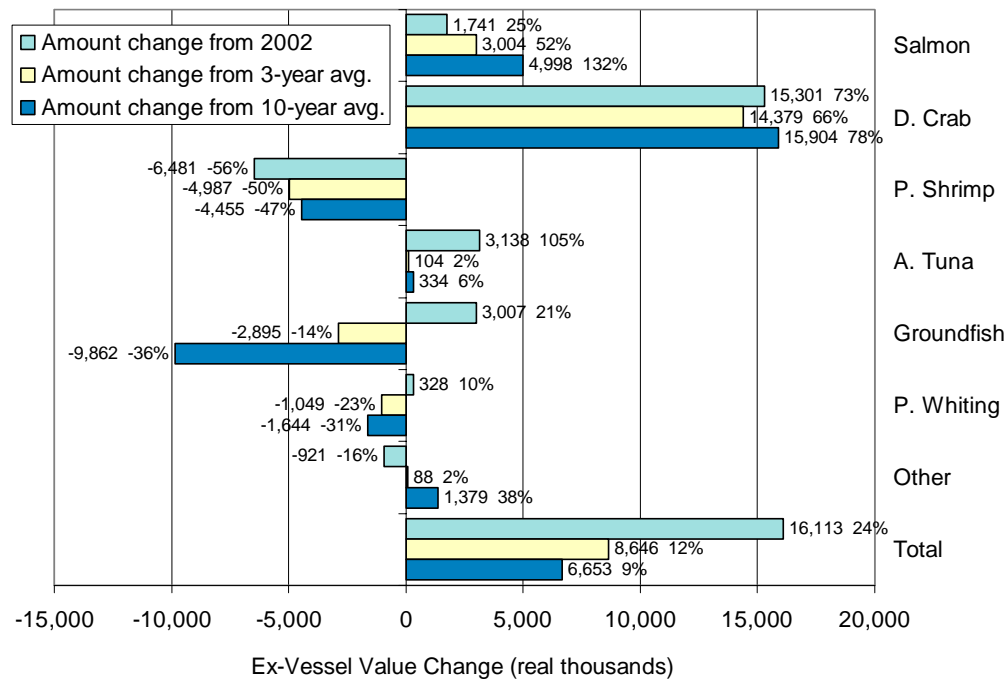


OREGON'S COMMERCIAL FISHING INDUSTRY

Preliminary Review of Year 2003 and Outlook for 2004



Change Between Year 2003 Ex-Vessel Value and 2002, Three Year Average (2000-2002), and 10 Year Average (1993-2002)

**Oregon Department of Fish and Wildlife
and
Oregon Coastal Zone Management Association Inc.**

February 15, 2004

OREGON'S COMMERCIAL FISHING INDUSTRY

Preliminary Review of Year 2003 and Outlook for 2004

prepared by

Hans D. Radtke
Shannon W. Davis
The Research Group
P.O. Box 813
Corvallis, OR 97339
(541) 758-1432 voice
(541) 758-1455 fax

prepared for

Oregon Department of Fish and Wildlife
and
Oregon Coastal Zone Management Association

February 15, 2004

PREFACE

This study was sponsored by the Oregon Department of Fish and Wildlife (ODFW) and administered by the Oregon Coastal Zone Management Association (OCZMA). The OCZMA is a voluntary association of over 40 local coastal governments comprised of counties, cities, ports, and soil and water conservation districts. The ODFW contract manager was Chris Carter, who provided considerable assistance on the study approach, facilitated obtaining much of the data that was used, and showed great patience in reviewing the several drafts of study results. The OCZMA contract manager, Onno Husing, Executive Director, provided insight and understanding of the issues facing the fishing industry. Assistance was also obtained from government and industry representatives from the fishing industry.

Fish landing data is derived from the Pacific Fisheries Information Network database maintained by the Pacific States Marine Fisheries Commission (PSMFC) and the Commercial Fisheries Information System maintained by the ODFW. Will Dasplit at the PSMFC and Jerry Lukas at ODFW assisted in providing the data.

The study consultant was The Research Group, Corvallis, Oregon. Hans Radtke and Shannon Davis were the principal authors. The authors were greatly assisted by Kari Olsen at The Research Group. While other contributors provided information and comments, the principal authors take sole responsibility for describing project results.

These same authors have assisted ODFW and OCZMA in the past with economic analysis studies. For example, there was a major study in 1998 that resulted in a five report series about Oregon's commercial and marine recreational fisheries. There were also reports issued biennially before and after 1998 that reviewed Oregon's commercial fishing industry. Another report came about when The Research Group teamed in 2002 with the OCZMA for a study of Oregon's groundfish fishery crisis. The study's report contains descriptions of the groundfish fishery's trends and current status, economic impacts of the fishery's downturn, and transitioning plans to new harvest levels. For this current report, sections from the ODFW and OCZMA previous reports are embellished and/or repeated where applicable so readers do not have to review the more extensive background material. The bibliography has full citations for these and other relevant Oregon commercial fishing industry descriptive reports.

This report was reviewed in draft form for the purpose providing candid and critical comments that were to assist in making study results as sound as possible and to ensure that the report meets standards for objectivity, evidence, and responsiveness to the study charges. Although the reviewers have provided many useful comments and suggestions, they were not asked to endorse study findings and recommendations. The authors are solely responsible for making certain independent examination of this report was carried out in accordance with accustomed procedures and that review comments were carefully considered.

The authors' interpretations and conclusions should prove valuable for this study's purpose, but no absolute assurances can be given that the described results will be realized. Government legislation and policies, market circumstances, and other situations can affect the basis of assumptions in unpredictable ways and lead to unanticipated changes. The information should

not be used for investment or operational decision making. The authors do not assume any liability for the information and shall not be responsible for any direct, indirect, special, incidental, or consequential damages in connection with the use of the information.

Authorization is granted for the study report's contents to be quoted either orally or in written form without prior consent of the authors. Customary reference to authorship, however, is requested.

TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| Preface..... | i |
| Table of Contents..... | iii |
| List of Acronyms and Abbreviations..... | v |
| Introduction..... | 1 |
| Year 2003 Fisheries Onshore Landing Review | 1 |
| <i>Salmon</i> | |
| <i>Crab and Shrimp</i> | |
| <i>Tuna</i> | |
| <i>Groundfish</i> | |
| <i>Pacific Whiting</i> | |
| <i>Sardines</i> | |
| Processing and Marketing Programs | 8 |
| Year 2003 Economic Contribution Review..... | 9 |
| Year 2003 Discussion and 2004 Outlook | 12 |
| Year 2004 and Beyond..... | 18 |

List of Tables

| | |
|--|----|
| Table 1: Onshore Landed Volume by Species Groups in 1970 to 2003 | 3 |
| Table 2: Onshore Landed Value by Species Groups in 1970 to 2003..... | 4 |
| Table 3: Economic Contributions by Species Group in 1973 to 2003 | 11 |
| Table 4: Port Group Share of Onshore Landings and Home-Port Vessels in 2001, 2002, and 2003 | 12 |
| Table 5: Projected 2004, Preliminary 2003, and Historical Period Annual Average Economic Contributions by Species Groups..... | 19 |

TABLE OF CONTENTS (CONT.)

Page

List of Figures

| | | |
|-----------|---|----|
| Figure 1: | Port Groups and Fishery Management Zones | 2 |
| Figure 2: | Onshore Landed Value and Volume by Species Groups in 1981 to 2003 | 6 |
| Figure 3: | Home-Port Vessel Counts and Annual Average Revenue Per Vessel 1981 to 2003 | 6 |
| Figure 4: | Species Group Annual Ex-Vessel Price Trends in 1971 to 2003..... | 7 |
| Figure 5: | Economic Contributions From Onshore Landings in 1973 to 2003 and Distant Water Fisheries in 1986 to 2003 | 10 |
| Figure 6: | Change Between Year 2003 Ex-Vessel Value and 2002, Three Year Average (2000-2002), and 10 Year Average (1993-2002) | 13 |
| Figure 7: | Volume and Price Trends in 1994 to 2003 by Species Group With Explanations of Recent Trend Factors | 14 |

LIST OF ACRONYMS AND ABBREVIATIONS

| | |
|----------------------|--|
| ABC | acceptable biological catch |
| AFA | American Fisheries Act |
| COMES | Coastal Oregon Marine Experiment Station |
| CBTA | Coos Bay Trawlers Association |
| CPS | coastal pelagic species |
| CPUE | catch per unit of effort |
| DLCD | Department of Land Conservation and Development |
| EDA | Economic Development Administration |
| EEZ | exclusive economic zone |
| ESA | Endangered Species Act |
| FAO | Food and Agriculture Organization of the United Nations |
| FAS | frozen at sea |
| FMA | Fisherman's Marketing Association |
| FMP | fishery management plan |
| GDOP | Groundfish Disaster Outreach Program |
| GTI | groundfish transition income |
| HMS | highly migratory species |
| HMSC | Hatfield Marine Science Center |
| IFQ | individual fishery quota |
| IQF | individually quick frozen |
| LE | limited entry |
| Magnuson-Stevens Act | Magnuson-Stevens Fishery Conservation and Management Act |
| MRFSS | Marine Recreational Fishery Statistics Survey |
| MSY | maximum sustainable yield |
| mt | metric tons |
| NEPA | National Environmental Policy Act |
| NMFS | National Marine Fisheries Service, recently renamed NOAA Fisheries |
| NOAA | National Oceanic and Atmospheric Administration |
| OA | open access |
| OAR | Oregon Administrative Rules |
| OCZMA | Oregon Coastal Zone Management Association |
| ODA | Oregon Department of Agriculture |
| ODFB | Oregon Developmental Fisheries Board |
| ODFW | Oregon Department of Fish and Wildlife |
| OECD | Oregon Economic and Community Development Department |
| ORS | Oregon Revised Statutes |
| OSP | Oregon State Police |
| OSU | Oregon State University |
| OTC | Oregon Trawl Commission |
| OY | optimum yield |
| PacFIN | Pacific Coast Fisheries Information Network |
| PFMC or Council | Pacific Fishery Management Council |
| PMCC | Pacific Marine Conservation Council |
| PSMFC | Pacific States Marine Fisheries Commission |
| RSW | refrigerated sea water |
| SFA | Sustainable Fisheries Act |
| U.S. | United States |
| USFWS | United States Fish and Wildlife Service |
| WCSPA | West Coast Seafood Processors Association |

OREGON'S COMMERCIAL FISHING INDUSTRY

Preliminary Review of Year 2003 and Outlook for 2004

February 15, 2004

Introduction

This report summarizes the economic contribution that came from Oregon's commercial fishing industry in 2003 and provides an outlook of what may happen in the 2004 fisheries.

Descriptions include the total volume and value of landings made in Oregon during 2003 and a preliminary estimate of associated economic contribution these landings make to communities and the State's economy.¹ Descriptions also include estimates for the economic contribution generated by distant water fisheries.²

Commercial fish landings occur at various ports along Oregon's coast and in the Columbia River. Ports, port groups, bathymetry depicting the continental shelf, and major fishery management zones relevant to commercial fisheries are shown on Figure 1.

