

Table 8. Preferred biological reference points and stock status determination criteria.

FMU/SUB-UNIT	STATUS	MSY (1,000 lbs)	OY (1000 lbs)	RECENT CATCH (1,000 lbs)	B _{MSY} (1,000 lbs)	B _{CURR} / B _{MSY}	MSST (1,000 lbs)	B _{CURR} / MSST	F _{MSY}	F _{CURR} / F _{MSY}	M
SPINY LOBSTER FMU											
LOBSTER, SPINY	unknown	547	513	547	2,217	1.00	1,463	1.52	0.34	1.00	0.34
CONCH FMU											
CONCH, QUEEN CONCH, OTHER ¹	OVERFISHED	452	424	439	2,005	<<1	1,404	<1	0.30	>1	0.30
	-	-	-	2	-	-	-	-	-	-	-
REEF FISH FMU											
SNAPPER											
UNIT 1 SNAPPER, SILK SNAPPER, BLACK SNAPPER, VERMILION SNAPPER, BLACKFIN	at risk	493	463	478	1,202	0.75	601	1.50	0.86	1.50	0.86
UNIT 2 SNAPPER, QUEEN WENCHMAN	unknown (at risk)	151	142	151	516	1.00	289	1.79	0.44	1.00	0.44
UNIT 3 SNAPPER, GRAY SNAPPER, LANE SNAPPER, MUTTON SNAPPER, DOG SNAPPER, SCHOOLMASTER SNAPPER, MAHOGANY	unknown	542	508	542	2,403	1.00	1,682	1.43	0.30	1.00	0.30
UNIT 4 SNAPPER, YELLOWTAIL	unknown	365	342	365	2,214	1.00	1,771	1.25	0.20	1.00	0.20
GROUPEL											
UNIT 1 GROUPEL, NASSAU	OVERFISHED	2-25	1.88-23.44	25	20-190	<<1	18-171	<<.9	0.18	-0	0.18
UNIT 2 GROUPEL, GOLIATH	OVERFISHED	2-11	1.88-10.31	7	40-120	<<1	38-114	<<.95	0.13	-0	0.13
UNIT 3 HIND, RED CONEY HIND, ROCK GRAYSBY CREOLE FISH	unknown	158	148	158	1,045	1.00	857	1.22	0.18	1.00	0.18
UNIT 4 GROUPEL, RED GROUPEL, YELLOWEDGE GROUPEL, MISTY GROUPEL, TIGER GROUPEL, YELLOWFIN	at risk	95	89	102	626	0.75	513	0.91	0.18	1.50	0.18

Table 8. Preferred biological reference points and stock status determination criteria.

FMU/SUB-UNIT	STATUS	MSY (1,000 lbs)	OY (1000 lbs)	RECENT CATCH (1,000 lbs)	B _{MSY} (1,000 lbs)	B _{CURR} / B _{MSY}	MSST (1,000 lbs)	B _{CURR} / MSST	F _{MSY}	F _{CURR} / F _{MSY}	M
GRUNTS GRUNT, WHITE MARGATE TOMTATE GRUNT, BLUESTRIPED GRUNT, FRENCH PORKFISH	unknown	195	183	195	739	1.00	462	1.60	0.38	1.00	0.38
GOATFISHES GOATFISH, SPOTTED GOATFISH, YELLOW	unknown	24	23	24	58	1.00	29	2.00	0.89	1.00	0.89
PORGIES PORGY, JOLTHEAD SEA BREAM PORGY, SHEEPSHEAD PLUMA	unknown	45	42	45	118	1.00	59	2.00	0.72	1.00	0.72
SQUIRRELFISHES SOLDIERFISH, BLACKBAR BIGEYE SQUIRRELFISH, LONGSPINED SQUIRRELFISH	unknown	27	25	27	75	1.00	37	2.00	0.64	1.00	0.64
TILEFISH TILEFISH, BLACKLINE TILEFISH, SAND	unknown	3	3	3	11	1.00	6	1.72	0.42	1.00	0.42
JACKS BLUE RUNNER JACK, HORSE-EYE JACK, BLACK JACK, ALMACO JACK, BAR AMBERJACK, GREATER JACK, YELLOW	unknown	310	291	310	1,283	1.00	860	1.49	0.33	1.00	0.33
PARROTFISHES PARROTFISH, BLUE PARROTFISH, MIDNIGHT PARROTFISH, PRINCESS PARROTFISH, QUEEN PARROTFISH, RAINBOW PARROTFISH, REDFIN PARROTFISH, REDTAIL PARROTFISH, STOPLIGHT PARROTFISH, REDBAND PARROTFISH, STRIPED	at risk	304	285	312	1,053	0.75	600	1.32	0.43	1.50	0.43

Table 8. Preferred biological reference points and stock status determination criteria.

