. Gulf of Mexico - Overfished is undefined.	not estimated	See Overfished Definition
Yellowtail snapper - Southern Atlantic Coast / Gulf of Mexico	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where $F_{MSY} = F_{30\%SPR}$.	0.33	Overfished is defined as a stock size less than MSST = $(1-c)B_{MSY}$, where c is the lesser of M or 0.5. M = 0.2; the best estimate of MSST for yellowtail snapper is $0.8B_{MSY}$.	4,522 mt	3,618 mt
Mutton snapper - Southern Atlantic Coast / Gulf of Mexico	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where $F_{MSY} = F_{30\%SPR}$.	0.34	Overfished is defined as a stock size less than MSST = $(1-c)B_{MSY}$, where c is the lesser of M or 0.5. M = 0.2; the best estimate of MSST for yellowtail snapper is $0.8B_{MSY}$.	6,296 mt	5,603 mt
Fishery Management Plan	**CORAL, CORAL REEFS, AND LIVE / HARD BOTTOM HABITATS OF THE SOUTH ATLANTIC REGION**				
Fire Corals, Hydrocorals, Octocorals, Stony Corals, Black Corals	Overfishing is defined as an annual level of harvest that exceeds optimum yield (OY). OY for coral reefs, stony corals, hydrocorals, black corals, seafans, and live rock is zero, except as may be authorized for scientific and educational purposes. Harvest of allowable octocorals in the EEZ is specified by the South Atlantic Council each year.	0 for all species except octocorals ($F/F_{MSY} <1$)	In South Atlantic overfished is defined as a stock size less than MSST. MSST = $1-M*B_{MSY}$.	not estimated	not estimated

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Fishery Management Plan	PELAGIC SARGASSUM HABITAT OF THE SOUTH ATLANTIC REGION				
Sargassum - Southern Atlantic Coast	Overfishing is defined as the rate of harvest which compromises the stock's ability to produce MSY.	*not estimated	A stock is overfished when the stock is reduced below MSST.	50,000 mt	25,000 mt
	*Although the MFMT was disapproved, an examination of the rate of harvest (currently zero), relative to the approved MSY level (100,000 mt), indicates that overfishing is not occurring. In addition, no directed fishery for this stock currently exists. This species has the capacity to increase its biomass through vegetative growth by as much as 10 percent per day, thus doubling its biomass every two weeks.				
Fishery Management Plan	DOLPHIN AND WAHOO FISHERY OF THE ATLANTIC				
Wahoo - Southern Atlantic Coast	Overfishing is defined as a fishing mortality rate (F) in the excess of F_{MSY} (F30% Static SPR).	Unknown	A stock is overfished if current biomass (Bcurr) is less than MSST and would be recovered when current biomass was equal or greater than the biomass at MSY. MSST is defined $(1-M)*B_{MSY}$, where 1-M should never be less than 0.5. Using the best estimates of natural mortality (M = 0.68-0.80) in the formula results in a MSST of 50% B_{MSY}.	not estimated	not estimated
Fishery Management Plan	DOLPHIN AND WAHOO FISHERY OF THE ATLANTIC / COASTAL MIGRATORY PELAGICS OF THE GULF OF MEXICO AND SOUTH ATLANTIC				
Dolphinfish - Southern Atlantic Coast / Gulf of Mexico	Overfishing is defined as a fishing mortality rate (F) in the excess of F_{MSY} (F30% Static SPR).	0.49	A stock is overfished if current biomass (Bcurr) is less than MSST and would be recovered when current biomass was equal or greater than the biomass at MSY. MSST is defined $(1-M)*B_{MSY}$, where 1-M should never be less than 0.5. Using the best estimates of natural mortality (M = 0.68-0.80) in the formula results in a MSST of 50% B_{MSY}.	B1998/Bmsy = 1.56; Bmsy not estimated.	B1998/MSST > 1; MSST not estimated
Fishery Management Plan	COASTAL MIGRATORY PELAGIC RESOURCES OF THE GULF OF MEXICO AND SOUTH ATLANTIC				

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
King mackerel - Gulf of Mexico	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.187	A stock is overfished when the stock size is less than the minimum stock size threshold. For Gulf group King Mackerel, MSST = (1-M)*B_{MSY} or 80% of B_{MSY}.	3.166 trillion eggs	2.615 trillion eggs
King mackerel - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.256	A stock is overfished when the stock size is less than the minimum stock size threshold. For Atlantic group King Mackerel, MSST = (1-M)*B_{MSY} or 85% of B_{MSY}.	2.175 trillion eggs	1.826 trillion eggs
Spanish mackerel - Gulf of Mexico	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.629	A stock is overfished when the stock size is less than the minimum stock size threshold. MSST = (1-M)*B_{MSY} or 70% of B_{MSY}	16.486 mp	11.5402 mp
Spanish mackerel - Southern Atlantic Coast	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.38-0.48	A stock is overfished when the stock size is less than the minimum stock size threshold. MSST = (1-M)*B_{MSY} or 70% of B_{MSY}	12.1-15.9 (unitless relative fecundity estimate in millions)	8.5-11.1 (unitless relative fecundity estimate in millions)
Little tunny - Gulf of Mexico	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.197	Undefined (Gulf); In South Atlantic overfished is defined as a stock size less than MSST. MSST = 1-M*B_{MSY}.	3,561,000 mt	1,780,500 to 2,848,800
	Little tunny will be removed from FMP in upcoming ACL amendment				
Cobia - Gulf of Mexico	Overfishing is defined as an F that exceeds MFMT = F_{MSY} where F_{MSY} = $F_{30\%SPR}$.	0.33	A stock is overfished when the stock size is less than the minimum stock size threshold. MSST = (1-M)*B_{MSY} or 70% of B_{MSY}	960 mt	1,372 mt
Fishery Management Plan	SPINY LOBSTER IN THE GULF OF MEXICO AND SOUTH ATLANTIC				
Caribbean spiny lobster - Southern Atlantic Coast / Gulf of Mexico	Overfishing is defined as an F in excess of the fishing mortality rate corresponding to a 20% SPR where F_{MSY} = $F_{20\%SPR}$.	0.42	(Gulf) Overfished is defined as a stock size less than MSST. MSST = 1-M*B_{MSY}.	not estimated	not estimated
Fishery Management Plan	STONE CRAB FISHERY OF THE GULF OF MEXICO				