While there are some fishing sectors that are going through major reorganization, overall the Oregon fishing industry in 2003 did very well, contributing about \$283 million to Oregon's economy. This is the second best year the industry has had since 1990 and is about 19 percent higher than the 13 year average. Marketing of Oregon seafood is a challenge and an opportunity.

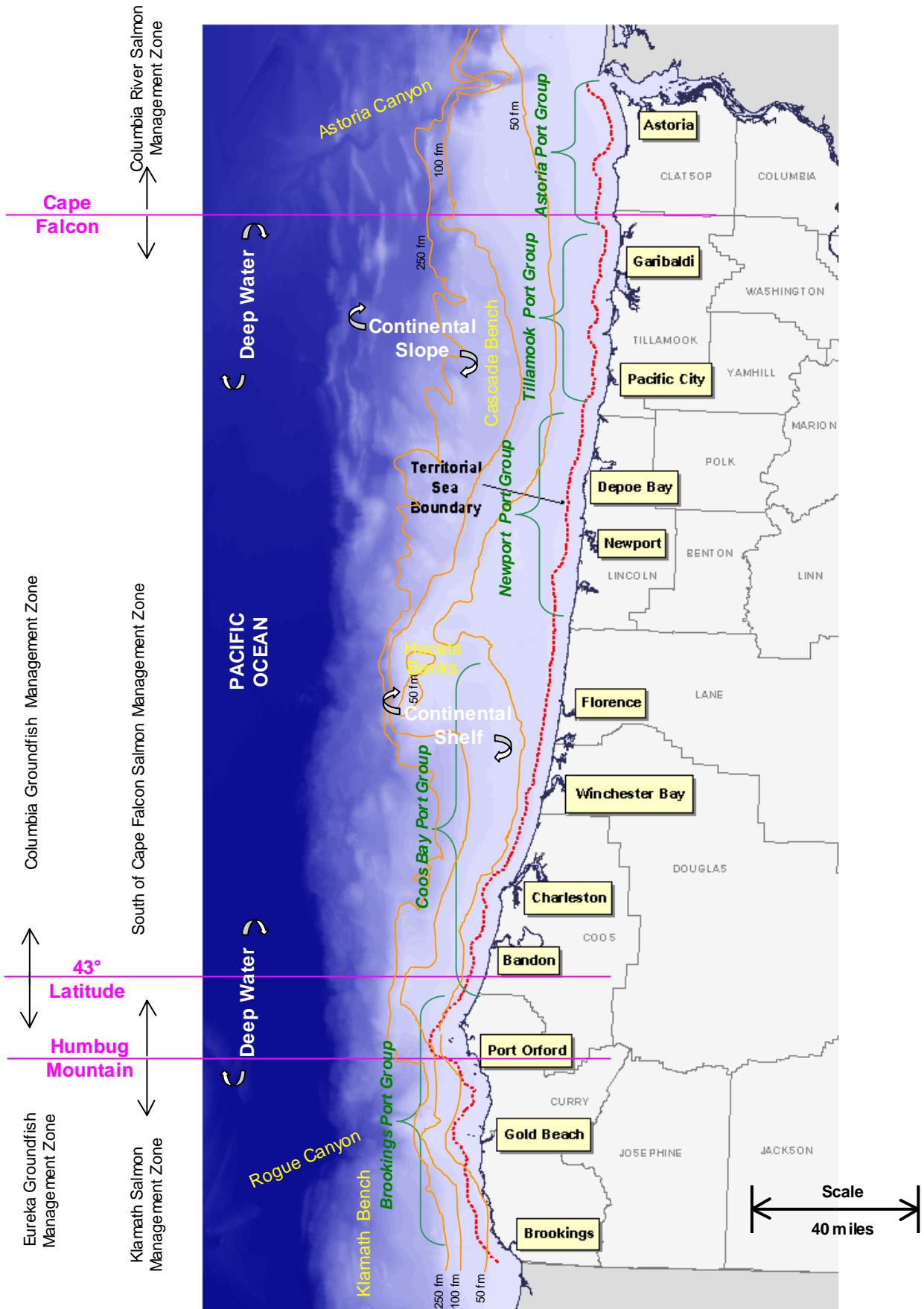
The outlook for 2004 commercial fisheries will not be as rosy as what occurred in 2003. Until there is a turnaround in prices at the harvesting level through marketing programs or other price taking influences, commercial fishing will not be a growth industry. Look to 2004 to be closer to an average of the last 10 years.

Year 2003 Fisheries Onshore Landing Review

Total landed volume in Oregon in 2003 was 225.0 million pounds compared to 210.1 million pounds in 2002 (Table 1). The overall ex-vessel value of Oregon's onshore landings in 2003 reached \$82.3 million, the sixth highest annual value in the last 13 years (Table 2). This compares to \$66.2 million in 2002. The increased value in 2003 was due to a record high crab

-
1. Commercial fish landing information is from ODFW annual pounds and value reports and from PacFIN extractions. Landings include harvests in tribal fisheries and a small amount of shellfish and crayfish caught at inland locations.
 2. Harvest revenue generated from vessel deliveries in Oregon are referenced in this report as onshore landing revenue. Revenue returned in the form of wages and salaries and/or expenditures made in Oregon for repairs, provisioning, or moorage is referenced in this report as distant water fishery revenue.

Figure 1
 Port Groups and Fishery Management Zones



Note: Continental slope/shelf boundary is usually considered to be 200 meters or about 108 fathoms.
 Source: DLCD (2002).

Table 1
Onshore Landed Volume by Species Groups in 1970 to 2003

| Year | Salmon | Crab | Shrimp | Tuna | Groundfish | Whiting | Other | Total |
|------|--------|--------|--------|--------|------------|---------|--------|---------|
| 1970 | 19,628 | 14,929 | 13,572 | 26,937 | 21,392 | -- | 1,200 | 97,659 |
| 1971 | 17,268 | 14,876 | 9,075 | 13,092 | 22,040 | -- | 1,036 | 77,387 |
| 1972 | 12,189 | 6,762 | 20,731 | 29,234 | 22,801 | -- | 1,170 | 92,888 |
| 1973 | 17,385 | 2,350 | 24,517 | 24,425 | 21,944 | -- | 917 | 91,538 |
| 1974 | 15,099 | 3,918 | 20,314 | 33,040 | 22,098 | -- | 1,137 | 95,605 |
| 1975 | 12,390 | 4,027 | 24,084 | 23,584 | 21,024 | -- | 937 | 86,046 |
| 1976 | 16,278 | 8,134 | 25,456 | 17,349 | 26,930 | -- | 1,313 | 95,460 |
| 1977 | 10,774 | 19,902 | 48,580 | 9,899 | 23,366 | -- | 1,835 | 114,357 |
| 1978 | 8,780 | 12,502 | 56,666 | 18,398 | 37,056 | -- | 1,385 | 134,787 |
| 1979 | 11,129 | 15,634 | 29,587 | 8,821 | 64,430 | -- | 2,267 | 131,868 |
| 1980 | 7,243 | 18,652 | 30,152 | 3,506 | 63,661 | -- | 1,293 | 124,507 |
| 1981 | 7,041 | 6,984 | 25,924 | 7,727 | 82,502 | -- | 18,047 | 148,224 |
| 1982 | 8,638 | 7,036 | 18,462 | 1,914 | 90,690 | -- | 2,944 | 129,683 |
| 1983 | 2,673 | 5,368 | 6,547 | 3,411 | 78,152 | -- | 4,211 | 100,361 |
| 1984 | 3,597 | 5,014 | 4,844 | 1,624 | 62,180 | -- | 6,905 | 84,163 |
| 1985 | 6,577 | 7,518 | 14,855 | 1,525 | 63,872 | -- | 5,258 | 99,606 |
| 1986 | 13,797 | 4,661 | 33,884 | 2,461 | 54,884 | -- | 4,136 | 113,822 |
| 1987 | 15,093 | 5,991 | 44,589 | 2,288 | 67,374 | -- | 3,380 | 138,716 |
| 1988 | 17,789 | 9,417 | 41,846 | 3,967 | 70,851 | -- | 4,531 | 148,402 |
| 1989 | 11,724 | 11,676 | 49,129 | 1,080 | 81,232 | -- | 10,784 | 165,624 |
| 1990 | 5,412 | 9,510 | 31,883 | 2,079 | 73,298 | 5,058 | 11,832 | 139,072 |
| 1991 | 5,344 | 4,924 | 21,711 | 1,259 | 80,843 | 29,109 | 6,843 | 150,033 |
| 1992 | 2,364 | 11,908 | 48,033 | 3,896 | 75,206 | 107,939 | 7,643 | 256,989 |
| 1993 | 1,848 | 10,456 | 26,923 | 4,754 | 81,297 | 78,970 | 6,166 | 210,415 |
| 1994 | 1,285 | 10,638 | 16,386 | 4,698 | 64,261 | 143,563 | 4,900 | 245,731 |
| 1995 | 2,862 | 11,954 | 12,106 | 5,034 | 55,037 | 147,355 | 4,348 | 238,695 |
| 1996 | 2,842 | 19,302 | 15,727 | 8,948 | 56,981 | 155,588 | 3,128 | 262,516 |
| 1997 | 2,245 | 7,777 | 19,560 | 9,168 | 52,691 | 162,782 | 6,738 | 260,960 |
| 1998 | 1,978 | 7,410 | 6,096 | 10,603 | 41,800 | 157,895 | 4,717 | 230,499 |
| 1999 | 1,560 | 12,347 | 20,451 | 4,553 | 44,112 | 160,965 | 5,532 | 249,520 |
| 2000 | 3,142 | 11,181 | 25,462 | 8,757 | 39,307 | 151,461 | 24,559 | 263,869 |
| 2001 | 5,266 | 9,690 | 28,482 | 8,957 | 31,543 | 117,673 | 32,163 | 233,773 |
| 2002 | 6,116 | 12,441 | 41,541 | 4,353 | 21,109 | 71,220 | 53,347 | 210,127 |
| 2003 | 6,657 | 23,483 | 20,546 | 9,126 | 25,743 | 80,648 | 58,759 | 224,962 |

- Notes:
1. Landings are reported in thousands of round pounds.
 2. Salmon includes landings of steelhead, which have come exclusively from the treaty Indian fisheries since 1975.
 3. Crab includes only Dungeness crab; shrimp only pink shrimp; and tuna only albacore tuna. Tuna includes landings of albacore, yellowfin and skipjack tuna for 1970 to 1979. Essentially all tuna landings from 1980 on are albacore.
 4. Groundfish includes landings of cods, rockfish (snapper), sablefish, soles, flounders, halibut (until 1983), and Pacific whiting (until 1990). Pacific whiting (also known as hake) did not emerge as a major fishery species until after 1990.
 5. Other in the most recent year includes landings (thousands of round pounds) of sardines (55,683), sea urchins (144), halibut (341), clams (208), sturgeon (178), crayfish (64), shad (168), smelt (31), squid (27), and other species (1,915). Shellfish volume excludes private lands harvests.
 6. Landing data is preliminary for 2003.

