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Section 20

FORESTRY, FISHERIES, AND MINING

This section presents data on forests and forest reserves, commercial fishing and fish populations, and mining and mineral products.

Important sources of data on these subjects are the *United States Census of Mineral Industries* and *Mineral Industry Surveys*, U.S. Census Bureau, *2007 Economic Census, Geographic Area Series*, Mining, and reports and records of the Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources and Division of Forestry and Wildlife. *Historical Statistics of Hawaii*, Section 14, summarizes the data for earlier periods. Comparable national statistics are reported in the *Statistical Abstract of the United States: 2012*, Sections 18.

**Table 20.01-- FOREST AND NATURAL AREA ACREAGE, BY ISLAND:
JUNE 30, 2013**

Island	Conservation district forest land		Natural areas	
	Forest reserve land 1/	Private forest land 2/	Number of areas	Acres
State total	644,720	328,742	20	123,432
Hawaii	445,413	106,745	8	94,954
Maui	68,220	53,180	5	18,543
Kahoolawe	-	-	-	-
Lanai	-	6,150	-	-
Molokai	11,690	-	2	2,950
Oahu	33,223	88,817	3	1,770
Kauai	86,174	73,850	2	5,215
Niihau	-	-	-	-

1/ State-owned and privately-owned lands under surrender agreement in forest reserve system.

2/ Private forest land within conservation district. The majority of these lands were previously in the forest reserve system.

Source: Hawaii State Department of Land and Natural Resources, Division of Forestry and Wildlife, records.

Table 20.02-- WOODLAND ON FARMS, 2002, 2007 AND 2012, AND BY COUNTY, 2012

[Acres]

Use	2002	2007	2012				
			State total	Hawaii	Honolulu	Kauai	Maui
Total	117,685	79,041	92,734	57,747	(D)	6,972	(D)
Pastured	41,467	22,570	23,766	10,823	(D)	374	(D)
Not pastured	76,218	56,471	68,968	46,924	(D)	6,598	(D)

D Withheld to avoid disclosing data for individual farms.

Source: U.S. Department of Agriculture, 2007 Census of Agriculture, Hawaii, (February 2009), p. 240.
 2012 Census of Agriculture, Hawaii, (February 2014) p. 217.

**Table 20.03-- FOREST AND BRUSHLAND FIRES, BY CAUSE OF FIRE:
2011 TO 2013**

Cause of fire	Number of fires			Acres burned		
	2011	2012	2013	2011	2012	2013
State total	2	12	6	1,228.0	5,526.0	782.0
Lightning	-	-	-	-	-	-
Campfire	-	-	3	-	-	3
Smoking	-	-	-	-	-	-
Debris burning	-	-	-	-	-	-
Arson	-	-	-	-	-	-
Equipment	1	-	-	1,153.0	-	-
Railroads	-	-	-	-	-	-
Children	-	-	-	-	-	-
Miscellaneous	1	12	3	75.0	5,526.0	779.0

Source: Hawaii State Department of Land and Natural Resources, Division of Forestry and Wildlife, Fire Management Program and records.

Table 20.04-- COMMERCIAL FISHING: 2003 TO 2013

[Fiscal year ending June 30. Represents the total sea catches of all licensed commercial fishers.
Excludes pond catches, The Aquaculture and Development Program, Department of Agriculture, surveys pond harvest market information]

Year	Number of commercial fishermen	Commercial fish catch		
		Pounds landed	Pounds sold	Value to primary producers (dollars)
2003	3,434	24,054,939	(1/)	(1/)
2004	2,971	22,230,489	(1/)	(1/)
2005	3,248	24,876,316	(1/)	(1/)
2006	3,137	24,636,892	(1/)	(1/)
2007	3,220	26,563,127	(1/)	(1/)
2008	3,196	33,310,542	(1/)	(1/)
2009	3,557	28,065,282	(1/)	(1/)
2010	3,373	29,164,222	(1/)	(1/)
2011	3,691	2/ 33,032,579	(1/)	(1/)
2012	3,992	2/ 31,786,440	(1/)	(1/)
2013	3,970	33,137,716	(1/)	(1/)

1/ Due to revisions to the commercial fishing report forms in October 2002, licensed commercial fishers no longer report ex-vessel landing values. The latter information is collected from a fish dealer reporting system. The Division of Aquatic Resources is developing an application to integrate the fishing and fish dealer reporting systems to summarize landings with ex-vessel landing value information. Therefore, only total landings reported by commercial fishers are available at this time.

