

# Main Hawaiian Islands Bottomfish

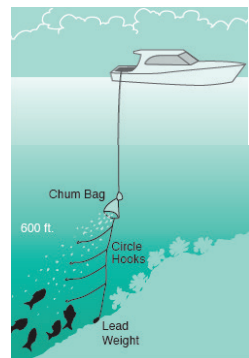
## A Case Study in Fisheries Conservation and Management

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The Hawai'i bottomfish fishery targets snappers, groupers and jacks that inhabit deep slopes and banks at depths ranging from 50 to 200 fathoms. The fishery provides a high-value, fresh, local source of protein for the people and promotes traditional fishing practices utilizing modern technology.

### Main Hawaiian Islands Deep-7 Bottomfish Species

SCIENTIFIC NAME	ENGLISH COMMON NAME	LOCAL NAME/HAWAIIAN NAME
<i>Aphareus rutilans</i>	Silverjaw Snapper	Lehi
<i>Epinephelus quernus</i>	Hawaiian Grouper	Sea Bass/Hāpu'upu'u
<i>Etelis carbunculus</i>	Red Snapper	Ehu/Ula'ula
<i>Etelis coruscans</i>	Longtail Snapper	Onaga/ 'Ula'ula koa'e
<i>Pristipomoides filamentosus</i>	Pink Snapper	Paka/Ōpapakapa
<i>Pristipomoides sieboldii</i>	Lavender Jobfish	Kalekale
<i>Pristipomoides zonatus</i>	Flower Snapper	Gindai/'Ūkiki

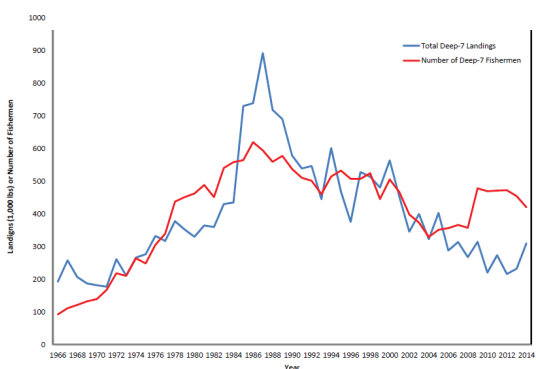


Bottomfish vessels range from 15 to 70 feet and fishermen deploy two to three vertical lines using electric reels. Each line has terminal gear consisting of a Christmas tree configuration of between five and 12 baited hooks with a 5-pound weight at the end. A chum (palu) bag with chopped squid or fish is often used at the top of the baited hooks to attract fish (see figure at left).



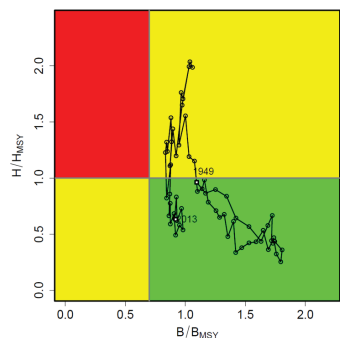
kalekale (lavender jobfish)

