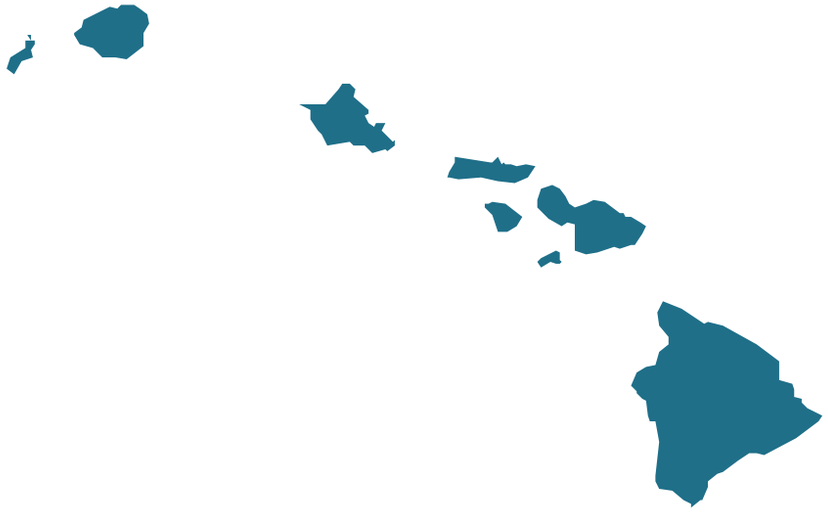
Western Pacific

- Hawai’i



Management Context

The Western Pacific Region includes the state of Hawai'i.[1] Federal fisheries in this region are managed by the Western Pacific Fishery Management Council (WPFMC) and NOAA Fisheries (NMFS) under five fishery ecosystem plans (FEPs). Fishery ecosystem plans manage marine resources from a place-based perspective rather than managing fishing activities in terms of targeted species. These FEPs replace the Council's existing fishery management plans (FMPs) for Bottomfish and Seamount Groundfish, Coral Reef Ecosystems, Crustaceans, and Precious Corals.

Western Pacific Fishery Ecosystem Plans

1. American Samoa Archipelago
2. Hawai'i Archipelago
3. Mariana Archipelago
4. Pacific Remote Island Areas
5. Pacific Pelagics

Of the stocks covered in these fishery ecosystem plans, the Hancock Seamount groundfish complex is currently considered overfished. This fishery has been closed since 1986. Pacific bigeye tuna is currently subject to overfishing and this status is considered to be primarily due to international fishing pressure. The U.S. harvested 4.5% (22.5 million pounds) of the Pacific-wide (western-central and eastern Pacific Ocean) total of Pacific bigeye tuna landings reported in 2007. Currently, there are no catch share programs in place in this region.

In addition to management oversight provided by the WPFMC and NOAA Fisheries, pelagic fish species such as bigeye and yellowfin tunas are also managed by two regional fishery management organizations (RFMOs). The Western and Central Pacific Fisheries Commission (WCPFC) is active in the western and central Pacific Ocean and the Inter-American Tropical Tuna Commission (IATTC) is active in the eastern Pacific Ocean. Species under the purview of the WCPFC and IATTC migrate across international boundaries and require coordinated management between countries with fishing interests in the Pacific Ocean. The annual bigeye tuna catch limit recommended by WCPFC for U.S. Longline in the Western and Central Pacific Ocean is 3,763 metric tons (mt) (8.3 million pounds (lbs)). NMFS responded to the measure by establishing a quota of 3,763 mt (8.3 million lbs) of bigeye tuna that may be caught in the Western and Central Pacific Ocean and retained by U.S. longline vessels beginning in 2009. In the meantime, the harvest limit established by the IATTC for U.S. Longline in eastern tropical Pacific bigeye tuna is 500 mt (1.1 million lbs). However, this quota is only applied to U.S. longline vessels greater than 24 meters (78.7 feet) in length. The U.S. longline vessels less than or equal to 24 meters (78.7 feet) are not bound by any catch limit in the Eastern tropical Pacific.[2]

[1]The Western Pacific Region also includes the U.S. territories of American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands. However, due to data availability, only information from Hawai'i is reported here.

