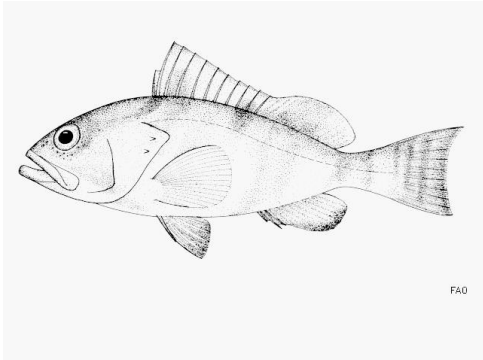


# Red grouper Gulf of Mexico and NW Atlantic

Fishery: [Southern Gulf of Mexico](#) [Mexico Gulf of Mexico](#) [Mexico](#) [Bottom-set longlines](#)

## IDENTIFICATION



### SCIENTIFIC NAME

*Epinephelus morio*

### SPECIES NAME(S)

Red grouper

### COMMON NAMES

Mero

### STOCK IDENTIFICATION

Genetic analyses have shown low genetic variation across red grouper's US and Mexican distribution suggesting the existence of a single stock, but not ruling out the possibility of several reproductively distinct stocks, supported by distribution discontinuity and life-history traits ([Richardson and Gold 1997](#)) ([Zatcoff et al. 2004](#)). Until further studies become available, we are using the former structure.

A 2017 study proposes adoption of the concept of a noxiline, or subarea unit, for which EBFM targets and limits can be set, which could be more appropriate for this species in this area ([Arreguín-Sánchez et al. 2017](#)). This is not currently being used.

Mexican and US stocks are minimally connected ([SEDAR and Southeast Data, Assessment, and Review \(SEDAR\) 2015](#)).



### RELATED LINKS:

- [Mexican Secretary of Agriculture, Livestock, Rural Development, Fisheries and Food \(SAGARPA\)](#), [Mexico National Commission of Aquaculture and Fisheries \(CONAPESCA\)](#)
- [Mexico National Fisheries Institute \(INAPESCA\)](#)

## ASSESSMENT

### Strengths

- Seasonal closures to protect the spawning season are declared since 2003 and a minimum landing size is defined.
- A network of marine protected areas is established and protected species identified.
- Closed area size has increased and data collection improved.
- There is a group of main target species and then associated species in the multispecies fishery which are identified and quantified.
- A management plan for red grouper and associated species was implemented in 2007 and updated in 2014 and 2016. This includes regulations for a fleet entry permit system, minimum landing size, gear specifications regulations, seasonal closure windows, and VMS requirements.
- Gear selectivity improvements have caused the average landed size of red grouper to go up from 44.3cm in 1980-2002, to 51.3 in 2003-2010.
- A permanent scientific programme has been established to improve biological knowledge of the stocks and environment, aiming to help them recover.

### Weaknesses

- Catch limits are not defined.
- The stock is "in deterioration" with biomass below limit reference point. 2010 biomass estimates represented a decrease of 60% in comparison with 1980 estimates.
- Fishing mortality reference points are not defined.
- The minimum landing size is not adequate according to biological characteristics of the species.
- There are signs of non-compliance in protected areas.
- Interaction of the fishery with protected species is not known but vulnerable ones are identified.
- Data on discards is not available.
- 40% of artisanal fleet landings were below minimum landing size in 2012.
- Fleet size and effort limits have been enacted but are not being enforced.

### Options

- Implement annual quotas / catch limits
- Based on a precautionary approach, the fishing effort should be reduced.
- Define fisheries reference points
- Improve compliance
- Improve data gathering operations

## SCORES

### Management Quality:

Management Strategy	Managers Compliance	Fishers Compliance
4.0 to 7.3	< 6 to 10	< 6 to 10

### Stock Health:

Current Health	Future Health
2.3 to 10	< 6 to 9.9

## FIPS

- Mexico Yucatan red and black grouper - longline:

Stage 4 , Progress Rating A , Type: Fip , Evaluation Start Date: 4 Jun 2014

## MSC

No related MSC fisheries

## RECOMMENDATIONS

### RETAILERS & SUPPLY CHAIN

- Develop a system to report catch by species.
- Work with scientists to develop a formal stock assessment for red grouper.
- Ask INAPESCA to update the National Fisheries Chart (Carta Nacional Pesquera) with specific advice for sustainable management of red grouper, including fishing mortality reference points and a harvest control rule, and effort limitation for the artisanal fleet.
- Work with managers to implement the regulations specified in the 2014 multi-species grouper fishery management plan and in accordance with

advice from INAPESCA.

- Ask managers to implement an observer program with adequate coverage to collect informative data on bycatch and fishery interactions with endangered, threatened and protected species.
- Press the government to enhance enforcement and control measures to ensure compliance with fishery regulations, particularly those related to seasonal and spatial closures, minimum legal sizes, and fishing effort.