Source: Oregon Department of Fish and Wildlife Table 4 and 42.

Table 2
Onshore Landed Value by Species Groups in 1970 to 2003

| Year | Price | Salmon | | Dungeness Crab | | Pink Shrimp | | Albacore Tuna | | Groundfish | | Pacific Whiting | | Other | | Total | |
|------|-------|--------|---------|----------------|---------|-------------|---------|---------------|---------|------------|---------|-----------------|---------|-------|---------|---------|---------|
| | Index | Real | Nominal | Real | Nominal | Real | Nominal | Real | Nominal | Real | Nominal | Real | Nominal | Real | Nominal | Real | Nominal |
| 1970 | 26.1 | 35,083 | 9,144 | 14,319 | 3,732 | 6,250 | 1,629 | 26,565 | 6,924 | 6,158 | 1,605 | -- | -- | 783 | 204 | 89,157 | 23,238 |
| 1971 | 27.4 | 20,994 | 5,745 | 15,512 | 4,245 | 4,056 | 1,110 | 13,258 | 3,628 | 6,622 | 1,812 | -- | -- | 753 | 206 | 61,194 | 16,746 |
| 1972 | 28.6 | 22,458 | 6,412 | 10,038 | 2,866 | 10,052 | 2,870 | 31,999 | 9,136 | 7,587 | 2,166 | -- | -- | 729 | 208 | 82,864 | 23,658 |
| 1973 | 30.1 | 46,938 | 14,150 | 4,445 | 1,340 | 17,893 | 5,394 | 28,853 | 8,698 | 8,701 | 2,623 | -- | -- | 756 | 228 | 107,586 | 32,433 |
| 1974 | 32.9 | 32,032 | 10,531 | 8,398 | 2,761 | 13,444 | 4,420 | 38,237 | 12,571 | 9,837 | 3,234 | -- | -- | 599 | 197 | 102,547 | 33,714 |
| 1975 | 36.0 | 27,392 | 9,851 | 8,956 | 3,221 | 9,001 | 3,237 | 20,855 | 7,500 | 8,270 | 2,974 | -- | -- | 673 | 242 | 75,147 | 27,025 |
| 1976 | 38.0 | 50,881 | 19,358 | 13,899 | 5,288 | 13,381 | 5,091 | 14,879 | 5,661 | 11,307 | 4,302 | -- | -- | 1,230 | 468 | 105,578 | 40,168 |
| 1977 | 40.5 | 38,735 | 15,672 | 26,940 | 10,900 | 27,682 | 11,200 | 6,337 | 2,564 | 12,111 | 4,900 | -- | -- | 1,461 | 591 | 113,265 | 45,827 |
| 1978 | 43.3 | 27,049 | 11,711 | 22,171 | 9,599 | 34,424 | 14,904 | 23,837 | 10,320 | 18,538 | 8,026 | -- | -- | 961 | 416 | 126,980 | 54,976 |
| 1979 | 46.9 | 44,666 | 20,947 | 24,793 | 11,627 | 24,181 | 11,340 | 9,928 | 4,656 | 37,113 | 17,405 | -- | -- | 1,960 | 919 | 142,640 | 66,894 |
| 1980 | 51.2 | 20,589 | 10,533 | 24,189 | 12,375 | 32,610 | 16,683 | 5,368 | 2,746 | 22,676 | 11,601 | -- | -- | 1,216 | 622 | 106,648 | 54,560 |
| 1981 | 56.0 | 19,825 | 11,095 | 11,993 | 6,712 | 23,305 | 13,043 | 11,932 | 6,678 | 26,297 | 14,717 | -- | -- | 9,492 | 5,312 | 102,844 | 57,557 |
| 1982 | 59.4 | 20,909 | 12,415 | 12,717 | 7,551 | 15,644 | 9,289 | 2,132 | 1,266 | 34,217 | 20,317 | -- | -- | 2,311 | 1,372 | 87,929 | 52,210 |
| 1983 | 61.7 | 4,926 | 3,040 | 12,877 | 7,947 | 7,545 | 4,656 | 3,048 | 1,881 | 30,731 | 18,965 | -- | -- | 2,688 | 1,659 | 61,816 | 38,148 |
| 1984 | 64.0 | 7,989 | 5,116 | 12,092 | 7,743 | 3,355 | 2,148 | 1,349 | 864 | 22,924 | 14,679 | -- | -- | 4,870 | 3,119 | 52,579 | 33,670 |
| 1985 | 66.0 | 13,739 | 9,066 | 16,116 | 10,634 | 7,944 | 5,242 | 1,218 | 804 | 25,204 | 16,632 | -- | -- | 3,953 | 2,608 | 68,174 | 44,986 |
| 1986 | 67.4 | 22,535 | 15,198 | 9,769 | 6,589 | 26,880 | 18,129 | 2,037 | 1,374 | 24,931 | 16,815 | -- | -- | 5,753 | 3,880 | 91,906 | 61,984 |
| 1987 | 69.3 | 38,967 | 26,997 | 12,055 | 8,352 | 43,697 | 30,274 | 2,418 | 1,675 | 34,953 | 24,216 | -- | -- | 4,555 | 3,156 | 136,646 | 94,670 |
| 1988 | 71.6 | 54,542 | 39,076 | 15,746 | 11,281 | 23,937 | 17,150 | 4,644 | 3,327 | 33,252 | 23,823 | -- | -- | 4,448 | 3,187 | 136,569 | 97,845 |
| 1989 | 74.4 | 19,176 | 14,259 | 18,242 | 13,564 | 24,081 | 17,906 | 1,193 | 887 | 33,911 | 25,216 | -- | -- | 7,514 | 5,587 | 104,117 | 77,420 |
| 1990 | 77.2 | 12,410 | 9,585 | 18,845 | 14,555 | 20,235 | 15,629 | 2,162 | 1,670 | 29,944 | 23,128 | 284 | 220 | 8,686 | 6,709 | 92,567 | 71,494 |
| 1991 | 79.9 | 7,296 | 5,832 | 9,336 | 7,462 | 15,100 | 12,069 | 1,221 | 976 | 36,050 | 28,816 | 1,747 | 1,397 | 7,018 | 5,610 | 77,769 | 62,162 |
| 1992 | 81.8 | 4,510 | 3,688 | 16,373 | 13,388 | 21,019 | 17,187 | 4,854 | 3,969 | 32,702 | 26,740 | 6,197 | 5,067 | 5,166 | 4,224 | 90,820 | 74,263 |
| 1993 | 83.7 | 2,900 | 2,426 | 14,103 | 11,798 | 10,652 | 8,912 | 4,639 | 3,881 | 33,034 | 27,636 | 2,724 | 2,279 | 4,697 | 3,929 | 72,749 | 60,861 |
| 1994 | 85.4 | 1,709 | 1,460 | 16,928 | 14,463 | 11,267 | 9,626 | 4,389 | 3,750 | 33,671 | 28,767 | 5,020 | 4,289 | 4,001 | 3,418 | 76,985 | 65,772 |
| 1995 | 87.2 | 4,100 | 3,575 | 22,991 | 20,045 | 9,863 | 8,599 | 4,301 | 3,750 | 35,516 | 30,965 | 8,029 | 7,000 | 3,870 | 3,374 | 88,670 | 77,308 |
| 1996 | 88.8 | 3,703 | 3,289 | 29,470 | 26,180 | 10,538 | 9,362 | 8,363 | 7,430 | 33,735 | 29,969 | 4,668 | 4,147 | 2,294 | 2,038 | 92,770 | 82,414 |
| 1997 | 90.3 | 3,070 | 2,773 | 16,206 | 14,637 | 8,759 | 7,911 | 7,243 | 6,542 | 30,986 | 27,986 | 7,554 | 6,823 | 2,453 | 2,215 | 76,271 | 68,886 |
| 1998 | 91.3 | 2,837 | 2,591 | 13,710 | 12,520 | 3,492 | 3,189 | 6,833 | 6,240 | 21,328 | 19,477 | 4,114 | 3,756 | 2,206 | 2,014 | 54,520 | 49,787 |
| 1999 | 92.6 | 2,205 | 2,043 | 24,729 | 22,908 | 10,331 | 9,571 | 4,084 | 3,784 | 23,953 | 22,190 | 6,388 | 5,917 | 2,036 | 1,886 | 73,726 | 68,299 |
| 2000 | 94.7 | 4,259 | 4,031 | 24,943 | 23,611 | 10,767 | 10,192 | 7,277 | 6,888 | 25,630 | 24,261 | 6,416 | 6,073 | 4,282 | 4,054 | 83,574 | 79,110 |
| 2001 | 96.9 | 6,039 | 5,852 | 19,804 | 19,192 | 7,801 | 7,560 | 7,798 | 7,557 | 20,999 | 20,350 | 4,261 | 4,129 | 4,554 | 4,413 | 71,256 | 69,053 |
| 2002 | 98.4 | 7,044 | 6,931 | 20,991 | 20,654 | 11,525 | 11,340 | 2,987 | 2,939 | 14,462 | 14,229 | 3,272 | 3,220 | 5,932 | 5,837 | 66,213 | 65,150 |
| 2003 | 100.0 | 8,785 | 8,785 | 36,292 | 36,292 | 5,044 | 5,044 | 6,125 | 6,125 | 17,469 | 17,469 | 3,601 | 3,601 | 5,011 | 5,011 | 82,327 | 82,327 |

- Notes:
1. Nominal value is the revenue received by fishermen/harvesters in the landing year. Real value is in thousands of 2003 dollars adjusted using the GDP implicit price deflator developed by U.S. Bureau of Economic Analysis.
 2. Other in the most recent year includes (thousands) sardines (\$2,856), halibut (\$859), sea urchins (\$61), sturgeon (\$305), clams (\$104), crayfish (\$97), shad (\$39), smelt (\$10), squid (\$5), and other species (\$675). Shellfish value excludes private lands harvest.
 3. Notes and sources from volume table concerning species composition also apply to this table.

volume, a near record of albacore tuna, an increase in the previous record sardine harvest of 2002, and an increase in price for some salmon and groundfish.

Over the last 30 years, the Oregon fishing industry has shifted from low-volume and high-value species, such as salmon, to high-volume and low-value, such as Pacific whiting and sardines (Figure 2). This has also had the effect of concentrating landings in ports that have high-volume harvesting and processing capabilities, such as Newport and Astoria. This trend has also reduced the number of small boats and increased annual revenues for the remaining boats (Figure 3). In 2003, about 60.6 percent of the volume landed was Pacific whiting and sardines, but these high volume species only comprised about 8.0 percent by landed value in 2003. The ex-vessel prices for these species were \$0.045 and \$0.053, respectively, as compared to over \$2.00 per pound received sometimes for species like Dungeness crab, Pacific halibut, and Chinook salmon (Figure 4).¹

Salmon

Salmon landings increased slightly in the middle 1990's following a historic low volume and ex-vessel value in 1994, but declined again in 1998 and 1999. Troll caught landings have increased in each year since 1999. In 2003, they were the highest since 1989, when ocean coho off central and southern Oregon coasts were still being harvested.