[2]Under the Tuna Conventions Act of 1950 (64 Stat. 777) as amended (16 U.S.C., 951-961), NMFS must publish regulations that carry out IATTC recommendations and resolutions that have been approved by the Department of State.

Commercial Fisheries

Fishermen in Hawai'i earned $85 million from their commercial harvest in 2008, landing over 30 million pounds of finfish and shellfish. Tunas comprised nearly three quarters of this ex-vessel revenue ($61 million) as well as 60% of total landings (18.3 million pounds). Swordfish ($7.2 million), mahimahi ($3.2 million), moonfish ($2.2 million), and marlin ($2.1 million) also contributed to landings revenue. Lobsters commanded the highest ex-vessel price in 2008, with an average annual price of $12.14 per pound.

Key Western Pacific Commercial Species

- Lobsters
- Mahimahi (dolphin)
- Marlin
- Moonfish (opah)
- Pomfret
- Scad
- Snappers
- Swordfish
- Tunas
- Wahoo

Economic Impacts

Economic impacts from Hawai'i's seafood industry generated $560 million in sales impacts, $283 million in income impacts, and approximately 12,300 full- and part-time jobs in 2008. The retail sector contributed most to sales (54% of the total), income (65%), and employment impacts (64%) with over $301 million in sales, $183 million in income, and 7,800 jobs. The commercial harvest sector followed with $162 million in in-state sales, $49 million in income impacts, and over 3,400 jobs.

Landings Revenue

Ex-vessel landings revenue for finfish and shellfish totaled over $85 million in 2008, a 35% increase from total revenue generated in 1999. When adjusted for inflation, real ex-vessel revenues increased 8%. Ex-vessel revenue in 2008 was a 12% increase (1.5% in real terms) from 2007 ($76 million). Finfish and other catch contributed nearly 100% of total revenue in 2008 ($84.8 million), a 38% increase from 1999 (10% in real terms). In contrast, revenue generated from shellfish landings decreased 73% (78% in real terms) from $1.3 million in 1999 to $357,000 in 2008. Lobster revenue between 1999 and 2008 decreased 86% (89% in real terms), contributing to this decrease in shellfish revenue.

Landings revenue in 2008 was dominated by tunas which contributed $61 million or 71% of total ex-vessel revenue. On average, tunas contributed 69% to total revenue over the 10 year time period. The largest increases in landings revenue from 1999-2008 were for pomfret (285% or 208% in real terms), moonfish (69% or 35% in real terms), and tunas (85% or 48% in real terms). Landings revenue between 1999 and 2008 declined for five of the key species or groups in the Western Pacific. The largest declines in revenue were for lobsters (86%, 89% in real terms), scad (65%, 64% in real terms), and swordfish (50%, 60% in real terms).

Commercial Fish Facts

Landings revenue

- On average, the key species or species groups accounted for 96% of total revenue ($82 million) generated in the Western Pacific.
- Eight of the key species or groups had average annual ex-vessel revenue in excess of $1.6 million.
- Tunas averaged $42 million annually over the 1999-2008 time period
- Landings revenue from swordfish decreased 89% from 2000 to 2001, the largest annual decrease, only to increase 561% from 2004 to 2005, the largest annual increase of any key species or group.

Landings

- On average, the key species and species groups accounted for 94% of total landings (94 million pounds) in this region.
- Tunas averaged 15.7 million pounds annually over the time period, contributing an average of 62% to total landings.
- Landings for swordfish increased 561% from 2004 to 2005, the largest increase in landings in the 10 year period. This species also had the largest annual decrease in landings, declining 91% from 2000-2001.

Prices

- Lobsters had the highest average annual ex-vessel price at $12.14 per pound, followed by snappers ($4.54) and tunas ($3.33).
- Marlin ($1.06), moonfish ($1.67), and swordfish ($1.87) had the lowest average ex-vessel prices of the key species or groups.
- Marlin had both the largest annual price increase and decrease of any key species or group, decreasing 37% from 2002-2003 then increasing 58% from 2003-2004.