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Stone crabs (Menippe spp.) - Gulf of Mexico	Overfishing occurs and a stock is overfished when the realized egg production per recruit is reduced below 70% of potential production. This will be avoided when there is a minimum claw length (length of prodopus) that assures survival of the crabs to achieve 70% egg production per recruit potential.	Fmsy is not known	Undefined	Undefined	Undefined
Fishery Management Plan	SHRIMP FISHERY OF THE GULF OF MEXICO				
Brown shrimp - Gulf of Mexico	Overfishing is occurring when the parent stock levels are reduced below 125 million shrimp. Parent stock is defined for brown shrimp as the number of age 7+ (months) shrimp during the November through February period.	Parent stock level = 125 million shrimp.	An overfished condition would result when a parent stock number falls below one-half of the overfishing definition.	125 million shrimp	63 million shrimp
Pink shrimp - Gulf of Mexico	Overfishing is occurring when parent stock levels are reduced below 100 million shrimp. Parent stock is defined for pink shrimp as the number of 5+ (months) shrimp during the July through June period.	Parent stock level = 100 million shrimp.	An overfished condition would result when a parent stock number falls below one-half of the overfishing definition.	100 million shrimp	50 million shrimp
White shrimp - Gulf of Mexico	Overfishing is occurring when parent stock levels are reduced below 330 million shrimp. Parent stock is defined for white shrimp as the number of age 7+ (months) shrimp during the May through August period.	Parent stock = 330 million shrimp.	An overfished condition would result when a parent stock number falls below one-half of the overfishing definition.	330 million shrimp	165 million shrimp
Royal red shrimp - Gulf of Mexico	Fishing mortality rate that results in an annual catch exceeding MSY for 2 consecutive years. MSY is equal to a range of 392,000 to 650,000 pounds and overfishing occurs if the lower level of this range is exceeded.	OY = 392,000 - 650,000 pounds of tails.	Undefined	Undefined	Undefined
Fishery Management Plan	REEF FISH RESOURCES OF THE GULF OF MEXICO				

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Red snapper - Gulf of Mexico	Overfishing occurs when the fishing mortality rate exceeds that associated with a 26% static SPR.	0.53	A stock is overfished when the relative spawning potential drops below the MSST = (1-M)*B26%	10.16	9.14
Red grouper - Gulf of Mexico	Overfishing is defined as a fishing mortality rate that exceeds MFMT = F_{MSY}.	0.187	Overfished is defined as a stock size less than MSST = (1-M)*SSB_{MSY}.	712.7 mt	612.9 mt
Greater amberjack - Gulf of Mexico	Overfishing occurs when the fishing mortality rate exceeds that associated with a 30% static SPR.	0.333	Overfished is defined as a stock size less than MSST = (1-M)*BMSY.	14.73 million lbs.	11.048 million lbs.
Black grouper - Gulf of Mexico	Overfishing occurs when the fishing mortality rate exceeds that associated with a 30% static SPR.	0.216	Overfished is defined as a stock size less than MSST = (1-M)*SSB_{MSY}.	5.92 million lbs.	5.12 million lbs.
Vermilion snapper - Gulf of Mexico	Overfishing occurs when the fishing mortality rate exceeds that associated with a 30% static SPR.	0.6	A stock is overfished when the relative spawning potential drops below the MSST = (1-M)*B30%	93.2 trillion eggs	69.9 trillion eggs
Gag - Gulf of Mexico	Overfishing is defined as a fishing mortality rate that exceeds MFMT = Fmax.	0.22	Overfished is defined as a stock size less than MSST = (1-M)*SSB_{MSY}.	22.51 million lbs	19.14 million lbs.
Gray triggerfish - Gulf of Mexico	Overfishing occurs when the fishing mortality rates exceeds that associated with a 30% static SPR.	0.34	Overfished is defined as a stock size less than MSST = (1-M)*SSB_{MSY}.	17.78 trillion eggs	12.98 trillion eggs
Yellowedge grouper - Gulf of Mexico	Overfishing occurs when the fishing mortality rates exceeds that associated with a 30% static SPR.	1.06	Currently undefined in FMP - see note on best scientific information available from last assessment		
New criteria were adopted and used to determine overfished stock status in the most recent stock assessment, and are now regarded as the best scientific information available by the Scientific and Statistical Committee. However, the criteria have not yet been implemented in the FMP.			Overfished is defined as a stock size less than MSST=(1-M)*SSB30%SPR,.	8.621 million lbs.	7.992 million lbs.