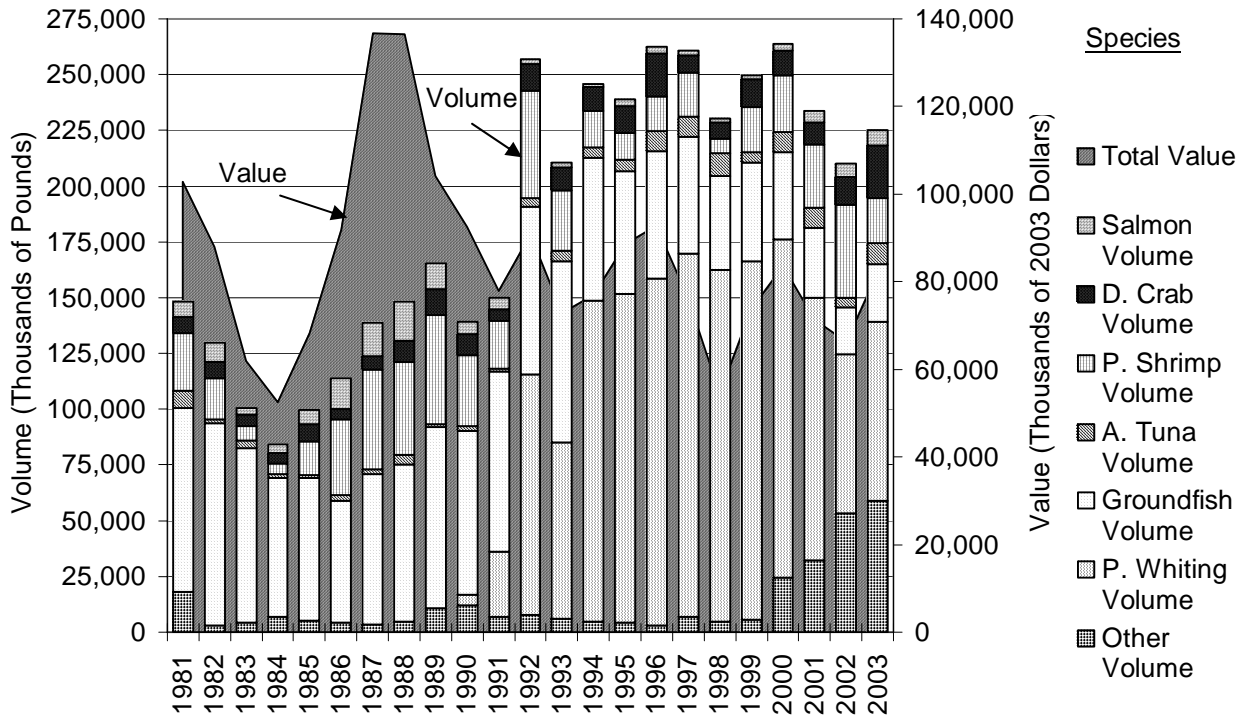
Prices, until 2002, continued to decrease; however, in 2003, troll Chinook salmon reached the highest price since 2001. The average price was \$1.72 per pound in 2003. This is still low compared to up to four and five dollars per pound (round weight equivalent in inflation-adjusted prices) during the 1970's and 1980's. The decline in price for salmon can mainly be attributed to the rapid increase in less expensive farmed salmon introduced to the marketplace. However, the increase in wild caught salmon price may reflect the preference that the consumer is placing on natural, coldwater harvested fish. This is an indication that Oregon salmon marketed as a quality, healthy protein may be able to increase its marketing position.

Crab and Shrimp

Dungeness crab and pink shrimp were near the apex of their cyclical abundance trends in 2000 through 2002. While shrimp volumes decreased in 2003, crab volumes reached a historic peak. Crab volumes in 2001 were 9.7 million pounds and increased to 12.4 million pounds in 2002 and to 23.5 million pounds in 2003. Shrimp volumes in 2001 were 28.5 million pounds, but increased to 41.5 million pounds in 2002. In 2003, this volume decreased to 20.5 million pounds. Crab prices were strong at \$2.24 in 2000 and \$2.05 in 2001 but decreased to \$1.70 and \$1.55 in 2002 and 2003. Shrimp prices continued their decreasing trend, dropping in 2003 to less than half of what they were in 1998 at \$0.25 per pound. The decreasing prices mirror the declines in the Gulf of Mexico and Atlantic shrimp prices. A large increase of farmed shrimp

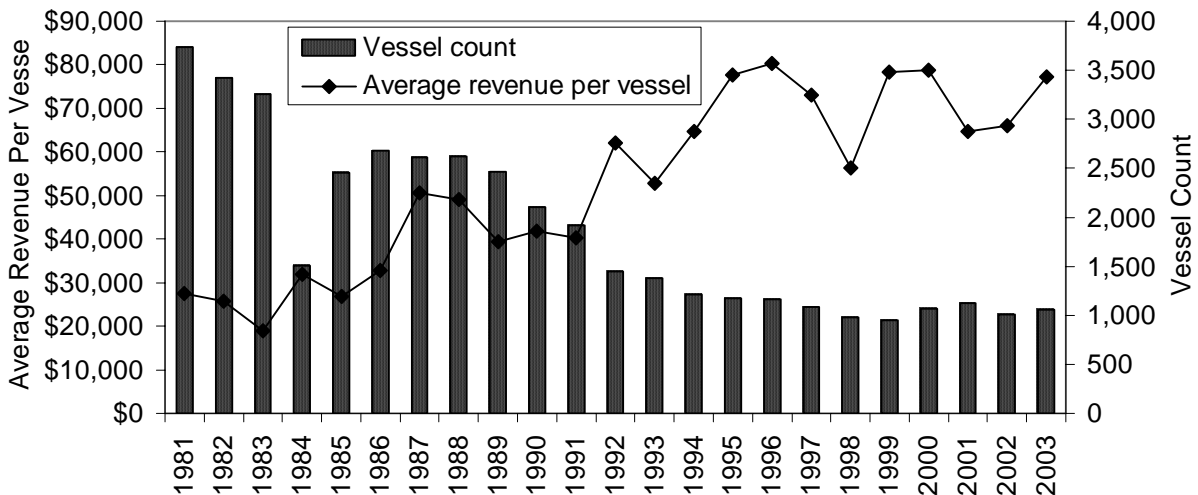
1. Ex-vessel prices are what harvesters receive when delivering their catch to processors, restaurants, and other types of buyers. Ex-vessel prices are reported in 2003 dollars per "round" pound equivalents. All ex-vessel values and prices have been adjusted to real 2003 dollars using the GDP implicit price deflator developed by the U.S. Bureau of Economic Analysis.

Figure 2
Onshore Landed Value and Volume by Species Groups in 1981 to 2003



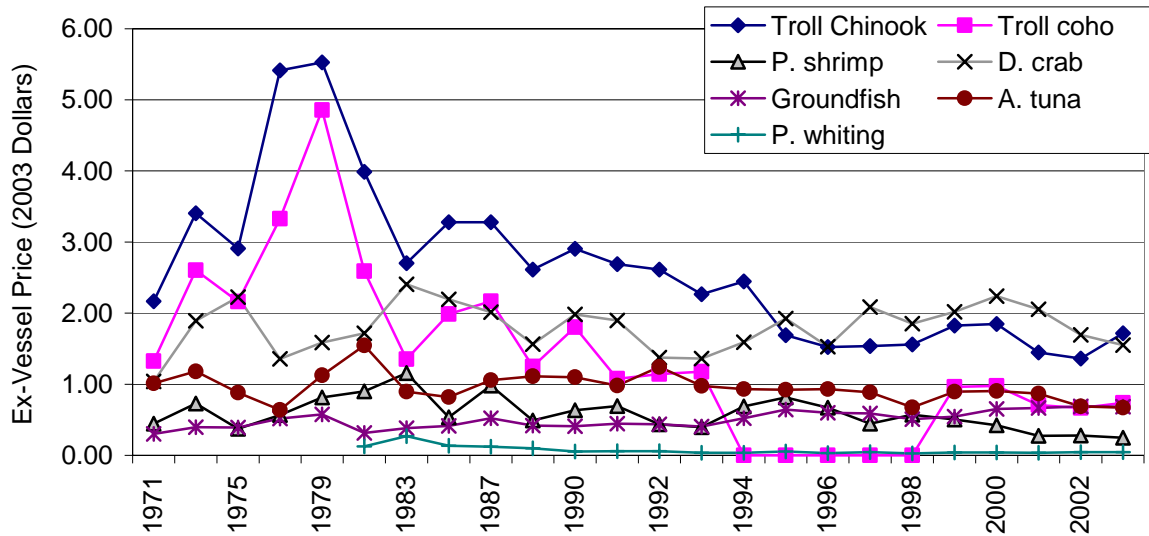
Notes: 1. Values in 2003 dollars adjusted using the GDP implicit price deflator developed by U.S. Bureau of Economic Analysis.

Figure 3
Home-Port Vessel Counts and Annual Average Revenue Per Vessel 1981 to 2003



Notes: 1. Revenues adjusted to 2003 dollars using the GDP implicit price deflator developed by the U.S. Bureau of Economic Analysis.
2. Average revenue per vessel is for onshore landings; distant water fisheries revenue is not included.

Figure 4
Species Group Annual Ex-Vessel Price Trends in 1971 to 2003



- Notes: 1. Prices adjusted to real 2003 dollars using the GDP implicit price deflator developed by the U.S. Bureau of Economic Analysis.
 2. Ex-vessel price is the amount paid to fishers at the time of fish delivery.
 3. Groundfish price calculation does not include Pacific whiting.
 4. Prices are annual and species averaged expressed in round weight, except for troll Chinook prior to 1981 which are based on dressed weight, and are for onshore landings only.
 Average prices for salmon include seasonal and size considerations.

Source: Oregon Department of Fish and Wildlife for years prior to 1981. PacFIN January 2003, July 2003, and January 2004 extractions for 1981 onward.

from Thailand and China and strong harvests of direct competing cold water shrimp off Norway and Canada are depressing prices of all shrimp products. Because of the increased volume of Dungeness crab, the total landed ex-vessel value was a record \$36.3 million, in spite of a decrease of ex-vessel price to \$1.55 per pound.

Tuna

Albacore tuna volume rebounded in 2003 consistent with 2000 and 2001 landing levels. The 2003 landings at 9.1 million pounds were about twice that landed in 2002. Prices have dropped from the early 1990's, when \$1.25 was received. The price in 2003 was \$0.67; the total landed value was \$6.1 million. This compared to \$3.0 million in 2002.

