Major Data Sources

This appendix provides an overview of major data sources used for this study. We list these data sources alphabetically. The bold headings for each data source are short names we use in the report in referring to these data sources. We developed these names to standardize and simplify citations to these data sources in the report, tables and figures.

Another purpose of this appendix is to serve as a reference source for readers who may be interested in further research about salmon markets and the salmon industry. By providing a comprehensive listing of data sources here, with brief descriptions of the data and their limitations, we hope to make it easier for others to research this complex topic.

ADFG Alaska Catch and Production Reports Salmon Data

Until 1985 the Alaska Department of Fish and Game published annual “Catch and Production” reports with detailed data on Alaska catches and production by species and area. These reports were discontinued after 1985.

ADFG Catch Data

The Alaska Department of Fish and Game (ADFG) reports data for Alaska salmon catches based on “fish tickets” filled out for all deliveries by commercial salmon fishermen to fish processors, as well as direct sales by fishermen to other buyers. These data are available from several different sources. A problem with the ADFG catch data is that there is no single “official” website or publication where “final” data are reported. Data reported on different websites or in different ADFG publications frequently vary slightly. One reason for this is that the ADFG “fish ticket” database is continuously being updated for reasons such as the discovery of misplaced fish tickets or the correction of coding errors in previously entered fish ticket data. Another reason is inconsistencies in whether or not the data include catches from test fisheries, hatchery cost-recovery catches and other non-typical fisheries. ADFG catch data reported in this study were downloaded from the Alaska Department of Fish and Game website:


ADFG Catch Data 1878-1981

For historical Alaska salmon catch data for this report, we used data from an Alaska Department of Fish and Game report, “Alaska Commercial Salmon Catches, 1878-1981,” which was published in January 1982. A more recent and more detailed report, “Alaska Commercial Salmon Catches, 1878-1997,” Alaska Department of Fish and Game Regional Information Report No. 5J99-05 (March 1999), is available on the website of the Alaska Department of Fish and Game at:


ADFG COAR Data

In April of every year, all Alaska fish processors are required to submit “Commercial Operator Annual Reports” to the Alaska Department of Fish and Game. In these reports they are required to report the total volume of fish purchased, by species and area; the total amount paid for fish purchased, by species and area; the total volume (weight) of production, by product, species and area; and the total first wholesale value of production. We refer to the production data reported by processors as “Alaska production data” and we refer to the average prices calculated by dividing first wholesale value by production volume as “Alaska production prices.”

Production, wholesale value and production price data for 1980-1983 are from the annual “Catch and Production” reports formerly published by the Alaska Department of Fish and Game. This series was discontinued in the mid-1980s and the COAR production data are no longer published on a regular basis. However, data are available upon request from the Alaska Department of Fish and Game. For the years 1984-2004 we used production data provided by the Alaska Department of Fish and Game over a number of years.
ADFG Hatchery Data

The Alaska Department of Fish and Game prepares annual reports on the Alaska Salmon Enhancement Program, which are available at:

www.cf.adfg.state.ak.us/geninfo/enhance/enhance.htm.

These reports include detailed data on egg takes, fry releases, total returns and catches of hatchery fish in the “common property harvest” and the “cost recovery harvest.” The data on catches of hatchery fish are based on in-season sampling of catches. Hatchery fish are identified in several ways, including coded wire tags, fin clips and otolith marking (a process by which an identifiable microscopic colored ring sequence in fish ear bones is created by exposing fish to a series of planned temperature changes).

