



**U.S. DEPARTMENT OF COMMERCE**  
National Oceanic and Atmospheric Administration  
**NATIONAL MARINE FISHERIES SERVICE**  
Pacific Islands Regional Office  
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Honolulu, Hawaii 96818  
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February 10, 2020

Archie Taotasi Soliai  
Chair, Western Pacific Fishery Management Council  
1164 Bishop Street, Suite 1400  
Honolulu, HI 96813

RECEIVED  
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WESPAC

Dear Mr. Soliai,

On February 6, 2020, the NOAA Assistant Administrator for Fisheries determined, based on the best scientific information available, the following:

- The American Samoa bottomfish multi-species stock complex *is subject to overfishing and is overfished*;
- The Guam bottomfish multi-species stock complex *is not subject to overfishing, but is overfished*; and
- The Northern Mariana Islands bottomfish multi-species stock complex *is not subject to overfishing and is not overfished*.

## Background

NMFS and the Council manage the American Samoa bottomfish fishery under the Fishery Ecosystem Plan for American Samoa (American Samoa FEP). The American Samoa FEP identifies 11 individual species caught in the fishery that require conservation and management. Termed the American Samoa bottomfish management unit species (MUS), they include eight species of snapper, a trevally, an emperor and a grouper (Table 1).

**Table 1: American Samoa bottomfish MUS.**

Local name	Common name	Scientific name
palu-gutusaliva	red snapper, silvermouth	<i>Aphareus rutilans</i>
asoama	gray snapper, jobfish	<i>Aprion virescens</i>
tafauli	black trevally, jack	<i>Caranx lugubris</i>
papa, velo	lunartail grouper	<i>Variola louti</i>
palu malau	red snapper	<i>Etelis carbunculus</i>
palu-loa	red snapper	<i>Etelis coruscans</i>
filoa-paomumu	redgill emperor	<i>Lethrinus rubrioperculatus</i>
savane	blueline snapper	<i>Lutjanus kasmira</i>
palu-`ena`ena	pink snapper	<i>Pristipomoides filamentosus</i>
palu-sina	yelloweye snapper	<i>Pristipomoides flavipinnis</i>
palu-ula, palu-sega	Snapper	<i>Pristipomoides zonatus</i>



NMFS and the Council manage the bottomfish fisheries of Guam and the Northern Mariana Islands under the Fishery Ecosystem Plan for the Mariana Archipelago (Mariana FEP). The Mariana FEP identifies 13 individual species caught in these fisheries that require conservation and management. Termed the Mariana bottomfish MUS, they include nine species of snapper, two trevally, an emperor and a grouper (Table 2). Although the bottomfish fisheries of Guam and the Northern Mariana Island both catch Mariana bottomfish MUS, they are treated as separate fisheries for management purposes.

**Table 2: Mariana bottomfish MUS**

Local name	Common name	Scientific name
lehi/maroobw	red snapper, silvermouth	<i>Aphareus rutilans</i>
tarakitu/etam	giant trevally, jack	<i>Caranx ignobilis</i>
tarakiton attelong, orong	black trevally, jack	<i>Caranx lugubris</i>
bueli, bwele	lunartail grouper	<i>Variola louti</i>
buninas agaga', falaghal moroobw	red snapper	<i>Etelis carbunculus</i>
abuninas, taighulupegh	red snapper	<i>Etelis coruscans</i>
mafuti, atigh	redgill emperor	<i>Lethrinus rubrioperculatus</i>
funai, saas	blueline snapper	<i>Lutjanus kasmira</i>
buninas, falaghal-maroobw	yellowtail snapper	<i>Pristipomoides auricilla</i>
buninas, pakapaka, falaghal-maroobw,	pink snapper	<i>Pristipomoides filamentosus</i>
buninas, falaghal-maroobw	yelloweye snapper	<i>Pristipomoides flavipinnis</i>
buninas, falaghal-maroobw	pink snapper	<i>Pristipomoides seiboldii</i>
buninas rayao amariyu, falaghal-maroobw	flower snapper	<i>Pristipomoides zonatus</i>

### Basis for Stock Status Determination

The American Samoa FEP and the Mariana FEP, adopted in 2009, contain overfishing and overfished status determination criteria (SDC) for American Samoa bottomfish MUS and Mariana bottomfish MUS, respectively. Under both plans, a stock/stock complex is overfished if the stock biomass (B) falls below the minimum stock size threshold (MSST). The MSST equals  $(1-M) \times B_{MSY}$ , where M is the natural mortality rate and  $B_{MSY}$  is the biomass that produces the maximum sustainable yield (MSY). Based on an assumed natural mortality rate of 0.3 for bottomfish MUS,  $MSST = 0.7 \times B_{MSY}$ . Expressed as a ratio, a stock/stock complex is overfished when  $B_{YEAR}/B_{MSY} < 0.7$ .