2/ Revised from previous *Data Book*.

Source: Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources, *Commercial Fish Landings for Fiscal Year* (annual) and records.

Table 20.05-- COMMERCIAL FISH CATCH, BY SPECIES: 2011 TO 2013

[Fiscal year ending June 30, pounds landed, excludes pond catches. Due to revisions to the commercial fishing report forms in 2002, data may not be comparable to previous years]

Species	2011 2/	2012 2/	2013
Total catch	33,032,579	31,786,440	33,137,716
Tunas	19,516,271	19,516,556	21,505,697
Aku (skipjack)	737,702	983,209	1,218,975
Tombo	1,271,198	1,706,993	1,603,184
Bigeye (ahi)	14,054,989	12,799,914	14,572,925
Yellowfin (ahi)	3,442,032	4,018,234	4,097,442
Billfishes	5,527,190	4,866,636	3,859,706
Blue marlin	1,232,013	1,169,396	1,107,510
Shortnose spearfish	563,085	425,419	402,441
Striped marlin	795,248	751,233	679,348
Swordfish	2,876,543	2,481,161	1,628,962
Miscellaneous pelagic species	5,811,119	5,663,040	6,014,471
Mahimahi	2,122,088	1,803,548	1,725,384
Monchong	486,007	674,275	958,474
Ono	817,967	734,730	860,532
Opah	1,662,961	1,787,878	1,805,963
Walu	666,568	621,588	643,616
Deep bottom fishes	476,033	364,686	424,021
Ehu	24,517	25,848	30,064
Hapupuu	8,244	9,224	10,538
Opakapaka	148,596	105,336	95,977
Uku	126,307	101,810	138,903
Ulaula (onaga)	67,702	52,738	66,957
Akule/opelu	739,126	554,485	516,988
Akule	452,619	260,118	253,462
Opelu	282,589	257,251	252,175
Jacks	46,283	53,582	43,987
Inshore fishes	472,995	414,431	431,670
Sharks	284,745	217,666	176,005
Mako	194,572	135,970	120,220
Lobsters	11,676	10,524	11,088
Crabs	41,340	23,153	46,213
Shells	(NA)	(NA)	(NA)
Shrimps	(1/)	7,141	12,974
Seaweeds	13,645	17,626	25,143
Unclassified / miscellaneous	92,156	76,914	69,753

NA Not available.

1/ Due to low level of fishermen reporting and to preserve confidentiality, data for these species are pooled under miscellaneous.

2/ Revised from previous *Data Book*.

Source: Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources, *Commercial Fish Landings, State of Hawaii--Fiscal Years 2011-2013* and records.

Table 20.06-- COMMERCIAL SEA LANDINGS, BY ISLAND: 2011 TO 2013

[Fiscal year ending June 30, pounds landed]

Island	2011 1/	2012 1/	2013
State total	33,032,579	31,786,440	33,137,716
Hawaii	2,642,718	2,685,704	3,255,962
Maui	738,961	874,622	813,935
Lanai	13,118	7,851	6,425
Molokai	39,639	42,757	44,473
Oahu	28,827,042	27,339,527	28,045,235
Kauai and Niihau	771,101	835,979	971,686

1/ Revised from previous *Data Book*.

Source: Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources, records.