ADOR Salmon Price Reports

Since 2000, the Alaska Department of Revenue (ADOR) has prepared “Salmon Price Reports” which report total monthly sales volume (pounds) and sales value (dollars) reported by Alaska processors, by species, product and region. In theory, these reports provide more detailed data on Alaska wholesale price trends than the COAR reports, because they are monthly data and give a more detailed product breakdown (for example, data are reported separately for different can sizes). In practice however, much of the reports are left blank because of confidentiality restrictions. Still, the data provide a very useful source for tracking monthly sales volumes and wholesale price trends for major products such as southeast Alaska canned pink salmon and Bristol Bay frozen sockeye salmon, for which sufficient processors report monthly sales that are not confidential. The ADOR Salmon Price reports are available at:

http://www.tax.state.ak.us/reports.asp

Anchorage CPI

The only measure of Alaska inflation rates is that provided by the U.S. Department of Labor, Bureau of Labor Statistics’ “Annual Average Consumer Price Index, All Items - All Urban Consumers” (CPI-U) for the Municipality of Anchorage. The price index data are posted at the website of the Alaska Department of Commerce and Workforce Development’s Research and Analysis Division:

http://almis.labor.state.ak.us/

BANR

BANR is an abbreviation for Bill Atkinson’s News Report, a weekly eight-page summary of articles and data from the Japanese seafood trade press, translated into English by Bill Atkinson. Published from the early 1980s until March 2006 (shortly before Bill Atkinson’s death in April 2006), BANR was a very useful source of information on Japanese markets for salmon and other species.

BANR Japanese Salmon Import Data

Bill Atkinson’s News Report reported monthly data for the volume of Japanese salmon imports by country. Beginning with 1996, the data also included imports of trout fillets. This data source did not report value or prices separately by country: import value was aggregated for all countries.

BC Canned Salmon Pack Bulletin

The “BC Canned Salmon Pack Bulletin” published by the British Columbia Ministry of Agriculture and Lands reports data on the British Columbia canned salmon pack, by species, on a 48-lb case basis. This bulletin is updated regularly over the summer salmon season. The report also distinguishes between production from Canadian salmon and production from imported salmon (most of which is likely from Alaska). The Bulletin is available at:


BC Salmon Data 2000-2005

Data for British Columbia salmon harvest volume and value, by species, for the years 2000-2005 was provided April 2, 2006 by Vancouver-based economic consultant Gordon Gislason, who has studied BC fisheries for many years. Gislason noted that BC catch data are usually subject to revision for three or four years, and that the data for 2000-2002 should be “final” but the 2003-2005 data could be revised in the future.

BCSMC Database

The British Columbia Salmon Marketing Council has a very useful online database at:

http://www.bcsalmon.ca/

The database includes information for the following:

- Farmed salmon harvest by species
- Wild salmon catch weight, value and number of fish by species, area and gear type
- Average fish prices by species and area
- Production in round weight and processed weight, by species and product (canned, fresh and frozen)
- Weight and value of exports by species, product type, and consuming nation
CFEC Alaska Salmon Summary Data 1975-1996

This is a database of Alaska salmon harvests for the years 1975-1996, which was provided to Gunnar Knapp by the Commercial Fisheries Entry Commission in June 1998. The database includes price, volume, value, number of fish and average fish weight, by year, area, species and gear type.

CFEC Alaska Salmon Summary Data 1980-2005

Data for Alaska statewide salmon landings by species for the years 1980-2005. Prepared by the Commercial Fisheries Entry Commission on March 31, 2005 in response to a request by Gunnar Knapp. Includes data on pounds landed, number of fish landed, average statewide price and earnings.

Notes provided with the data include the following: (1) 2005 price and value data is preliminary, and will change. Post-season bonuses and adjustments are not included in this year; (2) Gears / harvests include: set and drift gill net, beach and purse seine, hand and power troll, fish wheel, hatchery cost recovery, test fish, derby and confiscated. Excluded are: hatchery and roe-stripped carcasses; personal use, donated and discarded harvests; and other salmon harvested but not sold.

CFEC BIT Data

The Alaska Commercial Fisheries Entry Commission (CFEC) posts “Basic Information Tables” (BIT) for each Alaska salmon fishery that report annual data for number of permits issued (by residency of permit holders), total catch weight and value (all species combined), and average annual permit prices. These data are posted at the CFEC website under “Fishing Statistics and Activities” at:

http://www.cfec.state.ak.us/Mnu_Summary_Info.htm

DFO Aquaculture Statistics:

Canadian aquaculture production statistics (volume and value) by species and province are available at the Canada Fisheries and Oceans Statistical Services aquaculture statistics website: http://www.pac.dfo-mpo.gc.ca/species/salmon/aquaculture/aqua02_e.htm

The data do not distinguish between production of different species of salmon.