Groundfish

The overall Oregon commercial fishing industry had a reasonably good year in 2003; even the groundfish fishery had increases in landed volume and value over 2002.¹ This follows deep

1. The groundfish fishery includes over 80 individual species, including cods, rockfish, and soles. The species Pacific whiting is managed as a groundfish species, but the domestic Pacific whiting fishery did not develop

declines since the early 1990's. Total volume in 2003 was 25.7 million pounds while total value was \$17.5 million. These are low numbers in a sector that most likely will not increase for a while. A federal industry sponsored buyout has removed close to 50 percent of trawl fishery permits on the West Coast and the remaining fleet should see increases in per vessel revenues.

Pacific Whiting

Pacific whiting onshore volume was steady at about 160 million pounds during the late 1990's. Prices averaged around \$0.045, but hit a recent years' low level in 1998 (\$0.026 per pound). Recent stock assessments have put this species in an "overfished" status, and harvests under the rebuilding plan were considerably less in 2003 when only 80.6 million pounds were landed in Oregon. Average price was about \$0.045, which translates to total landed value of \$3.6 million.

There is also a large Pacific whiting at-sea fishery off the Oregon Coast. Factory trawlers (vessels that both harvest and process on-board) and motherships (only process what catcher vessels bring them) that usually home-port in Seattle fish during April through June of each year. More than a dozen catcher vessels from Oregon ports participate in this fishery by delivering to the motherships. The harvests are not counted in Oregon landings, but revenue returned to Oregon's economy is included in the distant water fisheries category.

Sardines

Another important market species in Oregon's onshore landings in 2003 was sardines (55.7 million pounds at an ex-vessel value of \$2.9 million). Sardine landings explain much of the overall landing volume increase for the other species category in recent years (55.7 million out of 58.8 million pounds). There are five processors in the Astoria area that handle most of the Oregon landings. Sardine abundances follow a 60 year cycle, so swings in landings are not expected to be as pronounced as the shorter cyclical periods for crab and shrimp. Sardines fetch approximately 5.3 cents per pound. Sardines are processed into bait for mostly Japanese buyers to be used in longline fisheries.

Processing and Marketing Programs

Processor plants are being consolidated to a few regional commercial fisheries centers. The expense for equipment and refrigeration to meet new quality standards balanced against business risk makes it unlikely this trend will change. Only processors making purchases over \$1 million accepted nearly all the deliveries for pink shrimp and all of the deliveries for Pacific whiting in 2003. This category of processors is not specialized in any one species group, but processes year-around as species are fished.

Harvesters are becoming more interested in participating in seafood product marketing programs that may lead to higher delivery prices. Geographic labeling and quality/sustainability

until after 1989. The fishery after that date is usually discussed separately because of its high-volume and low-value characteristics.

certifications are hoped to make Oregon seafoods distinct in world markets and translate from higher ex-processor prices to higher ex-vessel prices. Harvesters would be willing to invest in on-board equipment for improved handling if justified through increased revenues. There are several organized efforts underway to promote quality assurance programs that are linked between the two industry sectors. A Seafood Oregon campaign is underway and Oregon Sea Grant Extension Service is involved in market research and education to bring about the modernization that is necessary for harvester and processor quality assurance programs.

There is a growing number of harvesters selling whole (cleaned and gutted) salmon and tuna directly to the consumer from vessels. The Port of Newport is investigating the feasibility of enhancing this market opportunity, similar to the organized program and facilities at the Port of Bellingham's Fisherman Wharf. Vessels would have to apply for processing permits, so they could also sell processed fish (filleted, smoked, etc.) similar to what is being considered at the Seattle Fisherman's Terminal. This direct marketing concept is not without controversy, since participating vessels would be in competition with the local retail markets for customers. Harvesters can receive about double the price from what is received when delivering to processors. While the direct sale price appears to be an attractive return, there are costs (advertising, packaging, spoilage, etc.) and legal risks for this type of sale. In addition, there can be lost fishing effort while the vessel is used as a base for sales.

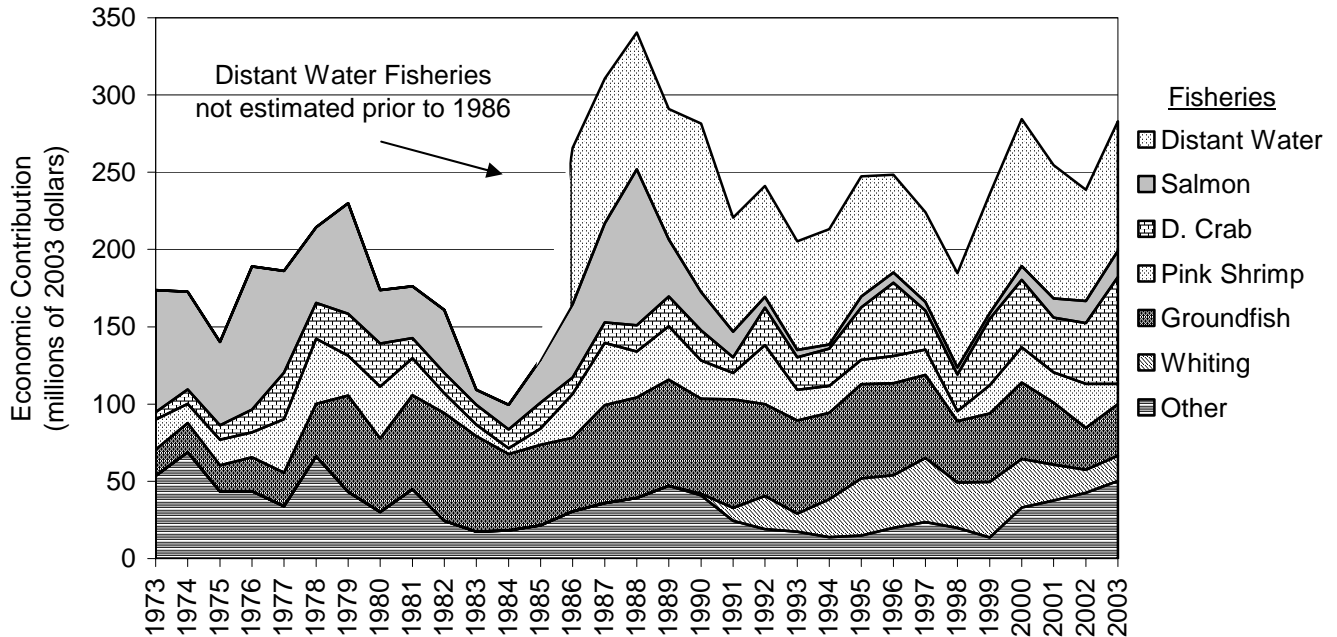
Year 2003 Economic Contribution Review

Economic contribution estimates are measured by total personal incomes received by households in Oregon. The estimates include wages and proprietary income made by crewmen and captains during harvesting and workers at processing plants. It includes income earned by people working at suppliers for fishing industry businesses. It also includes the respending of wages throughout the economy, therefore is inclusive of the "multiplier effect" of the industry.¹ Some fish have a higher labor cost per pound to harvest and process (like groundfish made into fillets) and therefore have a higher impact (generate more personal income) on the economy. Other fish (like salmon) are sold whole-fresh and have lower labor costs per pound. Using economic contribution for describing the industry simplifies all of these details and is a more revealing measure of the economic importance of certain fisheries within this industry.

Overall, the Oregon fishing industry generated about \$199 million in total personal income from fish landed in Oregon in 2003 (Figure 5 and Table 3). Another \$84 million of personal income was generated in the Oregon economy by the distant water fleet making landings to at-sea processors and onshore processors in Alaska, other West Coast states, southern Pacific Ocean, and elsewhere.

1. The Fishery Economic Assessment Model (FEAM), based on economic response coefficients generated from the IMPLAN input-output model, was used to estimate the total personal income derived from the commercial fishing industry for each coastal community and for the State of Oregon. IMPLAN models are available for each county and state in the U.S. The models are distributed by MIG, Inc., 1725 Tower Drive West, Suite 140, Stillwater, MN 55082.

Figure 5
Economic Contributions From Onshore Landings in 1973 to 2003
and Distant Water Fisheries in 1986 to 2003



- Notes: 1. Economic contributions are expressed as total personal income in millions of 2003 dollars. Dollar adjustment uses the GDP implicit price deflator developed by the U.S. Bureau of Economic Analysis.
2. Year 2003 is preliminary estimates.

Economic contributions from salmon fisheries were up in 2003 over 2002 by 17 percent. It is more than double what was seen during the 1990's. The increase to \$17 million in 2003 was partly due to higher landings and partly due to a price increase.

Crab economic contribution increased from \$39 million in 2002 to a record \$69 million in 2003, but shrimp decreased from \$28 million in 2002 to \$13 million in 2003.

Oregon's groundfish landings contributed \$61 million in personal income to the economy in 1995, but this decreased to \$40 million in 1998. It increased to about \$49 million in 2000, but dropped back to the very low level of \$27 million in 2002. Because of high sablefish landings and better prices for some species, the total economic contribution increased to \$33 million in 2003. The Pacific whiting fishery contributed about \$42 million in 1997. This stock has been declared overfished; total allowable catch has been reduced by about 50 percent. The total economic contribution of this fishery in 2003 was \$17 million.

Fisheries other than the before mentioned salmon, crab, shrimp, and groundfish species groups also have measurable economic contributions. For example, sardines alone contributed about \$33 million in 2003. Albacore tuna contributed another \$13 million in 2003.