### MHI Deep-7 Bottomfish Fishery Landing (in 1,000 lbs) and Participation from 1966–2014

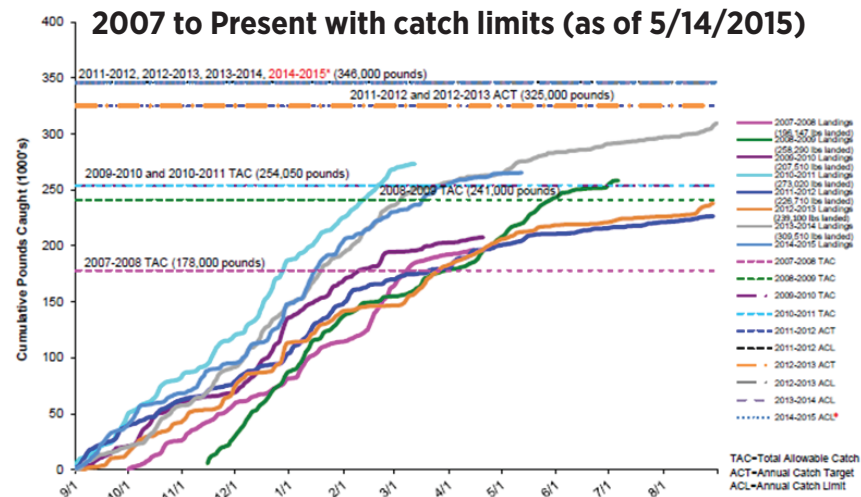


Participation in the MHI Deep-7 bottomfish fishery shows an overall increasing trend while landings have continually decreased since the mid-1980s (see figure at left). These trends contributed to the overfishing determination of the bottomfish stock in 2005. Recent increasing trends reflect the coordinated management regime.

Recent stock assessments show the bottomfish fishery is neither overfished nor experiencing overfishing. A Kobe Plot (at right) provides a visual representation of the status of the stock at different points in the fishery's history.



### Comparison of MHI Deep 7 Bottomfish Landings from 2007 to Present with catch limits (as of 5/14/2015)



Annual catch limits (ACLs) and near-real-time monitoring have been placed on the fishery to ensure that the fishery continues to avoid overfishing of the stock. If these limits are reached, the fishery is closed until the next fishing year.

Stock assessments and cooperative research are being done with fishery scientists, managers and fishermen. Research on life history contributes to updating the assessments and ACLs.

For more information visit [www.wpcouncil.org](http://www.wpcouncil.org) and [www.hawaiibottomfish.info](http://www.hawaiibottomfish.info)



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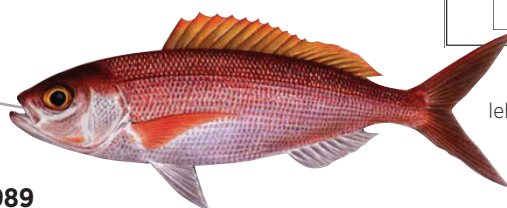
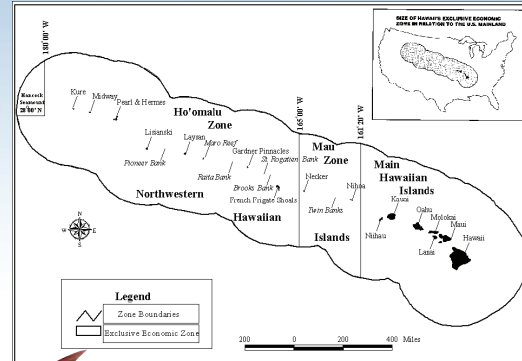
Fish illustrations by Les Hata, courtesy of Hawaii Division of Aquatic Resources.



onaga (longtail snapper)

### 1986

The Western Pacific Regional Fishery Management Council (Council) developed and the National Marine Fisheries Service (NMFS) approved the Bottomfish and Seamount Groundfish Fishery Management Plan (FMP). The FMP provided the ability to manage bottomfish in the Federal waters (generally 3–200 miles) around Hawai'i and implemented regulations to prevent overfishing.



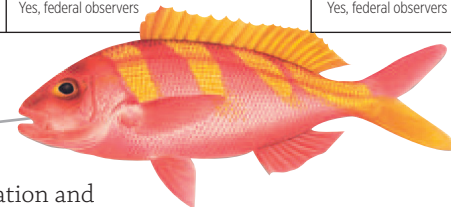
lehi (silverjaw snapper)

### 1989

The Hawaiian Archipelago was split into two management zones: the Main Hawaiian Islands (MHI) and the Northwestern Hawaiian Islands (NWHI), which was further divided into two zones, the Ho'omalulu and Mau Zones (see map above). Under a "gentlemen's agreement," the State took the lead on bottomfish fishery management in the MHI and the Council took the lead in the NWHI. Regulations for each of the areas are provided in the table (below).