Landings

In 2008 Hawaiian commercial fishermen landed 30.7 million pounds of finfish and shellfish, a 5.8% increase from 1999 landings totals. Compared to landings in 2007 (29 million pounds), this was a 6.0% increase. Finfish and other catch accounted for nearly 100% of total landings annually. Shellfish landings decreased 82% from 157,000 pounds landed in 1999 to 28,800 pounds in 2008, but increased 32% from 2007-2008.

Tunas contributed more to the Western Pacific's total landings than any other species or group with 18.3 million pounds landed in 2008. This was a 24% increase from 1999 total landings of tuna (14.7 million pounds). Swordfish followed with 3.8 million pounds landed in 2008. However, swordfish landings experienced dramatic changes from 1999 to 2008. From 2000 to 2001, swordfish landings decreased 89% from 6.4 million pounds to 559,000 pounds. A few years later (2004-2005), landings increased 534% from 520,000 pounds to 3.4 million pounds. Swordfish landings between 2001 and 2004 averaged approximately a half million pounds, while in 1999, 2000, and between 2005 and 2008, the average was over 4 million pounds.

Prices

Overall, 2008 ex-vessel price for all but two key species or species groups were above their 10 year average annual price. Swordfish had a lower price per pound ($1.87) in 2008 relative to its annual average ($2.17) over the time period and in 2008 the price per pound for marlin was $1.06 which was $0.13 less than the 10 year average. When adjusted for inflation, only scad, pomfret and tunas did not receive an ex-vessel price in 2008 that was larger than the 10 year average. Scad received $0.37, pomfret received $0.23, and tunas received $0.14 per pound more than the 10 year average between 1999 and 2008.

Relative to ex-vessel prices in 2007, scad (18%) and tuna (14%) both had double digit increases in 2008. Double digit decreases between 2007 and 2008 occurred in marlin, swordfish, and wahoo, declining 28%, 12%, and 10% respectively. In real terms, only scad and tunas did not experience declines in ex-vessel prices between 2007 and 2008.

Recreational Fishing

In 2008, there were 329,000 recreational anglers who fished in the state of Hawai'i. These anglers took 2.5 million fishing trips and of these, 78% were shore-based trips. Skipjack tuna was the most caught key species or species group with 570,000 fish caught in 2008. Almost all of these fish were harvested by anglers rather than released.

Economic Impacts and Expenditures

Over 5.6 million jobs in Hawai'i were associated with recreational fishing activities in 2008. Recreational anglers who fished in the region spent $588 million in trip-related and durable equipment expenditures. Roughly 70% of the 5.6 million jobs were related to industries that provided support for durable equipment sales and services (3.9 million jobs) and shore-based fishing trip activities (1.2 million jobs). Durable equipment expenditures contributed $454 million to Hawai'i's economy or 77% of total trip and durable equipment expenditures. Shore-based fishing trip expenditures contributed $87 million or 15% of total trip and durable equipment expenditures (or 65% of total trip expenditures). Resident anglers accounted for over 92% of total trip-related expenditures in Hawai'i.

Key Western Pacific Recreational Species

- Barracuda (smallmouth bonefish)
- Blue marlin
- Dolphinfish (mahimahi)
- Goatfishes
- Jacks (trevallys and other jacks)
- Bigeye and mackerel scad
- Snappers
- Skipjack tuna
- Yellowfin tuna
- Wahoo

In addition to jobs, the contribution of recreational fishing to Hawai'i's economy can also be measured in terms of sales impacts and the contribution of these activities to gross domestic product (value-added impacts). In 2008, shore-based fishing trips generated $100 million in sales (65% of trip-related sales) and $53 million in value-added impacts (64% of total trip-related value-added impacts). Private boat fishing activities contributed $47 million in sales (30%) and $24 million (29%) in value-added impacts. For-hire fishing trips contributed $10 million in sales (7%) and $6 million (7%) in value-added impacts.