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Fishery Management Plan	**RED DRUM FISHERY OF THE GULF OF MEXICO**				
Red drum - Gulf of Mexico	Overfishing occurs when the fishing mortality rates exceeds that associated with a 30% static SPR.	F30%SPR = 0.50	Undefined	Undefined	Undefined
Fishery Management Plan	**SPINY LOBSTER FISHERY OF PUERTO RICO AND THE U.S. VIRGIN ISLANDS**				
Caribbean spiny lobster - Caribbean	Overfishing is defined as a fishing mortality rate that exceeds MFMT = F_{MSY}. When the data needed to determine F_{MSY} are not available, natural mortality (M) is used as a proxy for F_{MSY}.	0.34	Overfished is defined as a stock size less than MSST is set = B_{MSY}(1-c); where c = the natural mortality rate (M) or 0.50, whichever is smaller.	2,217,000 lbs.	1,463,000 lbs.
Fishery Management Plan	**QUEEN CONCH RESOURCES OF PUERTO RICO AND THE U.S. VIRGIN ISLANDS**				
Queen conch - Caribbean	Overfishing is defined as a fishing mortality rate that exceeds MFMT = F_{MSY}.	0.30	Overfished is defined as a stock size less than MSST is set = B_{MSY}(1-c); where c = the natural mortality rate (M) or 0.50, whichever is smaller.	2,005,000 lbs.	1,404,000 lbs.
Fishery Management Plan	**REEF FISH FISHERY OF PUERTO RICO AND THE U.S. VIRGIN ISLANDS**				
Caribbean Snapper Unit 1	Overfishing is defined as a fishing mortality rate that exceeds MFMT = F_{MSY}.	0.86	Overfished is defined as a stock size less than MSST is set = B_{MSY}(1-c); where c = the natural mortality rate (M) or 0.50, whichever is smaller.	1,202,000 lbs.	601,000 lbs.
	NOTE: A combination of qualitative and quantitative data were used to make the most recent status determination for Snapper Unit 1.				
Caribbean Snapper Unit 2	Overfishing is defined as a fishing mortality rate that exceeds MFMT = F_{MSY}.	0.44	Overfished is defined as a stock size less than MSST is set = B_{MSY}(1-c); where c = the natural mortality rate (M) or 0.50, whichever is smaller.	516,000 lbs.	289,000 lbs.
Caribbean Snapper Unit 3	Overfishing is defined as a fishing mortality rate that exceeds MFMT = F_{MSY}.	0.30	Overfished is defined as a stock size less than MSST is set = B_{MSY}(1-c); where c = the natural mortality rate (M) or 0.50, whichever is smaller.	2,403,000 lbs.	1,682,000 lbs.
Caribbean Snapper Unit 4	Overfishing is defined as a fishing mortality rate that exceeds MFMT = F_{MSY}.	0.20	Overfished is defined as a stock size less than MSST is set = B_{MSY}(1-c); where c = the natural mortality rate (M) or 0.50, whichever is smaller.	2,214,000 lbs.	1,771,000 lbs.

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Caribbean Grouper Unit 1	Overfishing is defined as a fishing mortality rate that exceeds MFMT = F_{MSY}.	0.18	Overfished is defined as a stock size less than MSST is set = $B_{MSY}(1-c)$; where c = the natural mortality rate (M) or 0.50, whichever is smaller.	20,000-190,000 lbs.	18,000-171,000 lbs.
	NOTE: A combination of qualitative and quantitative data were used to make the most recent status determination for Grouper Unit 1.				
Caribbean Grouper Unit 2	Overfishing is defined as a fishing mortality rate that exceeds MFMT = F_{MSY}.	0.13	Overfished is defined as a stock size less than MSST is set = $B_{MSY}(1-c)$; where c = the natural mortality rate (M) or 0.50, whichever is smaller.	40,000-120,000 lbs.	38,000-114,000 lbs.
	NOTE: A combination of qualitative and quantitative data were used to make the most recent status determination for Grouper Unit 2.				
Caribbean Grouper Unit 3	Overfishing is defined as a fishing mortality rate that exceeds MFMT = F_{MSY}.	0.18	Overfished is defined as a stock size less than MSST is set = $B_{MSY}(1-c)$; where c = the natural mortality rate (M) or 0.50, whichever is smaller.	1,045,000 lbs.	857,000 lbs.
Caribbean Grouper Unit 4	Overfishing is defined as a fishing mortality rate that exceeds MFMT = F_{MSY}.	0.18	Overfished is defined as a stock size less than MSST is set = $B_{MSY}(1-c)$; where c = the natural mortality rate (M) or 0.50, whichever is smaller.	626,000 lbs.	513,000 lbs.
	NOTE: A combination of qualitative and quantitative data were used to make the most recent status determinations for Grouper Unit 4.				

Fishery Management Plan	COASTAL PELAGIC SPECIES					
Stock	**Overfishing Definition**	**Estimate of Overfishing**	**Overfished Definition**	**Estimate of Bmsy or Proxy**	**Estimate of Overfished**
Pacific chub mackerel - Pacific Coast	Overfishing occurs whenever catch exceeds ABC, which, based on the default MSY control rule used for monitored species, is set at 25% of estimated MSY.	0.155	A stock is overfished when the biomass level is low enough to jeopardize the capacity of the stock to produce MSY on a continuing basis.	115,000 mt	18,200 mt
Pacific sardine - Pacific Coast	Overfishing occurs whenever catch exceeds ABC, which is the annual value of the MSY control rule	58,076 mt	A stock is overfished when the biomass level is low enough to jeopardize the capacity of the stock to produce MSY on a continuing basis.	not available	150,000 mt
Jack mackerel - Pacific Coast	Overfishing occurs whenever catch exceeds ABC, which, based on the default MSY control rule used for monitored species, is set at 25% of estimated MSY.	0.25	Undefined	Undefined	Undefined
Northern anchovy - Southern Pacific Coast	Overfishing occurs whenever catch exceeds ABC, which, based on the default MSY control rule used for monitored species, is set at 25% of estimated MSY.	0.25	Undefined	Undefined	Undefined
Opalescent inshore squid - Pacific Coast	Overfishing occurs when market squid are harvested at a rate or level that results in egg escapement falling below 30 percent of the potential maximum level.	not estimated	A stock is overfished when the ratio of egg escapement compared to the potential maximum level results in a ratio below 30 percent.	not estimated	not estimated
Fishery Management Plan	**U.S. WEST COAST FISHERIES FOR HIGHLY MIGRATORY SPECIES**					

