

Pacific Islands Fisheries Science Center
Administrative Report H-05-01

Fishery Statistics of the Western Pacific

Volume 20

Territory of American Samoa (2003)
Commonwealth of the Northern Mariana Islands (2003)
Territory of Guam (2003)
State of Hawaii (2003)

Compiled By

David C. Hamm,¹ Nathan T. S. Chan,² and Craig J. Graham²

¹NOAA Fisheries
Pacific Islands Fisheries Science Center
2570 Dole Street, Honolulu, Hawaii 96822-2396

²Joint Institute for Marine and Atmospheric Research
University of Hawaii, Manoa
2570 Dole Street, Honolulu, Hawaii 96822-2396

May 2005

CONTENTS

	Page
Introduction	1
Progress	2
Precautions	2
Contents	3
Definitions	3
Graphics	4
Section A: American Samoa	
Introduction	A.1
Special Note on Data Revisions	A.2
Data Collecting System	A.2
Data Processing System	A.6
Data Quality and Cross Validation:	
American Samoa Longline Example	A.8
Data Reporting System	A.9
Interpretation of Statistics	A.14
Tables	A.16
Figures	A.30
Section B: Commonwealth of the Northern Mariana Islands	
Introduction	B.1
Data Collecting System	B.2
Data Processing System	B.3
Data Reporting System	B.3
Tables	B.6
Figures	B.19
Section C: Guam	
Introduction	C.1
Commercial Landings Data Collecting System	C.2
Commercial Landings Data Processing System	C.2
Commercial Landings Data Reporting System	C.3
Interpretation of Statistics	C.5
Tables	C.6
Figures	C.20
Section D: State of Hawaii	
Introduction	D.1
Data Collecting System	D.2
Data Processing System	D.3
Data Reporting System	D.3
Tables	D.8
Figures	D.34

PREFACE

Over the years, the demand for data and information concerning marine fisheries has greatly increased. To help meet these increased needs in the central and western Pacific areas, the National Marine Fisheries Service's (NMFS) Southwest Fisheries Science Center (SWFSC) initiated the Western Pacific Fishery Information Network (WPacFIN) to assist Pacific island fisheries agencies in upgrading their data collecting, processing, and reporting capabilities.

In 1982, these agencies formed a Fisheries Data Coordinating Committee (FDCC) and a 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 collecting and processing systems.

In a major step to improve and coordinate the data reporting and distribution systems of the agencies, in May 1985 the FDCC agreed to produce a combined document reporting 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 chapter, 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 comprised of the Pacific Islands Fisheries Science Center (PIFSC, formerly SWFSC's Honolulu Laboratory) and the Pacific Islands Regional Office (PIRO, formerly SWRO's Pacific Islands Area Office). As such, this report is now affiliated with PIFSC rather than SWFSC.

This is the twentieth volume in the series "Fishery Statistics of the Western Pacific" and contains year 2003 summaries of commercial landings for American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and Hawaii. As with previous volumes, it is divided into sections, one each for the major island areas.

INTRODUCTION

This report is compiled by fisheries agencies participating in the Western Pacific Fishery Information Network (WPacFIN, formerly referenced as WPACFIN), a collaboration between 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

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

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 a dial-in telecommunications link. Once data from all agencies are put into the proper format on the central WPacFIN computer and appropriate edit, adjustment, and verification procedures are completed, summary reports and files are produced using software developed by WPacFIN staff. Graphs are produced using 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 the 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 date of collection.

In particular, the 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 fishermen reporting and implementing a validation system to ensure that what gets reported by fishermen 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.

PRECAUTIONS

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

When using summaries contained in this report, especially if making comparisons, one should keep in mind the nature of the systems used to produce the data. For example, Hawaii's commercial landings data are based on mandatory monthly reporting by fish dealers and licensed commercial fishermen as well as NOAA Fisheries longline logbooks; CNMI's and Guam's data are based on voluntary reporting of major fish buyers using government-provided "trip-ticket" invoices, adjusted to represent 100% coverage, and are referenced as "Estimated Commercial Landings;" 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 user 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 user should also be aware that species assemblages vary among island groups, as do cultural preferences and principal fishing techniques and gear. Population size is of particular importance when interpreting the relative value and importance of the fisheries. To help the user, explanations of the data collecting and processing systems are provided in each island's section.

CONTENTS

This document is divided into appendices by island group. Each section contains reports on the monthly and annual landings by species or species groups for the commercial fleet.

DEFINITIONS

In addition to the description of the systems and the monthly and annual reports, each section contains graphs of some of the summary fishery statistics of particular interest or importance to participating WPacFIN agencies. To graphically present the data, several categories have been defined for each island's fisheries. Because of differences in reporting systems and capabilities among the islands, species contained within each category may vary, 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 tunas in all areas, but with the growth of longline fisheries in Hawaii and American Samoa, bigeye and albacore tunas have become much more important or even predominant in recent years.
5. Other Tunas—The definition varies among the islands depending on the importance of each tuna species in the total landings. For Guam and the CNMI it remains the same and includes all tunas as defined above except skipjack and yellowfin tunas. In Hawaii and Samoa it also excludes bigeye and albacore tuna, and it includes only tuna with relatively minor landings.
6. Billfish—Combination of all marlin, sailfish, spearfish, and swordfish species.

GRAPHICS

Four types of graphs are provided with each island's data. Type I graphs present summary charts of the major species and species groups for 2003. Type II graphs are seasonality plots for the major species or species groups, showing the average weight landed during each month for all years combined. Type III graphs are time series plots of annual summary statistics to help visualize the variability among years. Type IV graphs are plots of monthly landings of some of the major commercially important species and document monthly fluctuations in landings of these species over the entire time series.

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