

# PACIFIC ISLANDS FISHERIES SCIENCE CENTER



## Fishery Statistics of the Western Pacific

### Volume 27

Territory of American Samoa (2010)  
Commonwealth of the Northern Mariana Islands (2010)  
Territory of Guam (2010)  
State of Hawaii (2010)

Compiled by

David C. Hamm, Michael M. C. Quach, Karen R. Brousseau and  
Ashley S. Tomita

December 2012



Administrative Report H-12-05

## **About this report**

Pacific Islands Fisheries Science Center Administrative Reports are issued to promptly disseminate scientific and technical information to marine resource managers, scientists, and the general public. Their contents cover a range of topics, including biological and economic research, stock assessment, trends in fisheries, and other subjects. Administrative Reports typically have not been reviewed outside the Center. As such, they are considered informal publications. The material presented in Administrative Reports may later be published in the formal scientific literature after more rigorous verification, editing, and peer review.

Other publications are free to cite Administrative Reports as they wish provided the informal nature of the contents is clearly indicated and proper credit is given to the author(s).

Administrative Reports may be cited as follows:

Hamm, D.C., M.M.C. Quach, K.R. Brousseau, and A.S. Tomita  
2010. Fishery Statistics of the Western Pacific, Volume 27. Pacific  
Islands Fish. Sci. Cent., Natl. Mar. Fish. Serv., NOAA, Honolulu,  
HI 96822-2396. Pacific Islands Fish. Sci. Cent. Admin. Rep. H-12-  
05, var. p.

---

## **For further information direct inquiries to**

Chief, Scientific Information Services  
Pacific Islands Fisheries Science Center  
National Marine Fisheries Service  
National Oceanic and Atmospheric Administration  
U.S. Department of Commerce  
2570 Dole Street  
Honolulu, Hawaii 96822-2396

Phone: 808-983-5386  
Fax: 808-983-2902

Pacific Islands Fisheries Science Center  
Administrative Report H-12-05

## Fishery Statistics of the Western Pacific

Volume 27

Territory of American Samoa (2010)  
Commonwealth of the Northern Mariana Islands (2010)  
Territory of Guam (2010)  
State of Hawaii (2010)

Compiled By

David C. Hamm,<sup>1</sup> Michael M. C. Quach,<sup>1</sup> Karen R. Brousseau,<sup>2</sup> and  
Ashley S. Tomita<sup>2</sup>

<sup>1</sup>National Marine Fisheries Service  
Pacific Islands Fisheries Science Center  
2570 Dole Street, Honolulu, Hawaii 96822-2396

<sup>2</sup>Joint Institute for Marine and Atmospheric Research  
University of Hawaii, Manoa  
1601 Kapiolani Blvd., Honolulu, HI 96814-4700

December 2012



## CONTENTS

		Page
<b>Introduction</b>		1
	Progress	2
	Caveats	2
	Definitions of Species Categories	3
	Graphs	4
<b>Section A:</b>	<b>American Samoa</b>	
	Introduction	A.1
	September 2009 Tsunami	A.2
	Data Revisions	A.2
	Data Collecting	A.3
	Data Processing	A.6
	Data Reporting	A.8
	Species Categories	A.8
	Interpretation of Statistics	A.11
	Tables	A.12
	Figures	A.27
<b>Section B:</b>	<b>Commonwealth of the Northern Mariana Islands</b>	
	Introduction	B.1
	Data Collecting	B.1
	Data Processing	B.2
	Data Reporting	B.3
	Species Categories	B.3
	Tables	B.6
	Figures	B.19
<b>Section C:</b>	<b>Guam</b>	
	Introduction	C.1
	Data Collecting	C.1
	Data Processing	C.2
	Data Reporting	C.2
	Species Categories	C.3
	Tables	C.6
	Figures	C.19
<b>Section D:</b>	<b>State of Hawaii</b>	
	Introduction	D.1
	Data Collecting	D.2
	Data Processing	D.3
	Data Reporting	D.3
	Species Categories	D.4

<b>Section D:</b>	<b>State of Hawaii (continued)</b>	<b>Page</b>
	Tables	D.8
	Figures	D.34

## PREFACE

Increasingly, there is a demand for data and information concerning marine fisheries. To help meet this need in the central and western Pacific areas, the National Marine Fisheries Services (NMFS) Southwest Fisheries Science Center (SWFSC) Honolulu Laboratory initiated the Western Pacific Fisheries Information Network (WPacFIN) to assist Pacific island fisheries agencies improve their data collecting, data processing, and reporting capabilities.