DFO Canada Salmon Export Data 1989-1999

Data for Canadian salmon exports by species, product and country for the years 1989-1999. Provided to Gunnar Knapp by Department of Fisheries and Oceans, September 13, 2000.

DFO Catch Data

The Canada Department of Fisheries and Oceans reports annual data for commercially harvested salmon retained catch by gear type and area at the following website:

http://www.pac.dfo-mpo.gc.ca/species/salmon/salmon_fisheries/catchstats_e.htm

This source provides data for number of fish (“pieces”) only. Information is not provided on fish weight, value or price.

DFO Salmon Catch Volume Data 1996-2005

Data for British Columbia salmon catch volume (round pounds) by species for the years 1996-2005. The data were provided to Gunnar Knapp by Christina Burridge of the British Columbia Seafood Alliance, March 2006. The original source was the Canada Department of Fisheries and Oceans.

DFO Trade Data

Canadian fisheries trade statistics (volume and value of exports and imports, by species and product and/or by country—but not by species and product and country) are available at the Canada Fisheries and Oceans Statistical Services trade statistics website:

http://www.dfo-mpo.gc.ca/communic/statistics/trade/canadian_trade/index_e.htm

FAO FAOSTAT Food Supply Database

The Food and Agriculture Organization of the United Nations (FAO) maintains a series of online statistical databases known collectively as “FAOSTAT” at the following website: http://faostat.fao.org/. Among a series of “Nutritional” databases, the “Food Supply” database includes annual estimates, beginning in 1961, of per capita consumption (live weight equivalent) of “fish, seafood” by country.

FAO Fishstat+ Data

FAO Fishstat+ is a set of software and databases developed and maintained by the Food and Agriculture Organization of the United Nations (FAO) Fisheries Division to provide access to various FAO fisheries statistics. FAO Fishstat+ includes data for both wild salmon catches and aquaculture production, by country and species. Note that the FAO Fishstat+ data appear to substantially underestimate U.S. wild pink and chum.
salmon harvests. The software and databases may be downloaded from the FAO website at:

**FAO Globefish Salmon Commodity Update**

The FAO Globefish program tracks world fisheries markets and publishes a variety of reports on markets for different species. Among these are annual “Commodity Update” publications for different species, including salmon. The Salmon Commodity Updates include a wide variety of international market data for salmon, including monthly wholesale price series for a number of different markets. Information about the FAO Globefish Program and the Commodity Update publications is available at the FAO Globefish website:

**FIS Japan Frozen Wholesale Prices Data**

The proprietary website www.fis.com posts prices from numerous fish markets around the world. The “Market Prices” section of this website includes prices which are updated weekly for the “Japanese Frozen” market. These include weekly minimum and maximum Japanese wholesale prices for frozen Atlantic salmon, Alaska (presumably Bristol Bay) sockeye salmon, Chilean farmed coho salmon and Chilean and Norwegian rainbow trout, by size. The data are generally consistent with wholesale price data reported in the Seafood News Power Data Book. Japanese monthly market prices for frozen salmon used in this report are “minimum” prices for 4-6 pound sockeye salmon, 4-6 pound Chilean coho, and 4-6 pound Chilean trout, as reported for the first week of the month.

**Federal Reserve Bank of St. Louis Exchange Rate Data**

The Federal Reserve Bank of St. Louis posts monthly exchange rate data between the dollar and other major currencies at:
http://research.stlouisfed.org/fred2/

For this report, to convert annual prices or values into US dollars, except where otherwise specified, we calculate annual average exchange rates as simple averages of monthly exchange rates.

