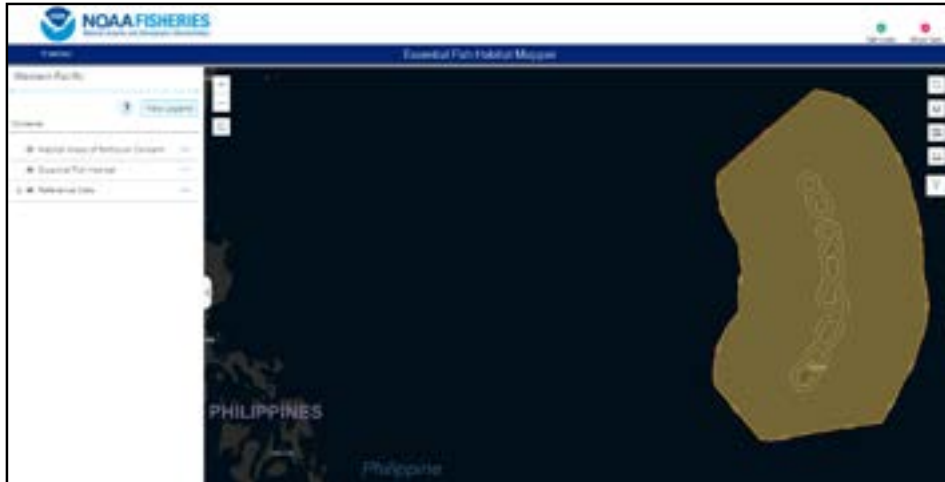


## What Are Conservation Recommendations?

NOAA Fisheries consults with federal agencies if a project (for example, construction projects) has a federal nexus—meaning the action is conducted, permitted, or funded by a federal government agency. During this consultation process, we can and may provide conservation recommendations to: avoid sensitive EFH (for example, coral), minimize the adverse effects of the project, or compensate for the unavoidable loss of EFH by restoring habitat (for example, removing invasive algae mats along coral to expose new hard bottom coral habitat).

## How Can Federal Agencies Help to Protect EFH?

- Use the EFH Mapper tool to see which EFH species and habitats are at risk from proposed activities.



The EFH Mapper tool is available online: <https://www.habitat.noaa.gov/apps/efhmapper/>

- Consider all habitat types, including submerged structures and man-made surfaces that are colonized by habitat-forming organisms (for example, coral).
- Coordinate with NOAA Fisheries as early as possible, when project partners have the greatest opportunity to modify designs or collect additional information.
- Submit a complete EFH Assessment with its required components:
  - A description of the proposed action
  - An analysis of the potential adverse effects to EFH
  - The federal agency's conclusions on the effects of the project to EFH
  - Proposed best management practices that avoid, minimize, or offset adverse effects to EFH
- Use common best management practices (for example, avoiding physical damage by working from shore whenever possible, and minimizing sedimentation by using turbidity or silt barriers).



06/2023

# Essential Fish Habitat In Guam and the Commonwealth of the Northern Mariana Islands



**NOAA  
FISHERIES**

National Marine  
Fisheries Service

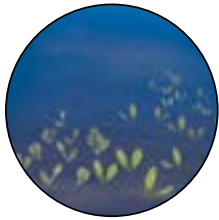
Pacific Islands  
Regional Office

## What Is Essential Fish Habitat?

Fish and invertebrates depend on healthy habitat to thrive, including areas to feed, reproduce, migrate, and grow. Essential Fish Habitat (EFH) includes all the places in the ocean where federally managed fish and invertebrates live and reproduce across their entire life cycle. The Magnuson–Stevens Fishery Conservation and Management Act (MSA) defines EFH as “those waters and substrate necessary to [federally-managed] fish for spawning, breeding, feeding, and/or growth to maturity.”



Open waters



Seagrass



Coral



Submerged structures

EFH can include open waters, seagrass, wetlands, coral, and submerged structures that contain biological communities such as filter-feeding sponges and oysters.

## What are Habitat Areas of Particular Concern?

Some areas within an EFH are prioritized for habitat conservation, management, and research. These areas are identified as Habitat Areas of Particular Concern (HAPC) and can have more rigorous conservation recommendations. In Guam and the Commonwealth of the Northern Mariana Islands (CNMI), HAPC for bottomfish include all slopes and escarpments (steep slope or long cliff) between 40 meters (m) and 280 m deep. The HAPC for pelagic (open sea) fish include the ocean surface down to a depth of 1,000 m above all seamounts and banks with summits shallower than 2,000 m.

## Designating Essential Fish Habitat

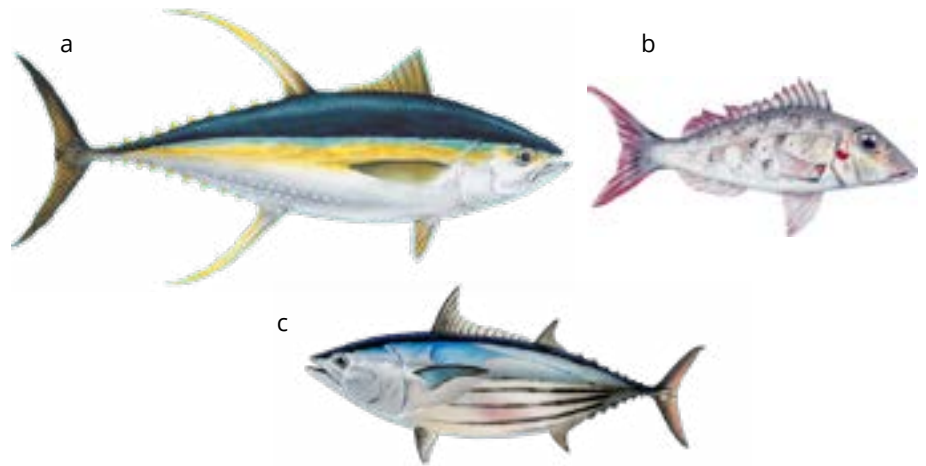
Regional Councils are required to designate EFH for their Region for all management unit species (MUS) based on the habitats needed for the species to spawn, breed, feed, or grow to maturity. Councils must act to prevent, mitigate, or minimize any adverse effects from fishing for MUS in their region, to the extent practicable. The Council has the responsibility to identify other activities that may adversely affect EFH and recommend actions to reduce or eliminate these effects. The Western Pacific Regional Fishery Management Council (Council) defines EFH for Guam and the CNMI.