In 1982, these agencies formed a Fisheries Data Coordinating Committee (FDCC) and an FDCC Technical Subcommittee to help guide, coordinate, and monitor all of their fisheries data-related activities. Significant progress has been made by all participating agencies, particularly in the areas of upgrading data collection and processing systems.

In a major step to improve and coordinate the data reporting and distribution systems of the agencies, the FDCC agreed in May 1985 to produce a combined document that would report each island's major fisheries statistics. Production of the document would be the responsibility of the FDCC Technical Subcommittee and would be coordinated by the WPacFIN Program Manager. Each agency would supply the data required to produce the tables and graphs for its respective section, and central WPacFIN staff would produce and distribute the document as part of the Administrative Report Series.

In April 2003, NMFS created a new Pacific Islands Region composed of the Pacific Islands Fisheries Science Center (PIFSC, formerly SWFSC's Honolulu Laboratory) and the Pacific Islands Regional Office (PIRO, formerly Southwest Regional Office's Pacific Islands Area Office). As such, this report is now affiliated with PIFSC rather than SWFSC.

This is the 27th volume in the series, "Fishery Statistics of the Western Pacific." It contains summaries of commercial landings for American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and Hawaii for the year 2010. As with previous volumes, it is divided into sections, with one for each of the major island areas. Each section contains reports about the monthly and annual landings by species and species groups for the commercial fleet.



## INTRODUCTION

This report is compiled by fisheries agencies participating in the Western Pacific Fisheries Information Network (WPacFIN, formerly referenced as WPACFIN), a collaboration among fisheries agencies in Hawaii, Guam, the Commonwealth of the Northern Mariana Islands (CNMI), and American Samoa. WPacFIN's goal is to improve the availability and dissemination of fisheries information. Participating groups include the following:

<b>American Samoa</b>	Department of Marine and Wildlife Resources (DMWR)
	Pacific Islands Regional Office (PIRO) Fisheries Monitoring Field Office, American Samoa
<b>Commonwealth of the Northern Mariana Islands (CNMI)</b>	Division of Fish and Wildlife (DFW)
<b>Guam</b>	Division of Aquatic and Wildlife Resources (DAWR)
	Bureau of Statistics and Plans (BSAP; formerly Department of Commerce)
<b>Hawaii</b>	Hawaii Division of Aquatic Resources (HDAR)
	Pacific Islands Fisheries Science Center (PIFSC)
	Pacific Islands Regional Office (PIRO)
	Western Pacific Regional Fisheries Management Council (WPFMC)

WPacFIN and these groups collect, computerize, edit, and process data from the islands. WPacFIN staff at the Pacific Islands Fisheries Science Center then use these data to create the summaries and graphs found in this document.

Data from DMWR, DAWR, and DFW are supplied on portable computer media in established WPacFIN database formats. Data for Hawaii are provided by HDAR through telecommunications. Once data from all agencies are entered into the central WPacFIN computer and appropriate edit, adjustment, and verification procedures are completed, summary tables and charts are produced using software developed by WPacFIN staff and commercially available software.

## **PROGRESS**

In 1981, when WPacFIN began assisting agencies in improving their data collecting and processing systems, only the State of Hawaii had computerized processing. By mid-1982, fisheries offices in American Samoa, Guam, and CNMI were using WPacFIN-supplied computers to process data. Since that time, these agencies have made significant improvements to their data collecting systems and have established sound, automated data processing systems. Most agencies can now provide preliminary fishery statistics to WPacFIN within 45 days of the collection date.

In particular, HDAR has significantly improved its procedures for editing, updating, and processing Hawaii's data; it has reduced the lag time in data processing from about 2.5 years to less than 3 months for most data. The biggest problems still facing HDAR in improving its data systems are reducing the delinquency of fisher reporting and implementing a validation system to ensure that the information reported by fishers is accurate. A Dealer Reporting System has been implemented to augment the Fishermen's Reporting System and has helped address this issue, and efforts are continuing to develop and implement other improvements to the Hawaii fisheries monitoring programs.