**Japan Tariff Association Salmon Trade Data**

The Japan Tariff Association publishes detailed data on Japanese fisheries imports and exports, by species and country. Information about the Japan Tariff Association and how to obtain trade data is available at:
www.kanzei.or.jp/english/.

**Maine DMR Farmed Salmon Data**

The Maine Department of Marine Resources reports data on annual farmed salmon production in Maine at:
www.maine.gov/dmr/aquaculture/leaseinventory2005/fishharvestchart.htm

**NFI Per Capita Fish Consumption Estimates**

The National Fisheries Institute (NFI) posts estimates of annual U.S. per capita consumption of the “top ten” fish species (edible weight) on its website at:
www.aboutseafood.com/media/top_10.cfm.

The estimates are calculated by Howard Johnson of H.M. Johnson & Associates.

**NFPA Canned Pack Data**

The National Food Processors Association (NFPA), which tests all canned salmon lots produced in the United States, prepares annual “Canned Salmon Pack” reports which summarize total United States canned salmon production in number of cases by species, can-size and region (three Alaska districts—Southeast, Central and Western—and Washington).

**NFPA Canned Stocks Data**

Until 1997 the National Food Processors Association reported estimated canned salmon stocks for the months October through June. After 1997 NFPA stopped reporting canned salmon stocks.

**NMFS Catch Data**

Data for fish catches by state and species are posted on the National Marine Fisheries Service (NMFS) commercial landings website:

**NMFS Cold Storage Holdings Data**

Until December 2002 the National Marine Fisheries Service published monthly data on U.S. cold storage holdings of frozen fish. These reports have since been discontinued. The last report may be found at:
http://www.nwr.noaa.gov/lgdfsh/stats01.htm

The Great Salmon Run: Competition Between Wild and Farmed Salmon
NMFS Fisheries of the United States

The National Marine Fisheries Service, Office of Science and Technology, publishes an annual report on “Fisheries of the United States,” which includes a wide variety of useful data on United States fisheries. The report is available at the Office of Science and Technology website at:


NMFS Japanese Fisheries Imports Data

The National Marine Fisheries Service Southwest Regional Office reports monthly Japanese fisheries imports (volume and value), by species. Beginning with November 1996, the data are available at:

http://swr.ucsd.edu/fmd/sunee/imports/jimp.htm

The same data were reported in Bill Atkinson’s News Report (see BANR Japanese Fisheries Imports Data). Note that these data are for total imports, by species, from all countries. Salmon imports by country were reported in BANR Japanese Salmon Imports Data.

NMFS Japanese Fisheries Exports Data

The National Marine Fisheries Service Southwest Regional Office reports monthly Japanese fisheries exports (volume and value), by species. Beginning with November 1996, the data are available at:


NMFS Trade Data

The National Marine Fisheries Service reports data on U.S. imports, exports and re-exports of salmon (and other fish species) at its “Foreign Trade Information” website:


NPAFC Catch Data and NPAFC Hatchery Release Data

The annual reports and statistical yearbooks of the North Pacific Anadromous Fish Commission (NPAFC), available at: http://www.npafc.org/, provide data on commercial catches, sport catches, and subsistence catches of Pacific salmon for the Pacific Northwest, Canada, Alaska, Russia and Japan. They also provide data on hatchery releases of salmon fry.

PACFIN Salmon Data

PacFIN is a joint Federal and State data collection and information management project funded in part by a grant from the National Marine Fisheries Service and in part by the states of Alaska, California, Oregon, and Washington. PACFIN maintains the “Pacific Fisheries Information Network” of fisheries data. The annual “Washington, Oregon and California (W-O-C) Report 307” includes data on landings into the states of Washington, Oregon and California for all marine species including salmon, including metric tons, revenues and price-per-pound. The reports are available at:

http://www.psmfc.org/pacfin/data/index-woc.html

SalmonChile Data

The Chilean salmon industry association SalmonChile (www.salmochile.cl) produces a detailed monthly report of data and analysis of market information for the Chilean salmon industry (Análisis Estadístico y de Mercado), including detailed data for Chilean exports, as well as other information related to production, prices and world market conditions.