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Skipjack tuna - Eastern Tropical Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M=1.5)	not available	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M=1.5)	not available	not available
Yellowfin tuna - Eastern Tropical Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M=0.8),	not available	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M=0.8),	354,958 mt	not available
Bigeye tuna - Eastern Tropical Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M=0.8),	not available	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M=0.8),	331,247 mt	not available
Striped marlin - Eastern Tropical Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not available	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not available	not available

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Fishery Management Plan	U.S. WEST COAST FISHERIES FOR HIGHLY MIGRATORY SPECIES / PACIFIC PELAGICS FISHERIES OF THE WESTERN PACIFIC REGION				
Albacore tuna - North Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	277,278 mt	not available
Pacific bluefin tuna - Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	61,907.25 mt	82,543 mt
Thresher shark - North Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	not estimated
Bigeye thresher - North Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	not estimated

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Pelagic thresher - North Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	not estimated
Shortfin mako - North Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	not estimated

Fishery Management Plan	WASHINGTON, OREGON, AND CALIFORNIA GROUNDFISH					
Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Lingcod	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is $F_{45\%}$ for other groundfish such as sablefish and lingcod.	6731 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	23,354 mt	14,597 mt
Pacific Ocean Perch	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is for $F_{50\%}$ rockfish (including thornyheads).	1173 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	2.622 trillion eggs	1.639 trillion eggs
Bocaccio	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is for $F_{50\%}$ rockfish (including thornyheads).	793 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	3.125 trillion eggs	1.953 trillion eggs
Canary rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is for $F_{50\%}$ rockfish (including thornyheads).	940 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	11,136 mt	6960 mt
Cowcod	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is for F50% rockfish (including thornyheads).	14 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	873 mt	545 mt

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Darkblotched rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is for F50% rockfish (including thornyheads).	440 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	1.167 trillion eggs	.729 trillion eggs
Widow rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is for F50% rockfish (including thornyheads).	6937 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	28,450 million eggs	17,781 million eggs
Yelloweye rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is for $F_{50\%}$ rockfish (including thornyheads).	32 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	1,225 mt	766 mt
Bank rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is for $F_{50\%}$ rockfish (including thornyheads).	undefined	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	537,889 - 536,571 eggs	336,181 - 335,357 eggs
Shortspine thornyhead	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is for $F_{50\%}$ rockfish (including thornyheads).	2411 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	52258	32662
Longspine thornyhead	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is for $F_{50\%}$ rockfish (including thornyheads).	3671 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	42063	26289

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Yellowtail rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is for $F_{50\%}$ rockfish (including thornyheads).	4562 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	12406	7754
Pacific Whiting	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is $F_{40\%}$ for flatfish and Whiting.	336,560 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	644,100 mt	402,500 mt
Sablefish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is $F_{45\%}$ for other groundfish such as sablefish and lingcod.	9217 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	72,854.4 mt	45,534 mt
Dover sole	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is $F_{40\%}$ for flatfish and Whiting.	28,582 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	117,466.5 mt	58,733,25 mt
English sole	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is $F_{40\%}$ for flatfish and Whiting.	9745 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	14,405 mt	9,003 mt
Petrale sole	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is $F_{40\%}$ for flatfish and Whiting.	2751 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	6569.5 mt	3284.75 mt

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Chillipepper rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is for $F_{50\%}$ rockfish (including thornyheads).	2576 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	13,356 mt	8,348 mt
Shortbelly rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is for $F_{50\%}$ rockfish (including thornyheads).	6950 mt	The overfished determination is presumably based on the 1989 stock assessment where virgin spawning biomass was estimated from an acoustic survey and a potential yield model was used to estimate MSY. Because this assessment was conducted pre-SFA, neither current biomass estimates nor an overfished threshold were identified.	19,800 mt	12,375 mt
Arrowtooth flounder	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) is $F_{40\%}$ for flatfish and Whiting.	10,112 mt	This overfished determination is presumably based on the 1993 assessment which estimated an equilibrium yield per recruit using a dynamic pool model. Because the assessment was conducted pre-SFA, neither the overfished threshold nor current biomass estimate were identified.	32,125 mt	20,078 mt
Black rockfish - North	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is for F50% rockfish (including thornyheads).	464 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	928.4 mt	580.25 mt
Black rockfish - South	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is for F50% rockfish (including thornyheads).	1317 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	1831.4 million larvae	1144 million larvae
Starry flounder	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (F_{MSY}) on a continual basis. The default F_{MSY} proxy used for setting acceptable biological catches (ABCs) are is F40% for flatfish and whiting.	1578 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	2,864	1,790

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Cabezon South	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is F45% for other groundfish such as sablefish and lingcod.	111 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	536.4 mt	335.25 mt
Kelp Greenling - Oregon	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is F45% for other groundfish such as sablefish and lingcod.	NA	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	128	80
Blackgill Rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is for F50% rockfish (including thornyheads).	NA	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	475,120 larvae	296,950 larvae
Gopher Rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is for F50% rockfish (including thornyheads).	NA	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	798	499
California Scorpionfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is F45% for other groundfish such as sablefish and lingcod.	155 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	409	256
Pacific Cod	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is F45% for other groundfish.	3200 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	Unknown	Unknown

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Silvergrey Rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is for F50% rockfish (including thornyheads).	4 mt	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	Unknown	Unknown
Blue Rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is for F50% rockfish (including thornyheads).	NA	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	830.8 million larvae	519.25 million larave
Longnose Skate	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is F45% for other groundfish such as sablefish and lingcod.	NA	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	2,814 mt	1,759 mt
Splitnose rockfish	Overfishing occurs when the catch exceeds the fishing mortality rate needed to produce the maximum sustainable yield (FMSY) on a continual basis. The default FMSY proxy used for setting acceptable biological catches (ABCs) is for F50% rockfish (including thornyheads).	615 mt in the Monterey/Conception area	A stock is overfished if its current biomass is less than 25% of the unfished biomass level or if the current biomass is less than 50% of the biomass that would produce the maximum sustainable yield (MSY).	.005 trillion eggs	.003 trillion eggs