The NOAA Fisheries Pacific Islands Regional Office is federally-obligated to conserve, protect, and manage marine resources in U.S. federal waters. It ensures regulatory compliance pursuant to the EFH provisions of the MSA through its consultation process any time an action may adversely affect EFH. Federal agencies must consult

with NOAA Fisheries regarding any of their actions authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken, that may adversely affect EFH. For any federal action that may adversely affect EFH, federal agencies must provide NOAA Fisheries with a written assessment of the effects of that action on EFH. NOAA Fisheries will review the EFH Assessment and render findings that could include providing conservation recommendations for the project proposal to be compliant under section 305(b)(4)(A) of the MSA. This includes, for example, in-water construction impacts to water quality and/or coral reefs.

## Which Species Have Essential Fish Habitat?

In Guam and the CNMI, the Council identifies EFH for two groups of management unit species—pelagic fish and bottomfish. It uses the best available information to determine the EFH boundaries for these groups, which it reviews and updates every five years.



The pelagic fish include (a) yellowfin tuna (‘asiasi, *Thunnus albacares*) and (c) skipjack tuna (*Katsuwonus pelamis*). Bottomfish include (b) redgill snapper (spotcheek emperor, *Lethrinus rubrioperculatus*) and yellow-edged lyretail (*Variola louti*), shown on reverse.

## What Are Some Threats to Essential Fish Habitat?

Direct and indirect activities can negatively affect EFH. These include, for example, dredging and mining, water intake structures, and beach nourishment. EFH consultations are necessary when a project may adversely affect EFH, either directly, such as by physically breaking or damaging coral or seagrass, or indirectly, such as by causing sedimentation or introducing invasive species.

# Exploring the Essential Fish Habitat of the Yellow-Edged Lyretail

The yellow-edged lyretail (*Variola louti*), also known as the coronation grouper, is a federally managed bottomfish in Guam and the Commonwealth of the Northern Mariana Islands (CNMI). This grouper can be found in various “essential” habitats during its different life stages—from near the ocean surface to near the seafloor. NOAA Fisheries works with the Western Pacific Regional Fishery Management Council to identify, describe, and map the lyretail's essential fish habitat (EFH). Federal agencies are required to consult with NOAA if their actions may adversely impact EFH.

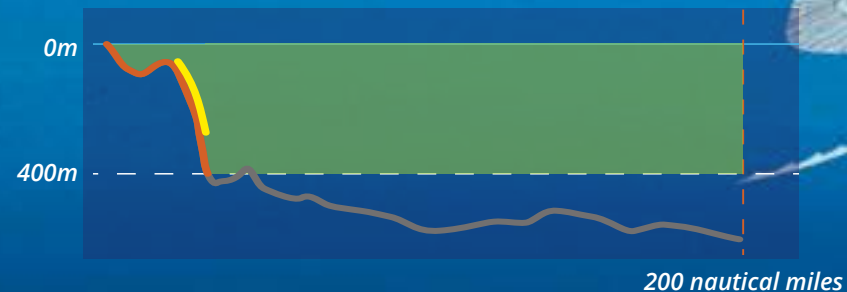
**Common names in Guam:** Velo, Papa, Papa-Tuauliin

**Common names in CNMI:** Gãdao Mattingan, Bueli, Bwele

Note: Yellow-edged lyretails are distinguished from white-edged lyretails (*Variola albigmarginata*) by the color of their rear tail margin (yellow versus white). Importantly, higher incidences of ciguatera poisoning are associated with the yellow-edged lyretails.

Eggs and larvae can be found from the ocean surface down to a depth of 400 m. This is their essential habitat.

## Side Profile For Bottomfish EFH



The EFH footprint for the yellow-edged lyretail grouper is defined by the combination of habitat the fish needs to feed, reproduce, and grow during its various life history stages (eggs, larvae, recruiting juveniles, juveniles, and adults). EFH for eggs and larvae (GREEN) covers the water column that extends from shore to the outer boundary of the 200-nautical mile Exclusive Economic Zone down to a depth of 400 m. For juveniles and adults (ORANGE), EFH is also designated by a line from the ocean surface to a depth of 400 and includes the water column and all the associated substrata and structures. Keep in mind: if there are offshore banks or pinnacles that are less than 400 m in depth, the substrata and structures present are EFH. The Habitat Areas of Particular Concern (YELLOW) for the yellow-edged lyretail include all slopes and escarpments between 40 m and 280 m in depth. The brown line is the ocean bottom that is not EFH.

EFH definitions can change over time as scientists learn more or conditions change. If the Council determines a definition should be changed, they would seek public comment as part of that process.

Use the EFH Mapper tool for a closer look at EFH habitats in the Western Pacific.



Eggs



Larvae



Adults



Juveniles

Juveniles and adults can live from the ocean surface to a depth of 400 m and to the seafloor, across a variety of habitats—including reefs, underwater vegetation, and man-made structures such as shipwrecks and piers. This is their essential habitat.