Expenditures on durable equipment totaled $454 million in 2008, contributing 77% to total expenditures in the region (trip and durable equipment combined). Expenditures on

fishing tackle ($184 million) and vehicle expenses ($99.6 million) accounted for most of the durable equipment expenditures, contributing 41% and 22%, respectively. Other equipment ($82 million), boat expenses ($59 million), and second home expenses ($30 million) also contributed to this total.

In 2008, economic impacts from durable equipment expenditures included over 3.9 million jobs, $453 million in sales impacts, and $219 million in value-added impacts.

Recreational Fishing Facts

Participation

- Over 377,000 anglers fished in Hawai'i annually over the 2003-2008 time period.
- In 2008, Hawai'ian residents made up 58% of total anglers active in the state and averaged 54% of total anglers annually from 2003-2008.
- The largest annual increase in angler participation was a 35% increase in out-of-state anglers from 2005-2006. Out-of-state anglers also experienced the largest annual decrease in participation, decreasing 35% from 2006-2007. In 2008, coastal angler participation increased from 12.9 % from 2007-2008, and out of state angler participation decreased 6.2% from 2007-2008.

Fishing trips

- In Hawai'i, an average of 2.6 million fishing trips were taken annually from 2004-2008.
- Shore-based fishing trips were very popular with recreational fishermen with 1.96 million trips taken in 2008. Shore-based trips averaged 78% of total fishing trips taken annually in Hawai'i from 2003-2008.
- From 2003-2004, private or rental boat fishing trips increased 39%, the largest annual increase in fishing trip mode. Private or rental boat trips also had the largest annual decrease, decreasing 19% from 2004-2005. From 2007-2008, private/rental boat trips experienced a 18.7% increase.

Harvest and release

- Bigeye and mackerel scad were the most caught key species or species group, averaging 863,000 fish over the 6 year period. All of these fish were harvested rather than released in 2008.
- Nine out of Hawai'i's ten key species or groups were harvested rather than released with 84-100% of fish harvested during the six year period. Only trevallys and other jacks were harvested at a lower quantity (59% harvested).
- Bigeye and mackerel scad had the largest annual increase in catch, increasing 313% from 2004-2005, and the largest annual decrease from 2003-2004 . Blue marlin had the largest increase (267%) in catch from 2007-2008.

Participation[3]

There were 329,000 recreational anglers who fished in Hawai'i in 2008. This was a 25% decrease from 2003 (440,000) and a 3.8% increase from 2007 (317,000). An increase in coastal county resident[4] was observed, and a decrease in out-of-state anglers was observed. Coastal county angler participation in 2008 decreased 26% relative to 2003 and increased 12.9% relative to 2007. Out-of-state angler participation decreased 24% relative to 2003 and decreased 6.2% relative to 2007.

Fishing Trips[3]

Recreational fishermen took 2.5 million private or rental boat and shore-based fishing trips in 2008. This was a 5% increase from 2003 and a 2% decrease from 2007. Shore-based fishing trips accounted for most of the trips taken in Hawai'i: 78% of total fishing trips or 2 million trips in 2008. This was a 4% increase from 2003 and a 7% decrease from 2007. Fishing trips taken from a private or rental boat increased 11% between 2003 and 2007. From 2007 to 2008 private or rental Fishing trips increased to 564,000 trips or approximately 19%.

Harvest and Release[3]

Bigeye and mackerel scad had the highest catch totals of the Western Pacific's key species and species groups. In 2008, approximately 402 million of these fish were caught by anglers and all of these were harvested rather than released. Overall, all of Hawai'i's key species and groups were harvested more than released, at rates over 90%. The exception were Jacks which were harvested at 70%. Anglers harvested nearly every dolphinfish caught in 2008.