Fishery Management Plan	WEST COAST SALMON					
Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Chinook salmon - California Central Valley: Sacramento (fall)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	78% Proxy	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	122,000	91,500
Chinook salmon - Columbia River Basin: Upper River (summer)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	75%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	12,143	6,071
Chinook salmon - Columbia River Basin: Upper River Bright (fall)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	85.91%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	39,625	19,812
Chinook salmon - Northern California Coast: Klamath (fall)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	71%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	40,700	30,525
Chinook salmon - Oregon Coast: Central and Northern	Undefined	N/A	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	60 fish per mile in index streams	30 fish per mile in index streams
Chinook salmon - Oregon Coast: Southern	Undefined	N/A	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	60 fish per mile in index streams	30 fish per mile in index streams
Chinook salmon - Washington Coast: Grays Harbor (fall)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	78% Proxy	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	11,388	5,694

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Chinook salmon - Washington Coast: Grays Harbor (spring)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	78% Proxy	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	1,400	700
Chinook salmon - Washington Coast: Hoh (fall)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	90%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	1,200	600
Chinook salmon - Washington Coast: Hoh (spring/summer)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	78%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	900	450
Chinook salmon - Washington Coast: Hoko (summer/fall)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	78%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	850	425
Chinook salmon - Washington Coast: Queets (fall)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	87%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	2,500	1,250
Chinook salmon - Washington Coast: Queets (spring/summer)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	78% Proxy	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	700	350
Chinook salmon - Washington Coast: Quillayute (fall)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	87%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	3,000	1,500

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Chinook salmon - Washington Coast: Willapa Bay Fall (natural)	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	78% Proxy	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	3,393	1,697
Coho salmon - Puget Sound: Hood Canal	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	65%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	14,350	10,750
Coho salmon - Puget Sound: Skagit	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	60%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	25,000	14,857
Coho salmon - Puget Sound: Snohomish	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	60%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	50,000	31,000
Coho salmon - Puget Sound: Stillaguamish	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	50%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	10,000	6,100
Coho salmon - Washington Coast: Grays Harbor	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	65%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	24,426	18,320
Coho salmon - Washington Coast: Hoh	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	65%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	2,520	1,890

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Coho salmon - Washington Coast: Queets	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	65%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	5,800	4,350
Coho salmon - Washington Coast: Quillayute (fall)	Undefined	N/A	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	6,300	4,725
Coho salmon - Washington Coast: Strait of Juan de Fuca	A stock will be considered subject to overfishing when the postseason estimate of Ft exceeds the MFMT, where the MFMT is generally defined as less than or equal to FMSY.	60%	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	11,000	7,000
Pink salmon - Puget Sound (odd-numbered years)	Undefined	N/A	A stock will be considered overfished if the 3-year geometric mean of annual spawning escapements falls below the MSST, where MSST is generally defined as 0.5*SMSY or 0.75*SMSY, although there are some exceptions.	900,000	450,000

1. An approaching overfished determination will be made if the geometric mean of the two most recent postseason estimates of spawning escapement, and the current preseason forecast of spawning escapement, is below the MSST.

2. After an overfished status determination has been triggered, once the stock's 3-year geometric mean of spawning escapement exceeds the MSST, but remains below SMSY, or other identified rebuilding criteria, the stock status will be recognized as "not overfished-rebuilding". This status level requires no Council action, but rather is used to indicate that stock's status has improved from the overfished level but the stock has not yet rebuilt.

3. The default criterion for determining that an overfished stock is rebuilt is when the 3-year geometric mean spawning escapement exceeds SMSY.

Fishery Management Plan	PELAGIC FISHERIES OF THE WESTERN PACIFIC REGION					
Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Yellowfin Tuna - Central Western Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	0.36	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.8-1.6)	1419	not available
Skipjack Tuna - Central Western Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M > 0.5)	0.8	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M > 0.5)	1.87	not available
Striped Marlin - Central Western Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	not estimated
Albacore - South Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not available	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.3)	not available	not available

Indo-Pacific Blue Marlin - Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.2)	not available	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.2)	not available	not available
Shortbill Spearfish - Pacific, Wahoo - Pacific, Kawakawa - Tropical Pacific, Moonfish (Opah) - Pacific, other tuna relatives (Auxis spp., Scomber spp., and Allothunnus spp.) - Tropical Pacific, Scomber spp., Black Marlin - Pacific, Pomfrets - Pacific, Sailfish - Pacific, Oilfish family - Western Pacific, Longfin Mako Shark - North Pacific, Silky	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	not estimated
Fishery Management Plan	**PELAGIC FISHERIES OF THE WESTERN PACIFIC REGION / WEST COAST HIGHLY MIGRATORY SPECIES**				
Albacore - North Pacific, Dolphinfish (Dorado or Mahimahi) - Pacific, Bluefin Tuna - Pacific, Common Thresher Shark - North Pacific, Bigeye Thresher Shark -	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	not estimated
Bigeye Tuna - Central Western Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.4)	0.16	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.4)	498,500 mt	not available

Swordfish - North Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.2)	not available	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.2)	not available	not available
Swordfish - Eastern Tropical Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.2)	0.13	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.2)	24,800 mt	17,360 mt
Swordfish - Central Western Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.2)	0.26	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. (M = 0.2)	57,300 mt	40,110 mt
Blue Shark - Pacific	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	0.14	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not available	299,800 mt
Fishery Management Plan	**CRUSTACEAN FISHERIES OF THE WESTERN PACIFIC REGION**				
Lobster complex (Red and Green spiny lobster and Common, Chinese, and Giant slipper lobster) of the Northwestern Hawaiian Islands	Overfishing occurs when F is greater than F_{MSY} B / B_{MSY} if the stock biomass (B) is less than or equal to B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than B_{MSY}	not estimated	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5.	not estimated	not estimated
Fishery Management Plan	**PRECIOUS CORAL FISHERIES OF THE WESTERN PACIFIC REGION**				