Under both plans, a stock/stock complex is subject to overfishing if the fishing mortality rate (F) exceeds the maximum fishing mortality threshold (MFMT), which is the fishing mortality rate that produces MSY ( $F_{MSY}$ ). Expressed as a ratio, a stock is subject to overfishing if  $F_{YEAR}/F_{MSY} > 1.0$ . However, the value of MFMT changes depending on whether the stock is overfished or not. If a stock/stock complex is not overfished, then  $MFMT = F_{MSY}$ . If a stock/stock complex is overfished, then the MFMT declines from  $F_{MSY}$  in proportion to  $B/MSST$ .

According to the American Samoa and Mariana FEPs, the overfishing criteria and control rules are specified and applied to individual species within the multi-species stock, whenever possible. Where this is not possible, they will be based on an indicator species for the multi-species stock. Currently, the Council has not identified any indicator species to evaluate the status of the bottomfish multi-species complex of American Samoa, Guam or the Northern Mariana Islands. Therefore, the SDCs described above are applied to each stock complex as a whole at this time.

## 2019 Benchmark Stock Assessment Results

In August 2019, NMFS Pacific Islands Fisheries Science Center (PIFSC) completed benchmark stock assessments for the bottomfish fisheries of American Samoa, Guam, and the Northern Mariana Islands, using data through 2017. The 2019 benchmark assessments applied a state-space Bayesian surplus production model within the framework – Just Another Bayesian Biomass Assessment (JABBA), and incorporate several changes relative to previous bottomfish assessments. These include, applying a revised bottomfish MUS lists for each island area, calculating the percentage of catch reported at the family or species-group level (e.g. snapper) believed to contain BMUS, and filtering CPUE based on gear, standardizing the CPUE for covariates that may affect the catch rate. Additional changes include removing independently-estimated maximum sustainable yield values from the model fitting process, and including a Pella-Tomlinson production model parameterization for Guam and American Samoa. On January 10, 2020, PIFSC determined these benchmark assessments represent the best scientific information available.

### Results for the American Samoa Multi-Species Bottomfish Complex

The 2019 benchmark assessment supports a determination that the stock complex is overfished because  $B_{2017}$  (102,600 lb) is less than the MSST (191,000 lb), and is subject to overfishing because  $F_{2017}$  (0.15) is greater than the MFMT (0.057).

### Results for the Guam Multi-Species Bottomfish Complex

The 2019 benchmark assessment supports a determination that the stock complex is overfished because  $B_{2017}$  (143,000 lb) is less than the MSST (174,160 lb), but is not subject to overfishing because  $F_{2017}$  (0.11) is less than the MFMT (0.14).

### Results for the CNMI Multi-Species Bottomfish Complex

The 2019 benchmark assessment supports a determination that the stock complex is not overfished because  $B_{2017}$  (569,230 lb) is greater than the MSST (399,420 lb), and is not subject to overfishing because  $F_{2017}$  (0.13) is less than the MFMT (0.17).

The table below provides the numerical estimates and year of fishing mortality, biomass, and other reference points for the bottomfish stock complexes of American Samoa, Guam and Northern Mariana. The figures in bold indicate values which breach the MFMT and/or MSST.

Stock	$F_{2017}$	FMSY	$F_{2017}/FMSY$	$B_{2017}$ (lb)	BMSY (lb)	$B_{2017}/BMSY$	BMSST (lb)
AS	0.15	0.11	<b>2.275</b>	102,600	272,800	<b>0.38</b>	191,000
GU	0.11	0.17	0.81	142,970	248,800	<b>0.57</b>	174,160
NMI	0.13	0.17	0.79	569,230	570,600	1.08	399,420

## Council Obligations

In accordance with Section 304(e) of the Magnuson-Stevens Act, and NMFS guidelines implementing National Standard 1 at 50 CFR 600.310(j), the Council is required to:

- (1) Take immediate action to end overfishing in the American Samoa bottomfish fishery. To accomplish this, the Council should begin working with its Scientific and Statistical Committee to ensure that the acceptable biological catch (ABC) for the American Samoa bottomfish stock complex is set appropriately to end overfishing. Given that a substantial amount of bottomfishing may occur in local nearshore waters around American Samoa, the Council should also evaluate whether an annual catch limit and accountability measures that apply only to fishing in Federal waters will be adequate to end overfishing in the fishery.
- (2) Within two years after the date of this notification letter, prepare and submit for Secretarial review, a fishery management plan, plan amendment or proposed regulations to rebuild the American Samoa bottomfish stock complex and the Guam bottomfish stock complex. To meet this deadline, Council actions should be submitted to NMFS within 15 months of this notification letter to ensure sufficient time for the Secretary to review and implement the measures, if approved.

In undertaking the actions above, we encourage the Council to begin discussions with the Governments of American Samoa and Guam to develop a coordinated management strategy to manage the fisheries into the future. My staff in the Sustainable Fisheries Division is ready to work with the Council in its efforts to make recommendations regarding the status of American Samoa and Guam bottomfish stocks. If you have any questions, please contact Dr. Brett Schumacher at 808-725-5185 or [brett.schumacher@noaa.gov](mailto:brett.schumacher@noaa.gov).

Sincerely,



Michael D. Tosatto,  
Regional Administrator

cc: Western Pacific Fishery Management Council – K. Simonds  
NMFS, PIFSC – M. Seki  
NOAA GCPI – F. Tucher  
NMFS, OSF – J. Wallace



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
Silver Spring, MD 20910

MEMORANDUM FOR: Chris Oliver  
Assistant Administrator for Fisheries

CLEARED THROUGH: Michael Tosatto  
Regional Administrator, Pacific Islands Regional Office  
on January 31, 2020

FROM: Jennifer M. Wallace *Jennifer M. Wallace*  
Acting Director, Office of Sustainable Fisheries

SUBJECT: Recommended Stock Status Determinations for American Samoa  
Bottomfish Multi-Species Complex and Guam Bottomfish Multi-  
species Complex

FEB 06 2020

For American Samoa Bottomfish Multi-species Complex I recommend:

- Changing the overfished status from not overfished to overfished; and
- Changing the overfishing status from not subject to overfishing to subject to overfishing.

For Guam Bottomfish Multi-Species Complex I recommend:

- Changing the overfished status from not overfished to overfished; and
- Maintaining the overfishing status as not subject to overfishing.

## BACKGROUND

The National Marine Fisheries Service and Western Pacific Fishery Management Council manage the American Samoa bottomfish multi-species complex under the Fishery Ecosystem Plan (FEP) for the American Samoa Archipelago and the Guam bottomfish multi-species complex under the FEP for the Mariana Archipelago. These complexes include multiple species of snappers, groupers, emperors, and jacks. In a final rule published February 8, 2019 (FR 84 2767), NMFS reclassified several bottomfish species as ecosystem component species. As a result, the new stock assessments evaluated a subset of the previous complexes. Also, the most recent stock assessments for the bottomfish complexes incorporated additional fishing trip information that was not included in previous assessments. This resulted in changes to historical trends in catch and catch-per-unit-effort. For the American Samoa multi-species bottomfish complex, the new assessment indicates that the revised complex has been overfished and subject to overfishing since 2006 and not just since the previous stock assessment in 2015. For the Guam bottomfish complex, the new assessment indicates the stock has been overfished since 2014.

## CURRENT STATUS

- The 2009 FEPs specified the same overfished and overfishing status determination criteria (SDC) for the bottomfish stock complexes in American Samoa and Guam. A stock/stock complex is overfished if the stock biomass (B) falls below the Minimum




- This assessment supports a determination that the stock complex is overfished because  $B_{2017}$  (143,000 lb) is less than the MSST (174,160 lb) but is not subject to overfishing because  $F_{2017}$  (0.11) is less than the MFMT (0.14).
- These stock assessments represent the best scientific information available for supporting stock status and management advice for the bottomfish multi-species complexes of American Samoa and Guam.

## RECOMMENDATION

I recommend that you:

- Determine that American Samoa bottomfish multi-species complex is overfished and is subject to overfishing.
- Determine that Guam bottomfish multi-species complex is overfished and not subject to overfishing.

1. I concur.  11/6/20  
Date

2. I do not concur. \_\_\_\_\_  
Date