## **CAVEATS**

Data collecting and processing systems vary greatly among Pacific Island fisheries agencies. Although much standardization has taken place and is a continuing effort, there remain unique aspects of each island's systems based on local needs and capabilities.

Interpretation of data from this report, especially for comparative purposes, requires recognition of several caveats. For example, Hawaii's commercial landings data are based on mandatory monthly reporting by fish dealers and licensed commercial fishers as well as NOAA Fisheries longline logbooks. In contrast, data for CNMI and Guam are based on voluntary reporting of major fish buyers using government-provided trip ticket invoices, adjusted to represent 100% coverage, and referenced as "estimated commercial landings." Finally, American Samoa's data are based on a complex integration of data from a boat-based creel survey and data expansion system for a portion of the fisheries, mandatory logbooks and a size-frequency sampling program for the longline fishery, and a mandatory trip ticket invoice reporting system for local sales. Each system has advantages and disadvantages, and the reader should be aware of them when comparing or interpreting data. In addition, WPacFIN staff and the island agencies are continually improving the data collecting and processing systems in each area. Because the improvements usually result in updates to the estimates of total and commercial landings, the data in this volume may not match exactly with data in previous volumes of this report series.

The reader should also be aware that species assemblages vary among island groups, as do cultural preferences and principal fishing techniques and gear. The population of the island group is relevant to the interpretation of the relative value and importance of the fisheries. Descriptions of data collecting and processing systems are included in each island's section.

## DEFINITIONS OF SPECIES CATEGORIES

In addition to a description of the data collecting systems and monthly and annual reports, each section contains graphs of summary fishery statistics of particular interest or importance to participating WPacFIN agencies. Species categories have been defined for each island's fisheries. Because of differences in reporting systems and capabilities, species in each category vary among the islands but all categories are documented in each island's section. Overlap exists among some of the categories used for different graphs.

**Note:** Many of the species included in this report have been recategorized over the years. For example, the Magnuson Fishery Conservation and Management Act of 1976 was amended in 1992 to include tunas in the Pelagic Management Unit Species (PMUS) category. However, this FSWP volume will maintain the original species categorizations from previous volumes for comparative purposes. As such, tunas are kept in a separate category.

Categories used in the graphs include

1. Fisheries Categories – These are combinations of species of similar ecological types, specifically pelagic, bottomfish, reef fish, and “other.” “Other” includes groups that generally traverse these categories, such as certain sharks and jacks, or are not typically included in these groups, such as mullet and milkfish.
2. Pelagic Management Unit Species (PMUS) – The Magnuson Fishery Conservation and Management Act of 1976 was amended in 1992 to place tunas under U.S. jurisdiction for management. The Fishery Management Plan for Pacific Pelagic Species was amended to reflect this change. However, this report series will continue to treat tunas as a separate category, and the PMUS category in this document includes only billfishes, wahoo, mahimahi, and oceanic sharks.
3. Bottom Fish Management Unit Species (BMUS) – Defined as the species of initial importance in the Fishery Management Plan for bottomfish and seamount fisheries, including the major deepwater snapper, grouper, emperor, and certain jacks.
4. Tunas – All the tuna species excluding wahoo. Historically this had been predominantly skipjack and yellowfin in all areas, but with the growth of longline fisheries in Hawaii and American Samoa, bigeye and albacore have become much more important or even predominant.
5. Other Tunas – The definition varies among the islands depending on the importance of each tuna species in the total landings.
6. Billfish – Combination of blue, striped, and black marlins, sailfish, spearfish, and swordfish species.

## GRAPHS

Four types of graphs are provided with each island's data, as follows:

- The first is a chart of the major species and species groups, showing the estimated commercial catch for each month of the year.
- The second is a seasonality plot for the major species or species groups, showing the average weight landed during each month for all years for which there are data.
- The third is a time series plot of annual summary statistics to illustrate the variability among years.
- The fourth type of graph plots monthly landings of some of the major commercially important species and documents monthly fluctuations in landings of these species over the entire time series (all years for which there are data).

To access the most up-to-date data and charts, please visit <http://www.pifsc.noaa.gov/wpacfin>.