	MAIN HAWAIIAN ISLANDS	NWHI MAU ZONE	NWHI HO'OMALU ZONE
Location	Hawai'i Island to Ni'ihau	Nihoa and Necker Islands	French Frigate Shoals to Kure Atoll
Management Authority	HDAR; Hawaii Administrative Rules	Bottomfish FMP; Federal Regulations	Bottomfish FMP; Federal Regulations
Effort Controls	Unlimited entry; 19 Bottomfish RFAs in place (12 as of 2006)	Limited entry since 1999, up to 10 permits allowed (2 permits reserved for indigenous communities)	Limited entry since 1989 with up to 7 permits allowed
Capacity Controls	No vessel size limits	60-foot vessel size limit	60-foot vessel size limit
Average Trip Duration	Mostly day trips, but may extend for several days	Trips last up to 2 weeks	Trips last up to 3 weeks
Recreational Fishing Controls	5 MHI Deep-7 species combined per person per day (Federal and State)	No recreational fishing allowed without federal limited entry permit	No recreational fishing allowed without federal limited entry permit
Permit, License and Reporting	Bottomfish vessel registrations for all vessels. Commercial operators must have CML & make trip catch reports	CML, federal permits and daily landing reports required	CML, federal permits and daily landing reports required
Observers	None	Yes, federal observers	Yes, federal observers

gindai/'ūkiki (flower snapper)



### 1996

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) was reauthorized and required the use of Maximum Sustainable Yield (MSY) over Spawning Potential Ratio (SPR). This change in the measurement of the stock status had implications for the stock status of the MHI Deep-7 fishery.

### 1998–2003

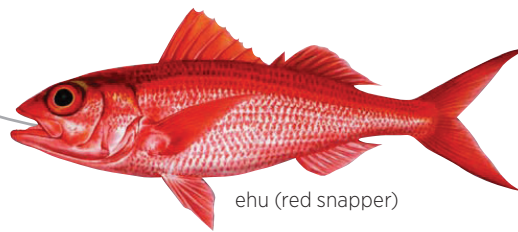
The Council's Bottomfish FMP Plan Team monitoring the stock status of the bottomfish stocks in Hawai'i noted declining SPR values and recommended the State of Hawai'i address the low SPR values for onaga and ehu. In response, the State implemented 19 Bottomfish Restricted Fishing Areas (BRFAs) in the MHI to protect bottomfish spawning areas.

### 2005–2006

The Council was notified by NMFS in 2005 of an overfishing status for the MHI bottomfish stock. To address the overfishing determination, the Council and State of Hawai'i coordinate a summer seasonal closure in 2006 and worked towards additional measures, including revising the BRFAs and developing a catch quota for commercial bottomfish fishermen. Also in 2006, the MSA was reauthorized mandating Annual Catch Limits (ACL) for all federally managed fisheries.



ōpapakapa (pink snapper)



ehu (red snapper)

### 2007

The Council developed a Total Allowable Catch (TAC) for the Deep-7 species in the MHI. The TAC was derived using the State's commercial catch report data and represented a 22-percent reduction in fishing mortality for 2007. The fishing year was set from Sept. 1 to Aug. 31 to account for the sociocultural importance of bottomfish during the holiday season. The State of Hawai'i moved from monthly reporting to trip reporting and improved reporting compliance.

### 2009–2011

President George W. Bush proclaimed the NWHI as a Marine National Monument under the Antiquities Act in 2009. Commercial fishing (including bottomfish) in the NWHI is prohibited under the proclamation. In 2011, the management framework for MHI bottomfish transitioned from the TAC to ACLs.



hāpu'upu'u  
(sea bass/Hawaiian grouper)

