

Archipelago FEP, MUS include only those current bottomfish and seamount MUS, crustacean MUS, precious coral MUS, and coral reef ecosystem MUS that are known to be present within EEZ waters around the Mariana Archipelago. Although, certain pelagic MUS are known to occur within the boundary of the Mariana Archipelago FEP, they are managed under a separate Pacific Pelagic FEP.

Tables 1–5 list those bottomfish and seamount MUS, crustacean MUS, precious coral MUS, and coral reef ecosystem MUS that are known to be present within the boundary of the Mariana Archipelago and are thus managed under this plan. Those species for which maximum sustainable yields (MSYs) have been estimated are indicated with an asterisk and their MSY values can be found in Sections 4.2.1.5, 4.2.2.5 (bottomfish MUS), 4.3.1.5, 4.3.2.5 (crustacean MUS), 4.4.1.5, 4.4.2.5 (precious coral MUS) and 4.5.1.5, 4.5.2.5 (coral reef ecosystem MUS). Some of the species included as MUS are not subject to significant fishing pressure and there are no estimates of MSY or minimum stock size threshold (MSST, the level of biomass below which a stock or stock complex is considered overfished), or maximum fishing mortality threshold (MFMT, the level of fishing mortality, on an annual basis, above which overfishing is occurring), available for these species at this time. However, these species are important components of the ecosystem and for that reason are included in this FEP. Permitting and data collection measures established under the existing FMPs will be continued under this FEP. Including these species as MUS in the FEP is consistent with MSA National Standard 3 which states at 50 CFR 600.320 that “To the extent practicable, an individual stock of fish shall be managed as a stock throughout its range, and interrelated stocks of fish shall be managed as a unit or in close coordination.” 50 CFR 600.320 goes on to say that “A management unit may contain, in addition to regulated species, stocks of fish for which there is not enough information available to specify MSY and optimum yield (OY) or to establish management measures, so that data on these species may be collected under the FMP”. Under the adaptive approach that utilizes the best available scientific information, the Council, in coordination with NMFS, will continue to develop and refine estimates or proxies of MSY for these species when sufficient data are available. The establishment of MSY proxies is consistent with 50 CFR 600.310 text regarding MSA National Standard 1 which states that “When data are insufficient to estimate MSY directly, Councils should adopt other measures of productive capacity that can serve as reasonable proxies of MSY to the extent possible.” Future management measures that would directly affect the harvest of any MUS contained in this FEP will be subject to the requirements of the MSA and other applicable laws.

In Tables 1-5, the local names of fish species are provided in Chamorro and Carolinian, the two native languages of the Mariana Archipelago. Where no local Chamorro or Carolinian name has identified for a particular species, the symbol NA (not applicable) is provided.

Table 1. Mariana Archipelago Bottomfish MUS

Scientific Name	English Common Name	Local Name Chamorro/Carolinian
<i>Aphareus rutilans</i> *	red snapper/silvermouth	lehi/marobw
<i>Aprion virescens</i> *	gray snapper/jobfish	gogunafon/aiwe
<i>Caranx ignobilis</i> *	giant trevally/jack	tarakitu/etam

Scientific Name	English Common Name	Local Name Chamorro/Carolinian
<i>C. lugubris</i> *	black trevally/jack	tarakiton attelong/orong
<i>Epinephelus fasciatus</i> *	blacktip grouper	gadao/meteyil
<i>Variola louti</i> *	lunartail grouper	bueli/bwele
<i>Etelis carbunculus</i> *	red snapper	buninas agaga/ falaghal moroobw
<i>E. coruscans</i> *	red snapper	buninas/taighulupegh
<i>Lethrinus rubrioperculatus</i> *	redgill emperor	mafuti/atigh
<i>Lutjanus kasmira</i> *	blueline snapper	funai/saas
<i>Pristipomoides auricilla</i> *	yellowtail snapper	buninas/falaghal-marooobw
<i>P. filamentosus</i> *	pink snapper	buninas/falaghal-marooobw
<i>P. flavipinnis</i> *	yelloweye snapper	buninas/falaghal-marooobw
<i>P. seiboldii</i> *	pink snapper	NA
<i>P. zonatus</i> *	snapper	buninas rayao amiriyu/ falaghal-marooobw
<i>Seriola dumerili</i> *	amberjack	tarakiton tadong/meseyugh

* Indicates a species for which there is an estimated MSY value.