Seafood News Power Data Book

The Japanese Company Suisan Tsushin (Seafood News) publishes an annual collection of seafood market data in Japanese which is named the “Marine Products Power Data Book.” This publication includes extensive data about Japanese salmon harvests, salmon imports, wholesale prices and other Japanese data as well as international data—much of which are Japanese press estimates not published elsewhere.

Statistics Canada Aquaculture Statistics

Statistics Canada produces an annual report entitled Aquaculture Statistics which provides a wide range of data on Canadian aquaculture, including production and value by province and species, as well as exports by species and country. The report is available at:

http://www.statcan.ca/english/IPS/Data/23-222-XIE.htm

Statistics Norway Fish Farming Report

A wide variety of data about the Norwegian salmon industry may be found in the annual “Fish Farming” report published by Statistics Norway, which is available at:

http://www.ssb.no/english/subjects/10/05/nos_fiskeoppdrett_en/.

Tokyo Central Wholesale Market Data

The Tokyo Central Wholesale Market, which is operated by the Metropolitan Government of Tokyo,
publishes monthly and annual data for total sales of
frozen salmon, by species, including the volume of
sales and the average price. These official monthly and
annual publications are in Japanese and are expensive
as well as difficult to obtain except by visiting Japan.
These data are reprinted from time to time in other
sources such as Bill Atkinson’s News Report and the
Seafood News Marine Products Power Data Book.

Several limitations should be kept in mind in using the
Tokyo Central Wholesale Market data. First, the data
aggregate all sales of frozen salmon for each species,
regardless of country of origin, size and grade, and
whether the salmon are farmed or wild. Second, the
data include only actual sales at the Tokyo Central
Wholesale Market. In contrast, other Japanese “Tokyo
wholesale price data” reported in the Japanese trade
press typically present prices for a particular size and
grade of salmon (such as Bristol Bay #1 grade 4-6
pounds). However, an advantage of the Tokyo Central
Wholesale Market data is that they provide continuous
price data series going back at least to the 1970s.

Urner Barry Wholesale Price Data

Urner Barry Publications, Inc. is a New Jersey-based
company which tracks market conditions for a wide
variety of food products, including seafood. Twice
each week Urner Barry publishes Urner Barry’s
Seafood Price Current, an eight-page newsletter which
reports United States wholesale prices for a wide
variety of seafood products. One page of this report
provides wholesale prices for a wide variety of salmon
products. Most of the products for which prices are
regularly reported are farmed salmon. For most wild
salmon products, price data are reported only
occasionally or rarely. Fresh salmon prices, for
example, are only reported during wild salmon seasons.

Urner Barry price data are the best available data for
tracking long-term wholesale price trends for farmed
salmon in the United States. They also provide the
most detailed U.S. wholesale price data available for
certain wild salmon products, particularly frozen wild
chum salmon.

Multi-year weekly data series for selected salmon
product forms are available in print and CD format
from Urner Barry. Information about ordering these
data are available at the Urner Barry web site at:

USDA ERS Food Supply Data

The United States Department of Agriculture (USDA)
Economic Research Service (ERS) annually calculates
the amounts of several hundred foods available for
human consumption in the United States; these
estimates are also called “food supply” or “food
disappearance” data. These data are available in
spreadsheet format at the ERS website:
http://www.ers.usda.gov/Data/FoodConsumption/
FoodAvailIndex.htm.

The “Red Meat, Poultry and Fish” spreadsheet
(mtpcc.xls) provides annual estimates of per capita
consumption of beef, pork, lamb, veal, chicken, turkey
and fish beginning in 1909.

Washington DFW Farmed Salmon Data

The Washington Department of Fish and Wildlife
reports annual data on commercial production of
Atlantic salmon in Washington State for the years
1990-2003 at:
wdfw.wa.gov/fish/atlantic/comcatch.htm.