Four of Hawai'i's ten key species or species groups experienced double-digit declines in the total number of fish caught from 2003-2008. The largest decrease in catch was for bigeye and mackerel scad where 79% less fish were caught by anglers in 2008 (402,000 fish) relative to 2003 (2 million fish). Blue marlin experienced a large increase in percent catch (175% increase) from 2003. yellowfin tuna experienced a large increase (144%) in catch from 2003-2008, skipjack tuna also increased (29%) in catch from 2003-2008. Dolphinfish (mahimahi) and barracuda (smallmouth bonefish) experienced increases in catch from 2003-2007, increasing 67% and 86%, respectively.

Marine Economy[5]

In 2007, over 33,400 establishments employed approximately 519,000 full- and part-time employees in Hawai'i. Annual payroll totaled $18 billion, employee compensation totaled $37 billion, and gross product by state totaled $62 billion. Gross state product and annual payroll increased 65% and 62%, respectively between 1998 and 2007. Modest increases were observed for employee compensation (49% increase), employee numbers (25%), and establishment numbers (13%). From 2006 to 2007, each of these economic measures increased slightly, ranging from a 0.8% increase in number of establishments and a 5.9% increase in annual payroll.

The commercial fishing location quotient (CFLQ) for Hawai'i decreased 37% from 7.26 in 2002 to 4.55 in 2007. Between 2006 and 2007, the CFLQ mirrored this declining trend, decreasing 1.3%. Despite these declines, Hawai'i's

[3]Due to data availability, the time period 2003-2008 is discussed in this section.
[4]All anglers in Hawaii are coastal county anglers.
[5]Data for 2008 were unavailable for this report therefore 2007 information is reported in this section.

level of commercial fishing-related employment was still higher than the national baseline.[6]

Seafood Sales and Processing

There were 10 nonemployer firms engaged in seafood product preparation and packaging in 2007. This was a 67% increase from 1999 levels. Annual receipts for this industry increased significantly, increasing 539% from $45,000 in 1998 to $1.0 million in 2007 (a 466% increase in real terms). The number of employer establishments engaged in this industry decreased to one establishment in 2007. Employee and annual payroll totals were not available.

In 2007, there were 36 seafood wholesale establishments that employed 550 full- and part-time workers with an annual payroll of $19 million. The number of establishments decreased by 28% and employees increased 12% from 1999 to 2007. Despite these declines in establishments, annual payroll totals increased 17% (but increased 4% in real terms).

Nonemployer firms involved in seafood retail increased 41% between 1999 and 2007 from 29 firms to 41 firms. Annual receipt totals also increased 54% (36% in real terms) to $4.4 million in 2007. In contrast, employer establishments involved in this industry increased 19% to 25 establishments in 2007. These establishments employed 393 workers with an annual payroll of $7.2 million. Employee and annual payroll numbers also increased from 1999 to 2007, increasing 117% and 135% (108% in real terms), respectively.

Transport, Support, and Marine Operations

Data was largely unavailable for the transport, support and marine operation sector. According to the available information, ship and boat building industries had the highest number of establishments in 2007 (13 establishments). The marine cargo handling sector had the largest payroll ($87 million) and the largest number of employees (1,050). The largest increase in number of establishments occurred between 1999 and 2007 (83%) and the greatest decrease occurred in the deep sea passenger transportation sector (50%) from two employees to one.

[6]The CFLQ for the U.S. is 1.0. This provides a national baseline from which state CFLQs can be compared.

2008 Economic Impacts of Hawai'i Seafood Industry *(thousands of dollars)*

	Sales Impacts	Income Impacts	Job Impacts
Total Impacts	560,191	283,222	12,258
Commercial Harvesters	161,753	49,186	3,426
Seafood Processors & Dealers	37,347	20,220	448
Seafood Wholesalers & Distributors	59,764	30,905	563
Retail Sector	301,326	182,911	7,821

Total Landings Revenue and Landings Revenue of Key Species / Species Groups *(thousands of dollars)*