Precious Corals Multi-Species Complex - Makapuʻu Bed Precious Corals Multi-Species Complex - Conditional Beds	Overfishing occurs when F is greater than 0.066	0.066	A stock is overfished when the ratio of the total spawning stock biomass for all species combined to the estimated unfished total spawning stock biomass for all species combined (SPR) is less than 0.3, based on cohort analysis of the pink coral, Corallium secundum.	not estimated	not estimated
Fishery Management Plan	**BOTTOMFISH AND SEAMOUNT GROUNDFISH FISHERIES OF THE WESTERN PACIFIC REGION**				
Bottomfish Multi-Species Complex - Hawaiian Archipelago	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. Effort (E) is used as a proxy for F. (M=0.3)	0.34	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. CPUE is used as a proxy for B. (M=0.3)	3,552,000 lbs.	2,486,000 lbs.
Bottomfish Multi-Species Complex - Northern Mariana Islands Bottomfish Multi-Species Complex - American Samoa Seamount Groundfish Complex - Hancock Seamount	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. Effort (E) is used as a proxy for F. (M=0.3)	0.29	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. CPUE is used as a proxy for B. (M=0.3)	708,000 lbs.	495,600 lbs.
Bottomfish Multi-Species Complex - Guam	Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c B_{MSY}, or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. Effort (E) is used as a proxy for F. (M=0.3)	0.28	A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. CPUE is used as a proxy for B. (M=0.3)	195,500 lbs.	136,850 lbs.
Fishery Management Plan	**CORAL REEF ECOSYSTEMS OF THE WESTERN PACIFIC REGION**				

| Coral Reef Ecosystem Multi-Species Complex - Hawaiian Archipelago, Bigeye Scad - Hawaiian Archipelago, Mackerel Scad - Hawaiian Archipelago, Coral Reef Ecosystem Multi-Species | Overfishing occurs when F is greater than F_{MSY} B / c B_{MSY} if the stock biomass (B) is less than or equal to c $B_{MSY,}$ or when F is greater than F_{MSY} if the stock biomass (B) is greater than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. Effort (E) is used as a proxy for F. (M = 0.3) | not estimated | A stock is overfished when stock biomass (B) is less than c B_{MSY}, where c is equal to the greater of 1 minus the natural mortality rate (M) and 0.5. CPUE is used as a proxy for B. (M=0.3) | not estimated | not estimated |

Fishery Management Plan	GROUNDFISH OF THE GULF OF ALASKA					
Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Walleye pollock - Western / Central Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	72,110 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	217,000 mt	not available
Walleye pollock - Eastern Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	12,326 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Pacific cod - Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	94,100 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	91,000 mt	not available
Arrowtooth flounder - Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	254,271 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	421,750 mt	not available
Pacific ocean perch - Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	20,243 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	82,163 mt	not available
Northern rockfish - Western / Central Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	6070 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	25,550 mt	not available

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Flathead sole - Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	59,295 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	36,313 mt	not available
Dusky Rockfish (indicator species for Pelagic Shelf Rockfish Complex)	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	5803 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	17,413 mt	not available
Gulf of Alaska Deepwater Flatfish Complex	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	7680 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Rex sole - Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	12,714 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	19,388 mt	not available
Atka mackerel - Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	6,200 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Shortspine Thornyhead (indicator species for Thornyhead Rockfish Complex)	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	2360 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Yelloweye Rockfish (indicator species for Demersal Shelf Rockfish Complex)	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	611 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Gulf of Alaska Blackspotted and Rougheye Rockfish Complex	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	1568 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	8514 mt	not available
Gulf of Alaska Other Slope Rockfish Complex	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	5624 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Gulf of Alaska Shallow Water Flatfish Complex	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	67,768 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Big skate - Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	4439 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Longnose skate - Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	3849 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Gulf of Alaska Skate Complex	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	10,742 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Northern rock sole - Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	67,768 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	16,625 mt	not available

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Rock sole - Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	67,768 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	43,050 mt	not available
Shortraker rockfish - Gulf of Alaska	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	1219 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Fishery Management Plan	**GROUNDFISH OF THE BERING SEA AND ALEUTIAN ISLANDS MANAGEMENT AREA**				
Walleye Pollock - Eastern Bering Sea	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	1,440,000 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	2,030,000 mt	not available
Walleye Pollock - Aleutian Islands	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	44,500 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	81,900 mt	not available
Pacific cod - Bering Sea / Aleutian Islands	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	207,000 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	359,625 mt	not available
Yellowfin sole - Bering Sea / Aleutian Islands	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	234,000 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	341,000 mt	not available

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Greenland halibut - Bering Sea / Aleutian Islands	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	7,460 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	18,900 mt	not available
Arrowtooth Flounder (indicator stock for Bering Sea / Aleutian Islands Arrowtooth Flounder Complex)	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	190,800 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	245,875 mt	not available
Northern Rock Sole (indicator stock for Bering Sea / Aleutian Islands Rock Sole Complex)	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	243,000 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	255,000 mt	not available
Flathead Sole (indicator stock for Bering Sea / Aleutian Islands Flathead Sole Complex)	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	83,100 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	116,375 mt	not available
Pacific ocean perch - Bering Sea / Aleutian Islands	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	22,400 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	138,250 mt	not available
Atka mackerel - Aleutian Islands	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	88,200 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	89,250 mt	not available
Alaska plaice - Bering Sea / Aleutian Islands	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	278,000 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	150,500 mt	not available