Table 2. Mariana Archipelago Crustaceans MUS

Scientific Name	English Common Name	Local Name
<i>Panulirus penicillatus</i>	spiny lobster	mahongang
Family Scyllaridae	slipper lobster	pa' pangpang
<i>Ranina ranina</i>	Kona crab	NA
<i>Heterocarpus</i> spp.	deepwater shrimp	NA

Table 3. Mariana Archipelago Precious Corals MUS

Scientific Name	English Common Name	Local Name Chamorro/Carolinian
<i>Corallium secundum</i>	pink coral (also known as red coral)	NA
<i>Corallium regale</i>	pink coral (also known as red coral)	NA
<i>Corallium laauense</i>	pink coral (also known as red coral)	NA
<i>Gerardia</i> spp.	gold coral	NA
<i>Narella</i> spp.	gold coral	NA
<i>Calyptrophora</i> spp.	gold coral	NA

Scientific Name	English Common Name	Local Name Chamorro/Carolinian
<i>Lepidisis olapa</i>	bamboo coral	NA
<i>Acanella</i> spp.	bamboo coral	NA
<i>Antipathes dichotoma</i>	black coral	NA
<i>Antipathes grandis</i>	black coral	NA
<i>Antipathes ulex</i>	black coral	NA

Table 4. Mariana Archipelago Coral Reef Ecosystem MUS, Currently Harvested Coral Reef Taxa

Family Name	Scientific Name	English Common Name	Local Name Chamorro/Carolinian
Acanthuridae (Surgeonfishes)	<i>Acanthurus olivaceus</i>	orange-spot surgeonfish	NA
	<i>Acanthurus xanthopterus</i>	yellowfin surgeonfish	hugupao dangulo/ mowagh
	<i>Acanthurus triostegus</i>	convict tang	kichu/limell
	<i>Acanthurus dussumieri</i>	eye-striped surgeonfish	NA
	<i>Acanthurus nigroris</i>	blue-lined surgeon	NA
	<i>Acanthurus leucopareius</i>	whitebar surgeonfish	NA
	<i>Acanthurus lineatus</i>	blue-banded surgeonfish	hiyok/filaang
	<i>Acanthurus nigricauda</i>	blackstreak surgeonfish	NA
	<i>Acanthurus nigricans</i>	whitecheek surgeonfish	NA
	<i>Acanthurus guttatus</i>	white-spotted surgeonfish	NA
	<i>Acanthurus blochii</i>	ringtail surgeonfish	NA
	<i>Acanthurus nigrofuscus</i>	brown surgeonfish	NA
	<i>Acanthurus pyroferus</i>	mimic surgeonfish	NA
	<i>Zebrasoma flavescens</i>	yellow tang	NA
Acanthuridae (Surgeonfishes)	<i>Ctenochaetus striatus</i>	striped bristletooth	NA
	<i>Ctenochaetus binotatus</i>	twospot bristletooth	NA
	<i>Naso unicornus</i>	bluespine unicornfish	tataga/igh-falafal
	<i>Naso lituratus</i>	orangespine unicornfish	hangon/bwulaalay
	<i>Naso tuberosus</i>	humpnose unicornfish	NA
	<i>Naso hexacanthus</i>	black tongue unicornfish	NA
	<i>Naso vlamingii</i>	bignose unicornfish	NA
	<i>Naso annulatus</i>	whitemargin unicornfish	NA
	<i>Naso brevirostris</i>	spotted unicornfish	NA
	<i>Naso brachycentron</i>	humpback unicornfish	NA
Balistidae (Triggerfishes)	<i>Balistoides viridescens</i>	titan triggerfish	NA
	<i>Balistoides conspicillum</i>	clown triggerfish	NA