FMU/SUB-UNIT	STATUS	MSY (1,000 lbs)	OY (1000 lbs)	RECENT CATCH (1,000 lbs)	B _{MSY} (1,000 lbs)	B _{CURR} / B _{MSY}	MSST (1,000 lbs)	B _{CURR} / MSST	F _{MSY}	F _{CURR} / F _{MSY}	M
SURGEONFISH TANG, BLUE SURGEONFISH, OCEAN DOCTORFISH	unknown	36	34	36	152	1.00	104	1.47	0.32	1.00	0.32
TRIGGERFISH AND FILEFISH TRIGGERFISH, OCEAN TRIGGERFISH, QUEEN TRIGGERFISH, SARGASSUM FILEFISH, SCRAWLED FILEFISH, WHITESPOTTED DURGON, BLACK	unknown	196	184	196	939	1.00	686	1.37	0.27	1.00	0.27
BOXFISH COWFISH, HONEYCOMB COWFISH, SCRAWLED TRUNKFISH TRUNKFISH, SPOTTED TRUNKFISH, SMOOTH	unknown	113	106	113	386	1.00	216	1.79	0.44	1.00	0.44
WRASSES HOGFISH PUDDINGWIFE HOGFISH, SPANISH	unknown	67	63	67	341	1.00	255	1.33	0.25	1.00	0.25
ANGELFISH ANGELFISH, QUEEN ANGELFISH, GRAY ANGELFISH, FRENCH	unknown	8	8	8	28	1.00	16	1.72	0.42	1.00	0.42
AQUARIUM TRADE ^a	unknown	-	-	29,469	-	-	-	-	-	-	-
FROGFISH		WRASSE, CREOLE			ROCK BEAUTY			BASSLET, SWISSGUARD			
FLAMEFISH		WRASSE, YELLOWCHEEK			SERGEANT MAJOR			SOAPFISH, GREATER			
CONCHFISH		WRASSE, YELLOWHEAD			CHROMIS, BLUE			BASS, ORANGEBACK			
BLENNY, REDLIP		WRASSE, CLOWN			SUNSHINEFISH			BASS, LANTERN			
FLOUNDER, PEACOCK		RAZORFISH, PEARLY			DAMSELFISH, YELLOWTAIL			TOBACCOFISH			
BUTTERFLYFISH, LONGSNOUT		RAZORFISH, GREEN			DAMSELFISH, DUSKY			BASS, HARLEQUIN			
BUTTERFLYFISH, FOUREYE		WRASSE, BLUEHEAD			BEAUGREGORY			BASS, CHALK			
BUTTERFLYFISH, SPOTFIN		MORAY, CHAIN			DAMSELFISH, BICOLOR			TONGUEFISH, CARIBBEAN			
BUTTERFLYFISH, BANDED		MORAY, GREEN			DAMSELFISH, THREESpot			SEAHORSES			
HAWKFISH, REDSPOTTED		MORAY, GOLDENTAIL			SNAPPER, GLASSEYE			PIPEFISHES			
GURNARD, FLYING		BATFISH			HIGH-HAT			SAND DIVER			
SPADEFISH, ATLANTIC		EEL, GOLDSPOTTED			JACKKNIFE-FISH			PUFFER, SHARPNOSE			
GOBY, NEON		JAWFISH, YELLOWHEAD			DRUM, SPOTTED			PORCUPINEFISH			
GOBY, RUSTY		JAWFISH, DUSKY			SCORPIONFISH						
ROYAL GRAMMA		CHERUBFISH			HAMLET, BUTTER						

NOTE: Under the Preferred Alternative 2 to redefine the reef fish FMU, these aquarium trade species would be retained for monitoring purposes only.

Table 8. Preferred biological reference points and stock status determination criteria.