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Alaska skate - Bering Sea / Aleutian Islands	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	88,200 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	32,200 mt	not available
Northern rockfish - Bering Sea / Aleutian Islands	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	8,460 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	44,275 mt	not available
Bering Sea / Aleutian Islands Blackspotted and Rougheye Rockfish Complex	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	269 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	5,880 mt	not available
Walleye Pollock - Bogoslof	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	22,000 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Shortraker rockfish - Bering Sea / Aleutian Islands	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	516 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Bering Sea / Aleutian Islands Other Rockfish Complex	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	1380 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Bering Sea / Aleutian Islands Other Flatfish Complex	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	23,000 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Bering Sea / Aleutian Islands Squid Complex	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	2,620 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Bering Sea / Aleutian Islands Other Species Complex	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	104,000 mt	No B_{MSY} estimate exists. Therefore, no MSST is defined.	undefined	undefined
Fishery Management Plan	**GROUNDFISH OF THE GULF OF ALASKA / GROUNDFISH OF THE BERING SEA AND ALEUTIAN ISLANDS MANAGEMENT AREA**				
Sablefish	Overfishing is defined as any rate of fishing in excess of the maximum fishing mortality threshold (MFMT). The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "overfishing level" (OFL).	21,310 mt	A stock is overfished when it falls below its MSST, defined as the minimum stock size at which rebuilding to the MSY level would be expected to occur within 10 years if the stock were exploited at the MFMT.	98,875 mt	not available
Fishery Management Plan	**BERING SEA / ALEUTIAN ISLANDS KING AND TANNER CRABS**				
Blue King Crab - Pribilof Islands	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.2 The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "sustainable yield level" (SYL).	136 mt	A stock is overfished when it falls below MSST, which is equal to ½ the MSY stock size	4490 mt	2245 mt
Blue King Crab - Saint Matthews Island	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.2 The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "sustainable yield level" (SYL).	739 mt	A stock is overfished when it falls below MSST, which is equal to ½ the MSY stock size	3040 mt	1520 mt

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Red King Crab - Bristol Bay	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.2 The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "sustainable yield level" (SYL).	10,977 mt	A stock is overfished when it falls below MSST, which is equal to ½ the MSY stock size	27,260 mt	13,630 mt
Red King Crab - Pribilof Islands	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.2 The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "sustainable yield level" (SYL).	1506 mt	A stock is overfished when it falls below MSST, which is equal to ½ the MSY stock size	5140 mt	2570 mt
Snow Crab - Bering Sea	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3. The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "sustainable yield level" (SYL).	35,063 mt	A stock is overfished when it falls below MSST, which is equal to ½ the MSY stock size	147,500 mt	73,750 mt
Southern Tanner Crab - Eastern Bering Sea	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3. The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "sustainable yield level" (SYL).	7039 mt	A stock is overfished when it falls below MSST, which is equal to ½ the MSY stock size	83,340 mt	41,670 mt
Blue King Crab - Saint Lawrence Island	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.2	0.2	Overfished is not defined	undefined	undefined
Red King Crab - Aleutian Islands, Dutch Harbor	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.2	0.2	Overfished is not defined	undefined	undefined
Tanner Crab - Adak (Western Aleutians)	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3	0.3	Overfished is not defined	undefined	undefined
Tanner Crab - Eastern Aleutian Islands	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3	0.3	Overfished is not defined	undefined	undefined
Tanner Crab - Western Aleutian Islands Grooved	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3	0.3	Overfished is not defined	undefined	undefined

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Golden King Crab - Aleutian Islands	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.2	0.2	Overfished is not defined	undefined	undefined
Red King Crab - Aleutian Islands, Adak	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3. The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "sustainable yield level" (SYL).	208 mt	Overfished is not defined	undefined	undefined
Red King Crab - Norton Sound	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3. The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "sustainable yield level" (SYL).	323 mt	A stock is overfished when it falls below MSST, which is equal to ½ the MSY stock size	1420 mt	710 mt
Golden King Crab - Northern District	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.2	0.2	Overfished is not defined	undefined	undefined
Golden King Crab - Pribilof Islands	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3. The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "sustainable yield level" (SYL).	77 mt	Overfished is not defined	undefined	undefined
Golden King Crab - Aleutian Islands	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3. The catch corresponding to fishing at a rate equal to the MFMT is referred to as the "sustainable yield level" (SYL).	4164 mt	Overfished is not defined	undefined	undefined
Tanner Crab - Eastern Aleutian Islands Grooved	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3	0.3	Overfished is not defined	undefined	undefined
Tanner Crab - Eastern Aleutian Islands Triangle	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3	0.3	Overfished is not defined	undefined	undefined
Tanner Crab - Eastern Bering Sea Grooved	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3	0.3	Overfished is not defined	undefined	undefined
Tanner Crab - Eastern Bering Sea Triangle	Overfishing is defined as any rate of fishing mortality in excess of M, where M = 0.3	0.3	Overfished is not defined	undefined	undefined