Family Name	Scientific Name	English Common Name	Local Name Chamorro/Carolinian
	<i>Balistapus undulatus</i>	orangstriped triggerfish	NA
	<i>Melichthys vidua</i>	pinktail triggerfish	NA
	<i>Melichthys niger</i>	black triggerfish	NA
	<i>Pseudobalistes fuscus</i>	blue triggerfish	NA
	<i>Rhinecanthus aculeatus</i>	Picassofish	NA
	<i>Balistoides rectanulus</i>	wedged Picassofish	NA
	<i>Sufflamen fraenatus</i>	bridled triggerfish	NA
Carangidae (Jacks)	<i>Selar crumenophthalmus</i>	bigeye scad	atulai/peti
	<i>Decapterus macarellus</i>	mackerel scad	NA
Carcharhinidae (Sharks)	<i>Carcharhinus amblyrhynchos</i>	grey reef shark	NA
	<i>Carcharhinus albimarginatus</i>	silvertip shark	NA
	<i>Carcharhinus galapagensis</i>	Galapagos shark	NA
	<i>Carcharhinus melanopterus</i>	blacktip reef shark	NA
	<i>Triaenodon obesus</i>	whitetip reef shark	NA
Holocentridae (Soldierfish/ Squirrelfish)	<i>Myripristis berndti</i>	bigscale soldierfish	saksak/mweel
	<i>Myripristis adusta</i>	bronze soldierfish	sagamelon
	<i>Myripristis murdjan</i>	blotcheye soldierfish	sagamelon
	<i>Myripristis amaena</i>	brick soldierfish	sagamelon
	<i>Myripristis pralinia</i>	scarlet soldierfish	sagamelon
	<i>Myripristis violacea</i>	violet soldierfish	sagamelon
	<i>Myripristis vittata</i>	whitetip soldierfish	sagamelon
	<i>Myripristis chryseres</i>	yellowfin soldierfish	sagamelon
	<i>Myripristis kuntee</i>	pearly soldierfish	sagamelon
	<i>Sargocentron caudimaculatum</i>	tailspot squirrelfish	sagamelon
	<i>Sargocentron microstoma</i>	file-lined squirrelfish	NA
	<i>Sargocentron diadema</i>	crown squirrelfish	chalak
	<i>Sargocentron tierre</i>	blue-lined squirrelfish	sagsag/leet
	<i>Sargocentron spiniferum</i>	saber or long jaw squirrelfish	sisiok
	<i>Neoniphon</i> spp.	spotfin squirrelfish	sagsag/leet
Kuhliidae (Flagtails)	<i>Kuhlia mugil</i>	barred flag-tail	NA
Kyphosidae (Rudderfish)	<i>Kyphosus biggibus</i>	rudderfish	guili
	<i>Kyphosus cinerascens</i>	rudderfish	guili/schpwul
	<i>Kyphosus vaigienses</i>	rudderfish	guilen puengi/reel
Labridae	<i>Cheilinus chlorourus</i>	floral wrasse	NA

Family Name	Scientific Name	English Common Name	Local Name Chamorro/Carolinian
(Wrasses)	<i>Cheilinus undulates</i>	napoleon wrasse	tangison/maam
	<i>Cheilinus trilobatus</i>	triple-tail wrasse	lalacha mamate/porou
	<i>Cheilinus fasciatus</i>	harlequin tuskfish or red-breasted wrasse	NA
	<i>Oxycheilinus unifasciatus</i>	ring-tailed wrasse	NA
	<i>Xyrichtys pavo</i>	razor wrasse	NA
	<i>Xyrichtys aneitensis</i>	whitepatch wrasse	NA
	<i>Cheilio inermis</i>	cigar wrasse	NA
	<i>Hemigymnus melapterus</i>	blackeye thicklip	NA
	<i>Hemigymnus fasciatus</i>	barred thicklip	NA
	<i>Halichoeres trimaculatus</i>	three-spot wrasse	NA
	<i>Halichoeres hortulanus</i>	checkerboard wrasse	NA
	<i>Halichoeres margaritaceus</i>	weedy surge wrasse	NA
	<i>Thalassoma purpuraceum</i>	surge wrasse	NA
	<i>Thalassoma quinquevittatum</i>	red ribbon wrasse	NA
	<i>Thalassoma lutescens</i>	sunset wrasse	NA
	<i>Hologymnosus doliatus</i>	longface wrasse	NA
	<i>Novaculichthys taeniourus</i>	rockmover wrasse	NA
Mullidae (Goatfishes)	<i>Mulloidichthys</i> spp.	yellow goatfish	NA
	<i>Mulloidichthys vanicolensis</i>	yellowfin goatfish	satmoneti/wichigh
	<i>Mulloidichthys flavolineatus</i>	yellowstripe goatfish	ti'ao (juv.) satmoneti (adult)
	<i>Parupeneus</i> spp.	banded goatfish	NA
	<i>Parupeneus barberinus</i>	dash-dot goatfish	satmonetiyo/failighi
	<i>Parupeneus bifasciatus</i>	doublebar goatfish	satmoneti acho/ sungoongo
	<i>Parupeneus heptacanthus</i>	redspot goatfish	NA
	<i>Parupeneus ciliatus</i>	white-lined goatfish	ti'ao (juv.) satmoneti (adult)
	<i>Parupeneus cyclostomas</i>	yellowsaddle goatfish	ti'ao (juv.) satmoneti (adult)
	<i>Parupeneus pleurostigma</i>	side-spot goatfish	ti'ao (juv.) satmoneti (adult)
	<i>Parupeneus multifasciatus</i>	multi-barred goatfish	ti'ao (juv.) satmoneti (adult)
	<i>Upeneus arge</i>	bantail goatfish	NA
Mugilidae (Mulletts)	<i>Mugil cephalus</i>	striped mullet	aguas (juv.) laiguan (adult)