Table 3
Economic Contributions by Species Group in 1973 to 2003

| Onshore Landings | | | | | | | | |
|------------------|--------|---------|-------------|------------|-----------------|-----------------------------|-------------------|-------------------------|
| Years | Salmon | D. Crab | Pink Shrimp | Groundfish | Pacific Whiting | Other Finfish and Shellfish | Total Landed Fish | Distant Water Fisheries |
| 1973 | 78.9 | 4.9 | 19.4 | 17.0 | - | 53.5 | 173.7 | - |
| 1974 | 63.3 | 9.4 | 12.3 | 19.0 | - | 68.8 | 172.8 | - |
| 1975 | 53.8 | 9.4 | 16.5 | 17.1 | - | 43.3 | 140.1 | - |
| 1976 | 92.7 | 14.8 | 16.2 | 22.0 | - | 43.5 | 189.2 | - |
| 1977 | 66.0 | 30.0 | 34.7 | 21.9 | - | 33.7 | 186.3 | - |
| 1978 | 48.9 | 23.1 | 42.2 | 33.9 | - | 66.2 | 214.3 | - |
| 1979 | 71.7 | 27.1 | 25.7 | 62.5 | - | 43.0 | 230.0 | - |
| 1980 | 34.5 | 27.8 | 33.5 | 47.8 | - | 30.0 | 173.7 | - |
| 1981 | 33.7 | 12.9 | 24.0 | 60.9 | - | 44.7 | 176.3 | - |
| 1982 | 40.7 | 13.1 | 13.0 | 69.7 | - | 24.4 | 160.9 | - |
| 1983 | 9.9 | 12.8 | 7.4 | 61.8 | - | 17.5 | 109.3 | - |
| 1984 | 15.9 | 12.2 | 3.8 | 49.4 | - | 18.2 | 99.5 | - |
| 1985 | 28.1 | 16.7 | 10.6 | 52.1 | - | 21.5 | 128.9 | - |
| 1986 | 47.4 | 10.7 | 28.3 | 47.7 | - | 30.5 | 164.6 | 101.2 |
| 1987 | 64.0 | 13.2 | 40.3 | 63.5 | - | 35.8 | 216.9 | 93.8 |
| 1988 | 101.0 | 17.2 | 29.6 | 65.2 | - | 39.1 | 252.0 | 88.4 |
| 1989 | 36.9 | 19.3 | 34.6 | 68.7 | - | 47.0 | 206.5 | 84.3 |
| 1990 | 24.8 | 19.5 | 24.7 | 61.5 | 1.0 | 40.9 | 172.4 | 109.1 |
| 1991 | 16.6 | 10.0 | 17.1 | 70.2 | 8.3 | 24.4 | 146.7 | 73.9 |
| 1992 | 7.1 | 24.1 | 38.3 | 59.4 | 21.3 | 19.2 | 169.4 | 71.8 |
| 1993 | 4.7 | 20.9 | 20.0 | 60.4 | 11.6 | 17.4 | 135.0 | 70.3 |
| 1994 | 2.7 | 24.2 | 17.3 | 56.0 | 24.5 | 13.9 | 138.6 | 74.5 |
| 1995 | 7.1 | 34.0 | 15.7 | 61.0 | 37.0 | 14.9 | 169.6 | 77.7 |
| 1996 | 6.8 | 47.4 | 17.6 | 59.4 | 33.9 | 20.0 | 185.2 | 63.2 |
| 1997 | 5.6 | 25.2 | 16.4 | 53.8 | 41.5 | 23.5 | 166.0 | 58.1 |
| 1998 | 4.6 | 23.6 | 6.5 | 39.7 | 29.3 | 19.9 | 123.6 | 61.1 |
| 1999 | 3.9 | 42.8 | 18.3 | 44.3 | 36.0 | 13.6 | 158.9 | 77.2 |
| 2000 | 8.8 | 43.8 | 22.7 | 49.5 | 31.4 | 33.0 | 189.2 | 95.2 |
| 2001 | 12.4 | 35.5 | 19.5 | 40.3 | 23.1 | 37.6 | 168.4 | 86.3 |
| 2002 | 14.4 | 39.3 | 28.4 | 27.1 | 15.0 | 42.4 | 166.7 | 72.1 |
| 2003 | 16.8 | 69.4 | 13.1 | 33.2 | 16.6 | 50.1 | 199.2 | 83.9 |

- Notes:
1. Economic contributions are expressed as personal income in millions of 2003 dollars. Adjustments to 2003 dollars using the GDP implicit price deflator developed by the U.S. Bureau of Economic Analysis.
 2. Year 2003 is preliminary estimates.
 3. The economic contributions from salmon fisheries includes ocean troll and Columbia River gillnet fisheries, so the estimates will be greater than ocean salmon fisheries as reported by the Pacific Fishery Management Council.
 4. Economic contributions from fish meal production are included in Pacific whiting. The largest source of fish carcasses is from surimi production.
 5. The economic contribution from distant water fisheries includes the effects of vessel revenue returned to Oregon's economy from U.S. West Coast at-sea fisheries, Oregon home-port vessels landing in other U.S. West Coast states and Alaska, southern Pacific Ocean, and other fisheries. New fishing vessel construction, fishery management, and fishery research and training are not included.

Source: Study.

Table 4
Port Group Share of Onshore Landings and Home-Port Vessels in 2001, 2002, and 2003

| Port Group/Communities | Local/ Regional | 2001 | | | 2002 | | | 2003 | | |
|------------------------|--------------------|------------------|-----------|-----------|------------------|-----------|-----------|------------------|-----------|-----------|
| | | Onshore Landings | | Home-Port | Onshore Landings | | Home-Port | Onshore Landings | | Home-Port |
| | | Volume | Value | Vessels | Volume | Value | Vessels | Volume | Value | Vessels |
| Astoria | | 45% | 37% | 31% | 52% | 39% | 32% | 52% | 33% | 31% |
| Astoria and Warrenton | R | | | | | | | | | |
| Tillamook | | 1% | 3% | 8% | 2% | 4% | 9% | 2% | 4% | 11% |
| Garibaldi | L | | | | | | | | | |
| Pacific City | L | | | | | | | | | |
| Newport | | 40% | 31% | 26% | 31% | 27% | 23% | 31% | 30% | 24% |
| Depoe Bay | L | | | | | | | | | |
| Newport | R | | | | | | | | | |
| Coos Bay | | 12% | 21% | 20% | 13% | 21% | 21% | 12% | 22% | 21% |
| Florence | L | | | | | | | | | |
| Winchester Bay | L | | | | | | | | | |
| Charleston | R | | | | | | | | | |
| Bandon | L | | | | | | | | | |
| Brookings | | 2% | 8% | 14% | 3% | 7% | 15% | 3% | 10% | 13% |
| Port Orford | L | | | | | | | | | |
| Gold Beach | L | | | | | | | | | |
| Brookings | R | | | | | | | | | |
| Total | | 233.8 | \$71.3 | 1,125 | 210.1 | \$66.2 | 1,011 | 225.0 | \$82.3 | 1,055 |
| | | million | million | vessels | million | million | vessels | million | million | vessels |
| | | pounds | ex-vessel | | pounds | ex-vessel | | pounds | ex-vessel | |

- Notes:
1. Declaration of local or regional considers presence of vessel repair businesses, fishing equipment suppliers, ice services, cold storage, delivery services from buyers and processors, moorage and landing facilities, etc.
 2. Value is in millions of 2003 dollars adjusted using the GDP implicit price deflator developed by U.S. Bureau of Economic Analysis.

Year 2003 Discussion and 2004 Outlook

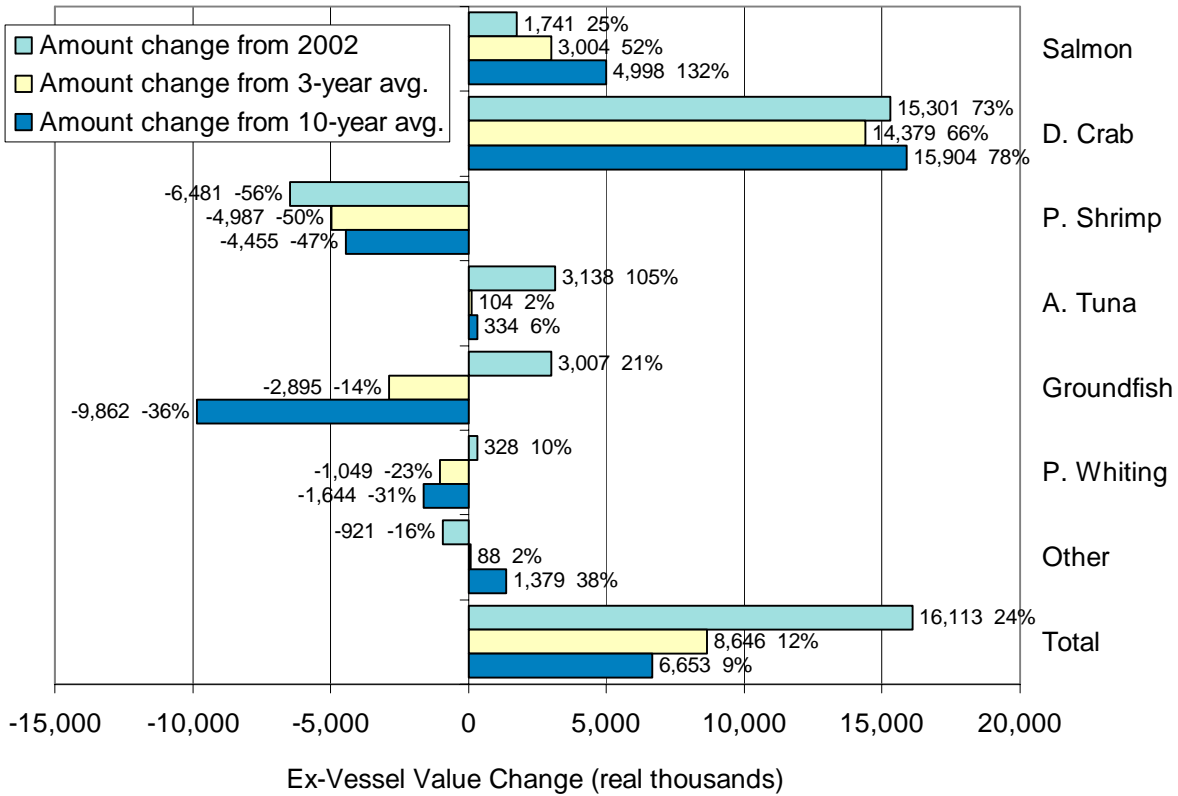
Except for salmon, shrimp, and sardines, total volume and value are below values in the most recent year and three and 10 year averages (Figure 6). An expanded discussion of trends by species groups for volume, price, and value in 2003 and 2004 follows (Figure 7).¹

Salmon is one picture that is getting a little brighter. The salmon species group includes ocean troll caught Chinook, ocean troll caught coho from north of Cape

| SALMON FISHERY | |
|----------------------------------|---------|
| <u>Year 2003 Preliminary</u> | |
| Volume (thousands pounds) | 6,657 |
| Troll Chinook price | \$1.72 |
| Ex-vessel value (thousands) | \$8,785 |
| Change from 2002 | 25% |
| 3 year average | 52% |
| 10 year average | 132% |
| Economic contribution (millions) | \$16.85 |
| Share onshore total | 8% |
| <u>Year 2004 Outlook</u> | |
| Economic contribution change | + |

1. The outlook in 2004 is best-guess estimates based on pre-season management decisions, market reports, recent landing trends, and ocean condition predictions. Because of the tenuous nature of these variables, the outlook information should not be used for investment or operational decision making. Author responsibility for use of the information is as stated in this report's preface.