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Fishery Management Plan			**SCALLOP FISHERY OFF ALASKA**		
Weathervane Scallop - Alaska	Overfishing is defined as the catch corresponding to fishing at a rate equal to the MFMT is referred to as the "sustainable yield level" (SYL).	1,240,000 pounds of scallop meat	Overfished is not defined	undefined	undefined
Fishery Management Plan			**SALMON FISHERIES IN THE EEZ OFF THE COAST OF ALASKA**		
Alaska Coho Salmon Assemblage	The Alaska coho salmon assemblage is subject to overfishing when the exploitation rate of any of the 4 indicator stocks is exceeded.		The Alaska coho salmon assemblage is overfished when adult spawner escapement (natural only) of any of the 4 indicator stocks is below the 50% MSY escapement goal from the most recent T_{coho} years.		
	Indicator stock: Coho salmon - Auke Creeke	0.365	Indicator stock: Coho salmon - Auke Creeke	1360	680
	Indicator stock: Coho salmon - Berners River	0.574	Indicator stock: Coho salmon - Berners River	25,200	12,600
	Indicator stock: Coho salmon - Ford Arm Lake	0.6	Indicator stock: Coho salmon - Ford Arm Lake	8,200	4,100
	Indicator stock: Coho salmon - Hugh Smith Lake	0.54	Indicator stock: Coho salmon - Hugh Smith Lake	3,400	1,700
Chinook salmon - Eastern North Pacific Far North Migrating	The stock is subject to overfishing when catch of adult spawners (hatchery + natural) exceeds the level associated with the 50% escapement goal.	1,821,803	The stock is overfished when adult spawner escapement (hatchery + natural) is below the 50% escapement goal from the most recent T_{chin} years.	1,216,350	608,175
Fishery Management Plan			**FISH RESOURCES OF THE ARCTIC MANAGEMENT AREA**		
Arctic Cod - Arctic management area	Overfishing is defined as an annual catch in excess of the OFL, where the OFL is based on fishing at the arithmetic mean estimate of FMSY.	0.7	A stock is overfished if it falls below Bmsy.	8,298 mt	8,298 mt
Saffron Cod - Arctic management area	Overfishing is defined as an annual catch in excess of the OFL, where the OFL is based on fishing at the arithmetic mean estimate of FMSY.	0.62	A stock is overfished if it falls below Bmsy.	953 mt	953 mt
Snow Crab - Arctic management area	Overfishing is defined as an annual catch in excess of the OFL, where the OFL is based on fishing at the arithmetic mean estimate of FMSY.	0.36	A stock is overfished if it falls below ½ Bmsy.	1,268 mt	634 mt

Fishery Management Plan	CONSOLIDATED ATLANTIC HIGHLY MIGRATORY SPECIES					
Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Blue Marlin - Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.074	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5.	25,411 t (SSBmsy)	22,870 t (based on SSBmsy)
White Marlin - Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.11 or 0.10 or 0.07 (Three Bayesian Surplus Production models reported)	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5.	15,417 or 16,169 or 27,787 mt (Three Bayesian Surplus Production models reported)	13,104-23,619mt
Sailfish - West Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	not estimated	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5.	not estimated	not estimated
Bigeye Tuna - Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.167	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5.	422,630 t	253,578t
Albacore - North Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.165	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5.	Bmsy= 172,000t; SSBmsy = 58,170t	(120,680t; based on BMSY) (40,719t; based on SSBMSY)

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Bluefin Tuna - West Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	Low Recruitment = 0.16 (0.14-0.18) High Recruitment = 0.06 (0.06-0.07)	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5.	Low Recruitment: SSBmsy = 12,722 t High Recruitment: SSBmsy = 91,712 t	(10,941t; low recruitment) (78,872t; high recruitment)
Yellowfin Tuna - Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	not available	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. For Yellowfin Tuna, MSST = $0.5B_{MSY}$.	not available	not available
Swordfish - North Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.222	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5.	61,860 t	49,488 t
Sandbar Shark	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.021	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. In 2006 stock assessment M ranged from 0.1 to 0.2 depending on age.	3.5E+05-1.4E+06 (number of sharks)	3.9 - 4.2 E+05 (number of sharks)
Blacktip Shark - Gulf of Mexico	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.2	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. In 2006 stock assessment M ranged across ages; stock assessment unable to determine which model to use so range across all of them.	1.23-1.78 e+7	0.99-1.07E+07 (number of sharks)

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Blacktip Shark - Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	not estimated	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. From 2006 stock assessment.	not estimated	not estimated
Large Coastal Shark Complex	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	not estimated	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = BLIMIT = (1-M)BMSY when M < 0.5; MSST = BLIMIT = 0.5BMSY when M > 0.5. From 2006 stock assessment.	not estimated	not estimated
Finetooth Shark	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.03-0.44	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. From 2002 stock assessment and 2003 Amendment 1.	3,200,000 fish	2,400,000 fish
Atlantic Sharpnose Shark	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.04-0.42	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. From 2002 stock assessment and 2003 Amendment 1.	4.59E+06 (number of sharks)	4.09E+06 (number of sharks)
Blacknose Shark - Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.03-0.32	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. From 2002 stock assessment and 2003 Amendment 1.	7.8E+04-2.9E+05 (number of sharks)	7.7E+04 - 2.8E+05 (number of sharks)
Bonnethead Shark	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.05-0.53	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. From 2002 stock assessment and 2003 Amendment 1.	1.99E+06 (number of sharks)	1.4 E+06 (number of sharks)

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Small Coastal Shark Complex	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.04-0.28	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = (1-M)B_{MSY} when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. From 2002 stock assessment and 2003 Amendment 1.	29,800,000 fish	21,000,000 fish
Shortfin Mako Shark	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	.007-.05	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = (1-M)B_{MSY} when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. From ICCAT stock assessment.	not available	not available
Porbeagle Shark	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.03-0.36	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = (1-M)B_{MSY} when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. From 2005 Canadian stock assessment; Assessment provides only Z, not M.	29382 - 40676	not available
Blue Shark	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	not estimated	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = (1-M)B_{MSY} when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. From ICCAT stock assessment.	not estimated	not estimated
Dusky Shark	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	0.0115	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = (1-M)B_{MSY} when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5. From 2006 Dusky Shark stock assessment; tables do not include M; used state space age structured model.	4409144	not available
Longbill Spearfish - West Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	not estimated	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = (1-M)B_{MSY} when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5.	not estimated	not estimated

Stock	Overfishing Definition	Estimate of Overfishing	Overfished Definition	Estimate of Bmsy or Proxy	Estimate of Overfished
Skipjack Tuna - West Atlantic	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	not estimated	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5.	not estimated	not estimated
Pelagic Shark Complex	Overfishing occurs when the MFMT is exceeded, which is set at $F_{limit} = F_{MSY}$.	not estimated	A stock is overfished when the stock level biomass falls below MSST, which is set at MSST = B_{LIMIT} = $(1-M)B_{MSY}$ when M < 0.5; MSST = B_{LIMIT} = $0.5B_{MSY}$ when M > 0.5.	not estimated	not estimated