Family Name	Scientific Name	English Common Name	Local Name Chamorro/Carolinian
	<i>Moolgarda engeli</i>	Engel's mullet	aguas (juv.) laiguan (adult)
	<i>Crenimugil crenilabis</i>	fringelip mullet	aguas (juv.) laiguan (adult)
Muraenidae (Moray eels)	<i>Gymnothorax flavimarginatus</i>	yellowmargin moray eel	NA
	<i>Gymnothorax javanicus</i>	giant moray eel	NA
	<i>Gymnothorax undulatus</i>	undulated moray eel	NA
Octopodidae (Octopus)	<i>Octopus cyanea</i>	octopus	gamsun
	<i>Octopus ornatus</i>	octopus	gamsun
Polynemidae	<i>Polydactylus sexfilis</i>	threadfin	NA
Pricanthidae (Bigeye)	<i>Heteropriacanthus cruentatus</i>	glasseye	NA
	<i>Priacanthus hamrur</i>	bigeye	NA
Scaridae (Parrotfishes)	<i>Bolbometopon muricatum</i>	humphead parrotfish	atuhong/roow
	<i>Scarus</i> spp.	parrotfish	palakse/laggua
	<i>Hipposcarus longiceps</i>	Pacific longnose parrotfish	gualafi/oscha
	<i>Calotomus carolinus</i>	stareye parrotfish	palaksin chaguan
Scombridae	<i>Gymnosarda unicolor</i>	dogtooth tuna	white tuna/ayul
Siganidae (Rabbitfish)	<i>Siganus aregentus</i>	forktail rabbitfish	hiting/manahok/llegh
	<i>Siganus guttatus</i>	golden rabbitfish	hiting
	<i>Siganus punctatissimus</i>	gold-spot rabbitfish	hiting galagu
	<i>Siganus randalli</i>	Randall's rabbitfish	NA
	<i>Siganus spinus</i>	scribbled rabbitfish	hiting/sesyon/palawa
	<i>Siganus vermiculatus</i>	vermiculate rabbitfish	hiting
Sphyrinae (Barracuda)	<i>Sphyrna helleri</i>	Heller's barracuda	NA
	<i>Sphyrna barracuda</i>	great barracuda	NA
Turbinidae (turban /green snails)	<i>Turbo</i> spp.	green snails turban shells	aliling pulan/aliling tulompu

Table 5. Mariana Archipelago Coral Reef Ecosystem MUS, Potentially Harvested Coral Reef Taxa

Scientific Name	English Common Name	Local Name Chamorro/Carolinian
Labridae	wrasses (Those species not listed as CHCRT)	NA

Scientific Name	English Common Name	Local Name Chamorro/Carolinian
Carcharhinidae Sphyrnidae	sharks	NA
Dasyatidae Myliobatidae	rays and skates	NA
Serranidae	groupers (Those species not listed as CHCRT or BMUS)	NA
Carangidae	jacks and scads (Those species not listed as CHCRT or BMUS)	NA
Holocentridae	solderfishes and squirrelfishes (Those species not listed as CHCRT)	NA
Mullidae	goatfishes (Those species not listed as CHCRT)	NA
Acanthuridae	surgeonfishes (Those species not listed as CHCRT)	NA
Ephippidae	batfishes	NA
Monodactylidae	monos	NA
Haemulidae	sweetlips	NA
Echeneidae	remoras	NA
Malacanthidae	tilefishes	NA
Lethrinidae	emperors (Those species not listed as CHCRT)	NA
Pseudochromidae	dottybacks	NA
Plesiopidae	prettyfins	NA
Muraenidae Chlopsidae Congridae Ophichthidae	eels (Those species not listed as CHCRT)	NA
Apogonidae	cardinalfishes	NA
Zanclidae	moorish idols	NA