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total Revenue	62,911	68,206	48,080	52,384	52,755	57,679	71,040	66,120	75,705	85,120
Finfish & Other	61,568	67,843	47,839	52,078	52,493	57,274	70,677	66,013	75,531	84,753
Shellfish	1,343	363	241	306	262	406	364	106	174	367
Lobsters	835	99	98	122	68	91	111	61	93	120
Mahimahi (dolphin)	2,564	3,188	2,262	2,630	2,940	4,909	3,597	3,640	3,482	3,182
Marlin	2,314	2,235	2,139	2,010	1,986	2,472	2,512	2,558	2,028	2,072
Moonfish (Opah)	1,297	1,100	999	1,219	1,509	1,343	1,897	1,873	2,170	2,197
Pomfret	432	499	386	675	777	1,316	1,440	1,311	1,460	1,665
Scad	1,971	1,441	882	1,067	1,105	944	839	1,020	1,099	896
Snappers	2,151	2,414	1,965	2,009	2,035	2,201	2,005	1,756	1,680	1,710
Swordfish	14,244	12,280	1,354	1,371	691	1,225	7,768	5,125	7,726	7,176
Tunas	32,858	41,215	34,491	37,598	37,381	38,484	46,071	44,085	51,148	60,874
Wahoo	1,695	1,663	1,657	1,452	1,919	2,201	2,253	2,329	2,087	2,235

Total Landings and Landings of Key Species / Species Groups *(thousands of pounds)*

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total Landings	28,989	28,622	23,484	23,968	23,740	24,456	28,140	25,659	28,938	30,682
Finfish & Other	28,831	28,594	23,460	23,937	23,711	24,426	28,113	25,644	28,916	30,653
Shellfish	157	28	24	31	28	31	26	15	22	29
Lobsters	73	8	8	10	6	8	10	6	8	10
Mahimahi (dolphin)	1,135	1,528	1,245	1,376	1,326	2,225	1,440	1,342	1,388	1,252
Marlin	1,892	1,582	2,220	1,497	2,337	1,844	2,190	2,389	1,376	1,951
Moonfish (Opah)	1,105	687	765	912	1,095	786	1,086	1,071	1,226	1,313
Pomfret	313	277	272	490	459	766	646	576	593	672
Scad	1,258	874	505	571	630	478	398	442	463	320
Snappers	588	600	526	499	501	508	436	377	376	376
Swordfish	5,629	6,368	559	703	306	520	3,439	2,514	3,643	3,835
Tunas	14,740	15,015	15,288	15,871	14,421	14,965	16,118	14,631	17,589	18,303
Wahoo	844	654	906	660	990	852	818	891	715	853

Average Annual Price for Key Species / Species Groups

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Lobsters	11.51	12.14	12.61	12.66	11.88	11.08	10.99	9.66	11.84	12.14
Mahimahi (dolphin)	2.26	2.09	1.82	1.91	2.22	2.21	2.50	2.71	2.51	2.54
Marlin	1.22	1.41	0.96	1.34	0.85	1.34	1.15	1.07	1.47	1.06
Moonfish (Opah)	1.17	1.60	1.31	1.34	1.38	1.71	1.75	1.75	1.77	1.67
Pomfret	1.38	1.80	1.42	1.38	1.69	1.72	2.23	2.28	2.46	2.48
Scad	1.57	1.65	1.75	1.87	1.75	1.97	2.11	2.30	2.37	2.80
Snappers	3.65	4.02	3.73	4.02	4.06	4.33	4.59	4.64	4.44	4.54
Swordfish	2.53	1.93	2.42	1.95	2.26	2.36	2.26	2.04	2.12	1.87
Tunas	2.23	2.74	2.26	2.37	2.59	2.57	2.86	3.01	2.91	3.33
Wahoo	2.01	2.54	1.83	2.20	1.94	2.58	2.75	2.61	2.92	2.62

2008 Economic Impacts of Recreational Fishing Expenditures *(thousands of dollars)*

Impact Category	Jobs	Total Sales	Value Added
Trip Impacts by Fishing Mode:			
For-Hire	108	10,343	5,687
Private Boat	444	46,882	23,973
Shore	1,174	100,306	52,953
Total Durable Equipment Impacts	3,897	452,901	219,333
Total State Trip and Durable Equipment Economic Impacts	5,623	610,433	301,946