FMU/SUB-UNIT	STATUS	MSY (1,000 lbs)	OY (1000 lbs)	RECENT CATCH (1,000 lbs)	B _{MSY} (1,000 lbs)	B _{CURR} / B _{MSY}	MSST (1,000 lbs)	B _{CURR} / MSST	F _{MSY}	F _{CURR} / F _{MSY}	M
AQUARIUM TRADE	unknown	-	-	-	-	-	-	-	-	-	-
AQUARIUM TRADE SPECIES IN THE CORAL FMP											
<i>Aphimedon compressa</i> , Erect rope sponge				<i>Lima</i> spp., Fileclams			<i>Astrophyton muricatum</i> , Giant basket star				
<i>Chondrilla nucula</i> , Chicken liver sponge				<i>L. scabra</i> , Rough fileclam			<i>Ophiocoma</i> spp., Brittlestars				
<i>Cynachirella alloclada</i>				<i>Spondylus americanus</i> , Atlantic thorny oyster			<i>Ophioderma</i> spp., Brittlestars				
<i>Geodia neptuni</i> , Potato sponge				<i>Octopus</i> spp. (except the Common octopus, <i>O. vulgaris</i>)			<i>O. rubicundum</i> , Ruby brittlestar				
<i>Haliclona</i> sp., Finger sponge				<i>Alpheus armatus</i> , Snapping shrimp			<i>Diadema antillarum</i> , Long-spined urchin				
<i>Myriastra</i> sp.				<i>Paguristes</i> spp., Hermit crabs			<i>Echinometra</i> spp., Purple urchin				
<i>Niphates digitalis</i> , Pink vase sponge				<i>P. cadenati</i> , Red reef hermit			<i>Eucidaris tribuloides</i> , Pencil urchin				
<i>N. erecta</i> , Lavender rope sponge				<i>Percnon gibbesi</i> , Nimble spray crab			<i>Lytechinus</i> spp., Pin cushion urchin				
<i>Spinosella polycifera</i>				<i>Lysmata</i> spp., Peppermint shrimp			<i>Tripeustes ventricosus</i> , Sea egg				
<i>S. vaginalis</i>				<i>Thor amboinensis</i> , Anemone shrimp			<i>Holothuria</i> spp., Sea cucumbers				
<i>Tethya crypta</i>				<i>Mithrax</i> spp., Clinging crabs			Tunicates-Subphylum Urochordata				
<i>Aiptasia tagetes</i> , Pale anemone				<i>M. cinctimanus</i> , Banded clinging							
<i>Bartholomea annulata</i> , Corkscrew anemone				<i>M. sculptus</i> , Green clinging							
<i>Condylactis gigantea</i> , Giant pink-tipped anemone				<i>Stenorhynchus seticornis</i> , Yellowline arrow							
<i>Hereractis lucida</i> , Knobby anemone				<i>Periclimenes</i> spp., Cleaner shrimp							
<i>Lebrunia</i> spp., Staghorn anemone				<i>Gonodactylus</i> spp.							
<i>Stichodactyla helianthus</i> , Sun anemone				<i>Lysiosquilla</i> spp.							
<i>Zoanthus</i> spp., Sea mat				<i>Stenopus hispidus</i> , Banded shrimp							
<i>Discosoma</i> spp., False coral				<i>S. scutellatus</i> , Golden shrimp							
<i>Ricordia florida</i> , Florida false coral				<i>Analcidometra armata</i> , Swimming crinoid							
<i>Sabellastarte</i> spp., Tube worms				<i>Davidaster</i> spp., Crinoids							
<i>S. magnifica</i> , Magnificent duster				<i>Nemaster</i> spp., Crinoids							
<i>Spirobranchus giganteus</i> , Christmas tree worm				<i>Astropecten</i> spp., Sand stars							
<i>Tridachia crispata</i> , Lettuce sea slug				<i>Linckia guildingii</i> , Common comet star							
<i>Oliva reticularis</i> , Netted olive				<i>Ophiaster guildingii</i> , Comet star							
<i>Cyphoma gibbosum</i> , Flamingo tongue				<i>Oreaster reticulatus</i> , Cushion sea star							

NOTE: Under the Preferred Alternative 2 to redefine the coral reef FMU, these aquarium trade species would be retained for monitoring purposes only.

¹ Includes Atlantic triton's trumpet (*Charonia variegata*), cameo helmet (*Cassis madagascarensis*), green star shell (*Astrea tuber*), hawkwing conch (*Strombus raninus*), milk conch (*Strombus costatus*), roostertail conch (*Strombus gallus*), true tulip (*Fasciolaria tulipa*), and West Indian fighting conch (*Strombus pugilis*). Under the Preferred Alternative 2 to redefine the Caribbean conch resource FMU, these species would be retained for monitoring purposes only.

² OY represents a target for this stock upon recovery and has been estimated based on a stock capable of producing MSY.

³ Values derived from average landings from Puerto Rico only for 1998-2000 (Ojeda-Serrano et al. 2001). Landings are in number of fish.