Scientific Name	English Common Name	Local Name Chamorro/Carolinian
<i>Aulostomus chinensis</i>	trumpetfish	NA
<i>Fistularia commersoni</i>	cornetfish	NA
Chaetodontidae	butterfly fishes	NA
Pomacanthidae	angelfishes	NA
Pomacentridae	damsel fishes	NA
Scorpaenidae	scorpionfishes	NA
Caracanthidae	coral crouchers	NA
Anomalopidae	flashlightfishes	NA
Clupeidae	herrings	NA
Engraulidae	anchovies	NA
Gobiidae	gobies	NA
Blenniidae	blennies	NA
Sphyrnidae	barracudas (Those species not listed as CHCRT)	NA
Lutjanidae	snappers (Those species not listed as CHCRT or BMUS)	NA
Balistidae	trigger fishes (Those species not listed as CHCRT)	NA
Siganidae	rabbitfishes (Those species not listed as CHCRT)	NA
Pinguipedidae	sandperches	NA
<i>Gymnosarda unicolor</i>	dog tooth tuna	NA
Kyphosidae	rudderfishes (Those species not listed as CHCRT)	NA
Bothidae Soleidae	flounders and soles	NA
Ostraciidae	trunkfishes	NA

Scientific Name	English Common Name	Local Name Chamorro/Carolinian
Caesionidae	fusiliers	NA
Cirrhitidae	hawkfishes	NA
Antennariidae	frogfishes	NA
Syngnathidae	pipefishes and seahorses	NA
Tetradontidae	puffer fishes and porcupine fishes	NA
Heliopora	blue corals	NA
Tubipora	organpipe corals	NA
Azooxanthellates	ahermatypic corals	NA
Echinoderms	sea cucumbers and sea urchins	NA
Mollusca	(Those species not listed as CHCRT)	NA
Gastropoda	sea snails	NA
<i>Trochus</i> spp.		NA
Opisthobranchs	sea slugs	NA
<i>Pinctada margaritifera</i>	black lipped pearl oyster	NA
Tridacnidae	giant clam	NA
Other Bivalves	other clams	NA
Fungiidae	mushroom corals	NA
	small and large coral polyps	NA
<i>Millepora</i>	fire corals	NA
	soft corals and gorgonians	NA
<i>Actinaria</i>	anemones	NA
<i>Zoanthinaria</i>	soft zoanthid corals	NA
Hydrozoans and Bryzoans		NA
Tunicates	sea squirts	NA
<i>Porifera</i>	sponges	NA
Cephalopods	octopi	NA

Scientific Name	English Common Name	Local Name Chamorro/Carolinian
Crustaceans	lobsters, shrimps/mantis shrimps, true crabs and hermit crabs (Those species not listed as CMUS)	NA
<i>Stylasteridae</i>	Lace corals	NA
<i>Solanderidae</i>	Hydroid corals	NA
Algae	Seaweed	NA
Annelids	Segmented worms	NA
Live rock		NA
All other coral reef ecosystem management unit species that are marine plants, invertebrates, and fishes that are not listed in the preceding tables or are not bottomfish management unit species, crustacean management unit species, Pacific pelagic management unit species, precious coral or seamount groundfish.		

1.7 Regional Coordination

In the Western Pacific Region, the management of ocean and coastal activities is conducted by a number of agencies and organizations at the federal, state, county, and even village levels. These groups administer programs and initiatives that address often overlapping and sometimes conflicting ocean and coastal issues.

To be successful, ecosystem approaches to management must be designed to foster intra- and interagency cooperation and communication (Schrope 2002). Increased coordination with state and local governments and community involvement will be especially important to the improved management of near-shore resources that are heavily used. To increase collaboration with domestic and international management bodies, as well as other governmental and non-governmental organizations, communities, and the public, the Council has adopted the multi-level approach described below.

1.7.1 Council Panels and Committees

FEP Advisory Panel

The FEP Advisory Panel advises the Council on fishery management issues, provides input to the Council regarding fishery management planning efforts, and advises the Council on the content and likely effects of management plans, amendments, and management measures. FEP Advisory Panel members are representatives from various fishery sectors that are selected by the Council and serve two-year terms.

The Advisory Panel consists of four sub-panels. In general, each Advisory Sub-panel includes two representatives from the area's commercial, recreational, and subsistence fisheries, as well as two additional members (fishermen or other interested parties) who are knowledgeable about