2008 Angler Trip & Durable Equipment Expenditures *(thousands of dollars)*

Fishing Mode	Trip Expenditures		Durable Equipment Expenditures	Expenditures
	Non-Residents	*Residents*		
For-Hire	7,479	32	Fishing Tackle	183,556
Private Boat	591	39,333	Other Equipment	81,734
Shore	2,029	85,336	Boat Expenses	58,867
Total Trip Expenditures	10,099	124,701	Vehicle Expenses	99,606
			Second Home Expenses	29,912
			Total Durable Equipment Expenditures	453,674
Total State Trip and Durable Equipment Expenditures				588,474

Recreational Anglers by Residential Area *(thousands of anglers)*[2]

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Coastal					261	223	204	173	170	192
Non-Coastal					NA[1]	NA[1]	NA[1]	NA[1]	NA[1]	NA[1]
Out of State					180	183	166	224	146	137
Total Anglers					440	407	370	396	317	329

Recreational Fishing Effort by Mode *(thousands of trips)*[2]

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Private Boat					509	709	578	570	475	564
Shore					1,893	2,162	1,892	2,074	2,102	1,966
Total Trips					2,402	2,871	2,470	2,644	2,577	2,530

Harvest (H) and Release (R) of Key Species / Species Groups *(number of fish in thousands)*[3]

Species/Groups		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Barracuda (Smallmouth Bonefish)	H					25	61	25	63	20	50
	R					4	9	12	2	13	4
Dolphinfish (Mahimahi)	H					109	225	178	219	136	184
	R					1	(1)	1	(1)	(1)	(1)
Goatfishes[4]	H					794	715	447	813	298	468
	R					10	17	8	16	9	6
Jacks (Trevallys & Other Jacks[5])	H					125	331	257	210	169	277
	R					171	146	182	210	130	120
Marlin, Blue	H					4	5	19	3	2	11
	R					(1)	(1)	(1)	(1)	1	(1)
Scad, Bigeye & Mackerel[6]	H					1,951	179	726	812	1,089	402
	R					2	(1)	14	(1)	(1)	(1)
Snappers[7]	H					233	236	223	177	104	138
	R					16	19	57	36	40	7
Tuna, Skipjack	H					440	420	302	201	228	568
	R					1	6	1	1	5	2
Tuna, Yellowfin	H					184	268	231	124	273	461
	R					5	(1)	9	1	2	(1)
Wahoo	H					105	97	54	62	57	78
	R					(1)	(1)	(1)	(1)	1	(1)

[1]All Hawai'i residents are considered coastal county residents thus this category is not applicable (NA).
[2]Participation (number of anglers), effort (number of trips), and catch (number of fish harvested or released) data were not available for 1998-2002.
[3]In this table, "1" = 1000-1499 fish were harvested or released and "(1)" = 0-999 fish were harvested or released.
[4]Goatfishes include yellowstripe, yellowfin, pflugers, bandtail, doublebar, sidespot, whitesaddle, manybar, blue, and "Goatfish family/genus."
[5]Trevallys & Other Jacks includes bluefin trevally, giant trevally, bigeye trevally, black trevally, African pompano, greater amberjack, island jack, and other species in the jack family.
[6]Scad (Jacks) includes bigeye scad and mackerel scad.
[7]Snappers include bluestip, blacktail, ruby, longtailed, pink, VonSiebolds, Binghams, green jobfish, ironjaw, and smalltooth jobfish.