Figure 6
 Change Between Year 2003 Ex-Vessel Value and 2002, Three Year Average (2000-2002), and 10 Year Average (1993-2002)



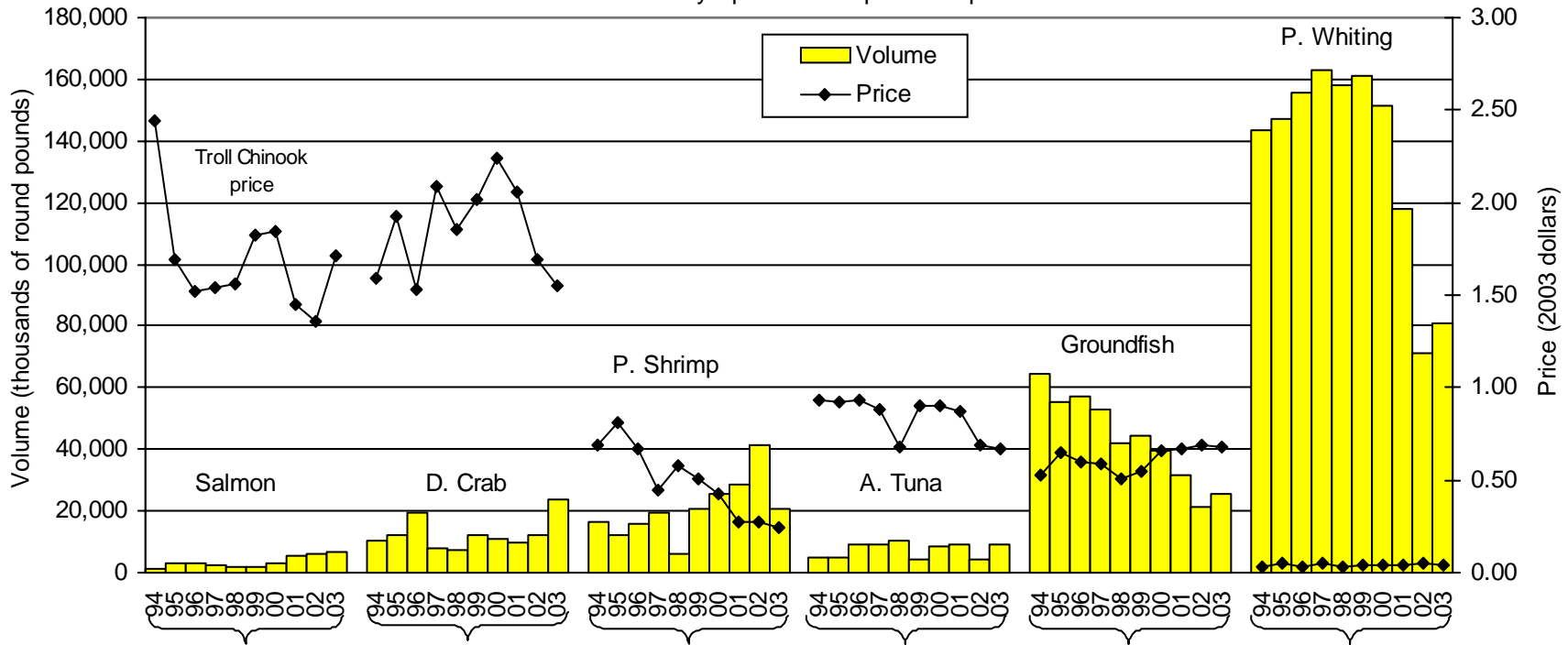
Notes: 1. Ex-vessel value is in thousands of 2003 dollars adjusted using the GDP implicit price deflator developed by U.S. Bureau of Economic Analysis.

Falcon, and net fisheries in the Columbia River. There has not been a south of Cape Falcon commercial troll coho fishery since 1993, and there has only been a recreational selective (hatchery origin only) coho fishery off the central Oregon Coast since 1999. There has been a commercial troll coho season north of Cape Falcon in 2000 through 2003 and another one is expected in 2004. The price for troll caught Chinook salmon is expected to continue to recover as customer awareness for quality and healthy seafood increases.

Oregon's commercial salmon fishery seasons are managed around Endangered Species Act listed stocks, primarily the Sacramento River fall and winter Chinook, Klamath River fall Chinook, several Columbia River Chinook stocks, Washington coastal rivers' Chinook stocks, and Oregon coastal streams' coho (called Oregon Coastal Natural or OCN stocks). There are many other listed stocks, but they have not constrained ocean salmon fisheries in recent years. Salmon commercial fisheries season management measures and allocations are decided after considering impacts to listed stocks, recreational and tribal fisheries, and inriver escapement needs.

The Sacramento River stock predictor increased in 2003 over 2002, but indications are that it will be depressed in 2004. The Klamath River fall Chinook forecast should also be lower than in 2003. The Columbia River Basin rivers' stock abundances will be slightly lower. OCN

Figure 7
Volume and Price Trends in 1994 to 2003 by Species Group With Explanations of Recent Trend Factors



- | | | | | | |
|---|--|---|---|--|---|
| <ul style="list-style-type: none"> • Volume: no expectation for central coast commercial coho due to OCN impacts, but Chinook increasing • Price: may increase due to consumer shifts to natural seafood • Outlook: troll Chinook landings may increase slightly; encouraging Columbia River net Chinook; OCN abundance high in 2004 fisheries allowing 15% impacts, so liberal coho rec. selective fishery but no S. Falcon comm. fishery | <ul style="list-style-type: none"> • Volume: increased from 10 million pounds to 23 million pounds between 2001 and 2003 • Price: decreasing trend, but may be reversed with unity harvester negotiations • Outlook: value for 2004 will be unchanged because increased prices may offset volume declines | <ul style="list-style-type: none"> • Volume: a sevenfold increase between 1998 and 2002, but decreased by half in 2003 • Price: a decline of about 50 percent in the same period • Outlook: substitute product from world production will depress Oregon product prices; groundfish protection policies will affect harvest costs; cyclical abundance trends are questionable; unknown whether smaller size class will mean lower prices | <ul style="list-style-type: none"> • Volume: a significant increase in 2003 from 2002 year • Price: price decreased to \$1,340 per ton in 2003 from over \$2,000 in early 1990's; this trend will continue • Outlook: resource availability will depend on international treaties; PFMC has accepted a HMS FMP; there are no indications of price increases unless specialty markets develop | <ul style="list-style-type: none"> • Volume: steady decline to lowest in 2002 since 1975; higher in 2003 • Price: some species price increase: new markets for rockfish delivered live • Outlook: slightly higher harvest volume but higher harvest costs due to depth mgmt; pessimistic TAC's due to rebuilding plans; more species may reach "overfished" status; restrictive nearshore plan w/ new species harvest caps; small increase in 2004, but does not reverse downward trend | <ul style="list-style-type: none"> • Volume: stock assessments in overfished status reduced harvests by greater than 50% since late 1990's; chance that the stock assessment will increase TAC • Price: surimi prices improved in 2002 which carried through to higher ex-vessel prices in 2003 • Outlook: prices should be steady due to weakening US\$; likely new stock assessments will be higher than predicted |
|---|--|---|---|--|---|

Note: Salmon price is for Chinook harvested with troll gear. Groundfish price is an aggregate over many species harvested with many gear types.

abundances should be very encouraging in 2004. The brood year levels that determine 2004 fisheries will probably allow 15 percent OCN impacts. A central Oregon recreational selective (hatchery origin) coho fishery quota may again be as high as three times the 2002 quota. Overall in Year 2004, the commercial troll and net fisheries are expected to continue the total (Chinook and coho) harvest volume at the range witnessed in 2003, or about seven million pounds.

Crab may well be in the downward cyclical trend in abundance. An expected strong crab year did not materialize in December of 2002 due to a strike while prices were being negotiated. Much of 2002 crab landings were pushed into 2003 due to strike actions.

The settlement in 2003 at \$1.53 per pound increased landings in December of 2003. These adjustments will show up as lower landings in 2004. Crab prices were down in 2003 over 2002, but are expected to stabilize in 2004. Crab prices will be negotiated for the 2003-2004 season using the new collective bargaining process allowed by SB 673 passed by the Oregon Legislature in 2003.

| CRAB FISHERY | |
|----------------------------------|----------|
| Year 2003 Preliminary | |
| Volume (thousands pounds) | 23,483 |
| Price | \$1.55 |
| Ex-vessel value (thousands) | \$36,292 |
| Change from 2002 | 73% |
| 3 year average | 66% |
| 10 year average | 78% |
| Economic contribution (millions) | \$69.43 |
| Share onshore total | 35% |
| Year 2004 Outlook | |
| Economic contribution change | v |

Shrimp prices will again be challenged in 2004 by increased quotas on the eastern U.S. coast and supplies from Canada and Europe, and by strong increases in farmed shrimp from China and Thailand. There are expectations that the opening offer in 2004 will be higher than in 2003, when it was \$0.25 per pound, because market inventories are down and the average shrimp size class will be heavier. The outlook for shrimp abundance is uncertain. If the young year class does not materialize, then the harvested shrimp will be larger but at a lower volume. If the year class does show up, volume could increase, but size of the shrimp will be lower.

| SHRIMP FISHERY | |
|----------------------------------|---------|
| Year 2003 Preliminary | |
| Volume (thousands pounds) | 20,546 |
| Price | \$0.25 |
| Ex-vessel value (thousands) | \$5,044 |
| Change from 2002 | -56% |
| 3 year average | -50% |
| 10 year average | -47% |
| Economic contribution (millions) | \$13.06 |
| Share onshore total | 7% |
| Year 2004 Outlook | |
| Economic contribution change | 0 |

There are a few vessels and processors that specialize in the tuna fishery, venturing as far as necessary to harvest stocks in each year. However, this is an opportunity fishery also when ocean conditions displace the cold California Current and bring warmer waters closer to shore. While such conditions are deleterious to anadromous fish species, they allow smaller vessels to make single day and overnight trips to harvest this species. These factors contributed to higher harvests of tuna in 2003 (9.1 million pounds and \$6.1 million value). Landing volume and value in 2003 were about double the landings in 2002. While canned tuna, mostly from

| TUNA FISHERY | |
|----------------------------------|---------|
| Year 2003 Preliminary | |
| Volume (thousands pounds) | 9,126 |
| Price | \$0.67 |
| Ex-vessel value (thousands) | \$6,125 |
| Change from 2002 | 105% |
| 3 year average | 2% |
| 10 year average | 6% |
| Economic contribution (millions) | \$13.46 |
| Share onshore total | 7% |
| Year 2004 Outlook | |
| Economic contribution change | 0 |

larger fish caught in the high seas of the western Pacific, are receiving "bad" press because of mercury content warnings, the smaller albacore caught off Oregon provide a marketing challenge to differentiate these less fatty fish.

The PFMC has adopted a highly migratory species (HMS) FMP. The FMP has established a maximum sustainable yield (MSY) for albacore tuna, which until now were regulated by the Inter-American Tropical Tuna Commission. Most of the concern for HMS is bycatch and incidental take of mammals and sea birds using driftnet and longline gear. This will not affect the Oregon fleet, because landings are typically from troll gear. There is a U.S.-Canada treaty allowing reciprocity in vessel landings and recent negotiations have resulted in amendments to reduce cross country effort.