**Table 20.07-- COMMERCIAL SEA LANDINGS, BY FISHING METHOD:
2011 TO 2013**

[Fiscal year ending June 30, pounds landed]

Fishing method	2011 2/	2012 2/	2013
All methods	33,032,579	31,786,440	33,137,716
Aku pole and line	(1/)	369,116	(1/)
Longline	26,351,386	24,558,662	25,278,607
Handline	2,143,751	2,211,202	2,927,627
Trolling	2,858,373	3,390,318	3,374,073
Net	651,744	483,258	435,010
Trap	89,040	40,461	93,749
All other methods	938,285	733,423	1,028,650

1/ Due to low level of fishermen reporting and to preserve confidentiality, data for these species are pooled under all other methods.

2/ Revised from previous *Data Book*.

Source: Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources, *Commercial Fish Landings, State of Hawaii--Fiscal Years 2011-2013* and records.

Table 20.08-- MINERAL INDUSTRIES (NAICS 21): 1982 TO 2007

[Includes establishments with payroll. Statistics based on the North American Industry Classification System (NAICS) which replaced the Standard Industrial Classification (SIC) system used in Economic Censuses prior to the 1997 Economic Census]

Subject	1982	1987	1992	1997	2002	2007
Number of establishments	12	9	7	7	8	8
With 20 employees or more	4	4	4	2	1	4
All employees						
Number (1,000) 1/	0.2	0.2	0.2	0.1	0.1	0.2
Annual payroll (million dollars)	3.8	7.4	9.4	5.6	7.3	9.6
Production, development, and exploration workers						
Number (1,000) 1/	0.1	0.2	0.2	0.1	0.1	0.1
Annual hours (millions)	0.2	0.4	0.4	0.2	0.2	0.3
Annual wages (million dollars)	2.6	5.7	8.1	4.7	5.1	7.9
Value added (million dollars)	9.7	23.5	27.3	22.0	20.7	49.0
Total cost of supplies (million dollars)	5.9	10.4	11.3	(D)	6.6	12.9
Total value of shipments and receipts for services (million dollars)	12.8	31.1	33.7	33.3	25.6	55.4
Capital expenditures (million dollars)	2.7	2.8	4.8	(D)	1.7	6.4

D Withheld to avoid disclosing data for individual companies.

1/ For pay period including March 12.

Source: U.S. Census Bureau, *1987 Census of Mineral Industries, Geographic Area Series, Pacific States*, MIC87-A-9 (October 1990), Hawaii table 1; *1992 Census of Mineral Industries, Geographic Area Series, Pacific States*, MIC92-A-9 (May 1996), Hawaii table 1; *1997 Economic Census, Mining, Geographic Area Series, Hawaii*, EC97N21A-HI (May 2000), table 1; *2002 Economic Census, Mining, Geographic Area Series, Hawaii*, EC02-21A-HI (April 2005), table 1; 2007 Economic Census, Sector 21: EC0721A2: Mining: Geographic Area Series: Detailed Statistics for the State or Offshore Areas: 2007 <http://factfinder.census.gov/servlet/IBQTable?_bm=y&-geo_id=04000US15&-fds_name=EC0700A1&-ds_name=EC0721A2&-_lang=en> accessed May 26, 2010.

Table 20.09-- NONFUEL MINERAL PRODUCTION: 2007 TO 2009

[Production as measured by mine shipments, sales, or marketable production (including consumption by producers), Data are rounded to no more than three significant digits; may not add to totals shown]

Minerals	2007 1/	2008 1/	2009
Quantity (1,000 Metric Tons)			
Gemstones	(NA)	(NA)	(NA)
Sand and gravel (construction)	1,850	1,640	1,130
Stone (crushed)	8,800	7,410	5,920
Value (\$1,000)			
Total	165,251	163,951	115,451
Gemstones	151	151	151
Sand and gravel (construction)	24,100	29,800	14,300
Stone (crushed)	141,000	134,000	101,000

NA Not available.

1/ Revised from previous *Data Book*.

Source: U.S. Geological Survey, Minerals Information, "2009 Minerals Yearbook, Hawaii 2009 [Advance Release]" (May 2013) <<http://minerals.er.usgs.gov/minerals/pubs/state/hi.html>> accessed May 20, 2013.