Hawai'i's State Economy *(% of national total)*

	Establishments	Employees	Annual Payroll *($ millions)*	Employee Compensation *($ millions)* [1]	Gross State Product *($ millions)*	Commercial Location Quotient [2]
1998	29,603 (0.4%)	416,571 (0.4%)	11,292 (0.3%)	24,568 (0.4%)	37,549 (0.4%)	7.26[3]
2007	33,388 (0.4%)	519,060 (0.4%)	18,306 (0.4%)	36,563 (0.5%)	62,019 (0.5%)	4.61 (2006)
% change	12.8%	24.6%	62.1%	48.8%	65.1%	-37.3%

Seafood Sales & Processing - Nonemployer Firms *(thousands of dollars)*

		1999	2000	2001	2002	2003	2004	2005	2006	2007
Seafood product preparation & packaging	Firms	8	3	7	7	9	11	5	11	10
	Receipts	160	44	231	1,566	1,034	1,309	409	1,011	1,023
Seafood Sales, retail	Firms	29	23	34	0	36	33	29	31	41
	Receipts	2,829	3,670	2,497	ND	4,753	2,875	3,487	3,627	4,353

Seafood Sales & Processing – Employer Establishment *(thousands of dollars)*

		1999	2000	2001	2002	2003	2004	2005	2006	2007
Seafood product preparation & packaging	Establishments	3	3	3	4	4	4	3	3	1
	Employees	ND[4]	ND	ND	86	ND	ND	ND	ND	ND
	Payroll	ND	ND	ND	2,584	ND	ND	ND	ND	ND
Seafood sales, wholesale	Establishments	50	49	51	44	33	36	32	33	36
	Employees	493	510	812	525	654	404	485	462	550
	Payroll	16,186	17,805	17,656	15,203	12,653	13,949	15,163	16,786	18,932
Seafood sales, retail	Establishments	21	23	27	29	31	31	29	27	25
	Employees	181	183	235	229	317	321	326	315	393
	Payroll	3,063	2,969	3,773	3,737	5,187	5,038	5,007	5,564	7,209

Transport, Support, & Marine Operations – Employer Establishments *(thousands of dollars)*

		1999	2000	2001	2002	2003	2004	2005	2006	2007
Coastal & Great Lakes freight transportation	Establishments	13	13	11	11	10	11	13	13	11
	Employees	ND	507	463	ND	ND	ND	ND	543	557
	Payroll	ND	30,087	25,782	ND	ND	ND	ND	36,941	36,635
Deep sea freight transportation	Establishments	2	2	2	2	1	NA[5]	NA	NA	NA
	Employees	ND	ND	ND	ND	ND	NA	NA	NA	NA
	Payroll	ND	ND	ND	ND	ND	NA	NA	NA	NA
Deep sea passenger transportation	Establishments	2	2	1	1	1	1	2	2	1
	Employees	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Payroll	ND	ND	ND	ND	ND	ND	ND	ND	ND
Marinas	Establishments	6	10	7	8	11	11	10	9	11
	Employees	76	ND	ND	56	177	178	181	152	167
	Payroll	1,257	ND	ND	1,414	3,285	3,439	3,354	3,719	4,151
Marine cargo handling	Establishments	7	7	6	7	8	8	8	7	8
	Employees	673	663	426	756	ND	ND	694	ND	1,048
	Payroll	32,743	37,306	24,920	49,975	ND	ND	53,061	ND	87,770
Navigational services to shipping	Establishments	6	6	5	7	7	6	6	6	8
	Employees	126	63	103	ND	ND	ND	ND	ND	ND
	Payroll	6,601	2,637	5,926	ND	ND	ND	ND	ND	3,340
Port & harbor operations	Establishments	2	2	2	2	2	2	2	2	2
	Employees	ND	ND	ND	ND	ND	ND	ND	ND	ND
	Payroll	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ship & boat building	Establishments	19	17	17	16	14	17	16	14	13
	Employees	ND	ND	ND	ND	480	589	ND	545	ND
	Payroll	ND	ND	ND	ND	22,053	20,908	ND	23,134	ND

[1]Employee Compensation data for 1998 were not available. Data from 2001 are reported here.
[2]The U.S. Commercial Fishing Location Quotient (CFLQ) of 1.0 represents the national baseline from which state CFLQs can be compared.
[3]CFLQ for 2001 was not available; 2002 data were used here.
[4] ND = Data are suppressed due to confidentiality restrictions.
[5] NA = Data are not available.