A small increase in groundfish landings is expected in the year 2004, but this will still only be about half of what was landed in the 1990's. Management rebuilding plans will continue to decrease allowable catch for several groundfish species of concern. Nine species are declared overfished now and more may be added soon. Of the nine, the following ones are important to Oregon's groundfish fishery: Pacific whiting, lingcod, canary rockfish, Pacific ocean perch, darkblotched rockfish, yelloweye rockfish, and widow rockfish. The other species (boccacio and cowcod) are mostly harvested in California fisheries.

| GROUND FISH FISHERY | |
|----------------------------------|----------|
| <u>Year 2003 Preliminary</u> | |
| Volume (thousands pounds) | 25,743 |
| Price | \$0.68 |
| Ex-vessel value (thousands) | \$17,469 |
| Change from 2002 | 21% |
| 3 year average | -14% |
| 10 year average | -36% |
| Economic contribution (millions) | \$33.19 |
| Share onshore total | 17% |
| <u>Year 2004 Outlook</u> | |
| Economic contribution change | + |

Several other stocks are in a precautionary zone (Dover sole, sablefish, and shortspine thornyhead) and these as well as others may be declared overfished depending on upcoming stock assessments. The ODFW has concerns about other individual species that are not individually managed by the PFMC. ODFW has placed harvest caps on these species through changes to Oregon's Nearshore Fishery Management Plan. The rebuilding plans for these species will also affect other fisheries that catch rockfish as a bycatch, like the shrimp fishery.

The concern for the groundfish management measures is from the multi-species nature of the fishery. Drastic economic impacts have occurred because fishing on healthy stocks has to be curtailed to protect the stocks in an overfished and depleted status. New area and time restrictions based on federal management of ocean depth over the continental shelf and State management were imposed in the nearshore waters in 2003. Area management based on depth will continue in 2004.

The new regulations will have severe impacts on small trawling vessels—especially on Oregon's north coast. On the north coast, the edge of the continental shelf is 50 miles offshore. On the south coast, the edge of the continental shelf is 20 miles offshore. Many smaller trawl vessels do not have the capacity to fish in deep water off the continental shelf. Moreover, it becomes dangerous to operate small trawl vessels far offshore. Forcing vessels to shallow waters will cause conflicts due to congestion with other commercial fishing vessels and recreational boaters. Stricter verification requirements (observers, satellite signal locational registry programs, etc.) will add costs to an already distressed industry.

A federal/industry partnership buyout resulted in 91 (over 35 in Oregon) trawl permits removed from the fishery. While landings are expected to remain the same (or perhaps increase slightly), the home ports of vessels and the resulting economic conditions will change along the coast.

Some communities where vessels depended on the groundfish fishery will be hard hit. Recreational fisheries will also continue to have restrictions that will reduce angler days, hence spending in coastal communities.

Pacific whiting resource availability and allocations for Oregon's onshore fleet in 2004 will be about the same as in 2003. Recently completed U.S.-Canada negotiations will slightly erode U.S. at-sea onshore quotas in the future, but new stock assessments will likely be higher than previously predicted. Pacific whiting ex-vessel prices recovered in 2002 and 2003 to about 4.5 cents per pound, which is up considerably from the 3.6 cents per pound received in 2001. Ex-processor prices for surimi improved somewhat in 2003 due to a weaker U.S. dollar and the decreased supplies to market from downturns in other historical surimi based world fisheries. The expected trend in improved prices is being dampened by increased yield in both the Pacific whiting and the pollock fisheries with the use of "decanter" technology. There are also other countries, like India, that are starting to produce a lower grade surimi. This will increase the downward pressure on surimi prices. With the use of on-board superchilling technology, there is an opportunity for an improved headed and gutted product for whiting in the eastern U.S. market. The PFMC accommodated this opportunity by allowing the non-exempted permit fishery to have a 20,000 trip limit prior to the primary season and 10,000 trip limit after the primary season, which offers landings spread-out over months when the derby fishery does not dominate.

| WHITING FISHERY | |
|----------------------------------|---------|
| <u>Year 2003 Preliminary</u> | |
| Volume (thousands pounds) | 80,648 |
| Price | \$0.045 |
| Ex-vessel value (thousands) | \$3,601 |
| Change from 2002 | 10% |
| 3 year average | -23% |
| 10 year average | -31% |
| Economic contribution (millions) | \$16.57 |
| Share onshore total | 8% |
| <u>Year 2004 Outlook</u> | |
| Economic contribution change | ^ |

Sardines returned as a viable fishery after a 30 year absence (a midseason reallocation of sardines from southern California to the Pacific Northwest benefiting the Astoria area). The landings in 2003 were 55.7 million pounds, up from 50.1 million pounds in 2002. Prices were steady at 5.3 cents per pound, which realized an ex-vessel value of \$2.9 million. The growth in landings from the new sardine fishery in Oregon is expected to stabilize in 2004 with full exploitation of resources having been realized. Oregon issued five more vessel permits in 2001 for the fishery, bringing the total to 20 permitted vessels. The fishery provides a high quality bait for longliners, and there are other product forms and markets which will assist in keeping harvester prices strong.

Distant water fisheries increased in Year 2003 due to higher quotas on Alaska pollock, higher volumes in the Alaska salmon fisheries, and increased optimal yields in the West Coast at-sea Pacific whiting fishery. The Alaska and West Coast fisheries should see slightly higher landings in Year 2004.

Year 2004 and Beyond

The commercial fishing industry is an important business segment to many communities along the Oregon Coast. Including the distant water fishery revenue, all commercial fishing contributed about \$283 million to the State's economy in the year 2003. The contribution to Oregon's economy most likely will decrease to about \$250 million in 2004. This is mostly due to the "seasonal shifting effect" of Dungeness crab in 2004. Also the increased sardine quota realized in 2003 from receiving the uncaught residual from southern California will not be repeated in 2004. Overall, 2004 should be a better than average year. Larger contributions could be generated with higher prices. If prices had maintained at some average historical levels (at \$2.00 for troll Chinook, \$2.00 for Dungeness crab, \$0.05 per pound for whiting, and \$0.50 per pound for shrimp, etc.), the total economic contribution could be (at these prices) increased about \$62 million to \$345 million. This highlights the importance of including marketing considerations in management decisions. The 2003 economic contribution represents less than one percent of the State's earned income, but is about seven percent of all earned income along the Coast. The industry represents about 10,000 jobs in Oregon.

The permanency of recent increased fishery harvests cannot be determined, because of several factors:

- Abundances depend on favorable ocean conditions through vertical mixing and lateral currents which are not completely predictable;
- Pressure to set aside areas for no-take marine protection areas for research and to preserve their intrinsic values;
- Social policies for allocations among user groups (commercial, recreational, and tribal fishermen) and communities;
- Judicial decisions on habitat protection and incidental take issues brought to the forefront by conservation organizations, like protection of sea birds and mammals either impacted by fishing techniques or dependent on protein from the same fish species now exploited;
- Compacts and international treaties, such as recently completed negotiations with Canada for allocation of Pacific whiting between the two nations that will lower the U.S. share; and the Multilateral High Level Conferences on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific which may result in new country allocations of highly migratory species like albacore tuna;
- Better understanding in the science of ecosystem interactions and improved stock assessments that may cause fishery management agencies to reduce exploitation rates, control fishing gear, reduce trip limits, or have further restrictions in time/area closures;

Table 5
 Projected 2004, Preliminary 2003, and Historical Period
 Annual Average Economic Contributions by Species Groups

| | Historical Period | | | 2001 | 2002 | Preliminary Projected | |
|-----------------|-------------------|--------|--------|-------|-------|-----------------------|----------|
| | 1970's | 1980's | 1990's | | | 2003 | 2004 |
| Salmon | 67.9 | 41.2 | 8.4 | 12.4 | 14.4 | 16.8 | + |
| D. Crab | 16.9 | 15.6 | 27.2 | 35.5 | 39.3 | 69.4 | v |
| P. Shrimp | 23.8 | 22.5 | 19.2 | 19.5 | 28.4 | 13.1 | 0 |
| Groundfish | 27.6 | 58.7 | 56.6 | 40.3 | 27.1 | 33.2 | + |
| P. Whiting | na | na | 24.4 | 23.1 | 15.0 | 16.6 | ^ |
| Other | 50.3 | 30.9 | 20.8 | 37.6 | 42.4 | 50.1 | v |
| Subtotal landed | 186.6 | 168.9 | 156.5 | 168.4 | 166.7 | 199.2 | 0 |
| Distant water | na | 91.9 | 73.7 | 86.3 | 72.1 | 83.9 | 0 |
| Total | na | 301.9 | 230.2 | 254.6 | 238.8 | 283.1 | 0 |

- Notes:
1. Economic contributions are expressed as personal income in millions of 2003 dollars. Adjustments are made to real 2003 dollars using the GDP implicit price deflator developed by the U.S. Bureau of Economic Analysis.
 2. The 1970's are 1973 to 1979.
 3. The symbols representing projected change from 2003 to 2004 are:
 \wedge = >10%, **+** = 5 to 9.9%, **0** = \pm 4.9%, **-** = -5 to -9.9%, **v** = >-10%
 4. The species group "other" in the most recent year includes sardines (\$32.6 million), tuna (\$13.5 million), halibut (\$1.4 million), sea urchins (\$0.1 million), and many other fisheries.

- Not being able to reach harvest quotas on species in healthy stock status due to fishing techniques that have unavoidable mortalities on species in a depleted stock status where species occupy the same space at the same time;
- Stock building programs calculated using variables with large uncertainties; rebuilding programs will take many years for depleted species to return to sustaining harvest levels because of life cycle characteristics of these fish;
- For the most part, there are not underutilized species in which harvesters can move, but new fisheries may develop around some minor opportunities for filling niche markets;
- Looming issues for the reauthorization of the Magnuson-Stevens Act and the pending expiration of the moratorium on using individual fishing quotas (IFQ) for vessels, processors, and cooperatives.

In consideration of the before mentioned landing trends and in light of the above mentioned current issues, it is a prudent assessment that commercial fishing is not a growth industry in Oregon. Goals for the industry would be to extract more value from the fishery resources that are available.

Raising resource value has several challenges. There will be continuing price pressures on seafood products from substitute aquaculture products. Consumer concerns about quality (freshness, inclusions of toxics, etc.) will affect seafood product demands. Considerations about health and wholesomeness of natural coldwater fish could be a marketing advantage to Oregon's industry. The fall-out from lower values will be disruptive to a fleet where profitability already suffers due to, among other influences, excess capacity. A government sponsored and industry reimbursed buyout program has been used to reduce trawl permits. This will provide some help for fleet viability in the groundfish fishery. More liberal rules to allow vessels to use or acquire other vessels entry permits will help reduce capacity and allow remaining vessels a better chance for profitability. Vessels can receive revenue from participating in cooperative research projects and exempted fishing permits. Modernization of vessels for better handling capabilities and initial onboard processing, modernization of processing plants that will improve seafood products, and assistance through commodity commissions and other entities for developing marketing strategies that will gain market power for Oregon seafood products should help the industry raise value at all levels of seafood production.