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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, 2011**

Island	Conservation district forest land		Natural areas	
	Forest reserve land 1/	Private forest land 2/	Number of areas	Acres
State total	642,388	328,742	20	123,432
Hawaii	444,155	106,745	8	94,954
Maui	68,220	53,180	5	18,543
Kahoolawe	-	-	-	-
Lanai	-	6,150	-	-
Molokai	11,690	-	2	2,950
Oahu	32,136	88,817	3	1,770
Kauai	86,187	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, 1997, 2002, AND 2007, AND BY COUNTY, 2007**

[Acres]

Use	1997	2002	2007				
			State total	Hawaii	Honolulu	Kauai	Maui
Total	108,704	117,685	79,041	46,137	5,646	5,660	21,598
Pastured	31,844	41,467	22,570	12,791	(D)	103	(D)
Not pastured	76,860	76,218	56,471	33,346	(D)	5,557	(D)

D Withheld to avoid disclosing data for individual farms.

Source: U.S. Department of Agriculture, 2002 Census of Agriculture, Hawaii, (June 2004), p. 195.  
 2007 Census of Agriculture, Hawaii, (February 2009), p. 240.

**Table 20.03-- FOREST AND BRUSHLAND FIRES, BY CAUSE OF FIRE:  
2009 TO 2011**

Cause of Fire	Number of Fires			Acres burned		
	2009	2010	2011	2009	2010	2011
State total	8	11	2	8,079.1	3,521.9	1,228.0
Lightning	-	1	-	-	900.0	-
Campfire	-	2	-	-	2.1	-
Smoking	-	-	-	-	-	-
Debris burning	-	-	-	-	-	-
Arson	-	2	-	-	1,487.0	-
Equipment	-	-	1	-	-	1,153.0
Railroads	-	-	-	-	-	-
Children	-	-	-	-	-	-
Miscellaneous	8	6	1	8,079.1	1,132.8	75.0

Source: Hawaii State Department of Land and Natural Resources, Division of Forestry and Wildlife, Fire Management Program, *Annual Wildfire Summary Report* <<http://www.wildahinet.com/fmp/firedata.htm>> accessed May 10, 2012 and records.

**Table 20.04-- COMMERCIAL FISHING: 2003 TO 2011**

[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	31,455,425	(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.

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: 2009 TO 2011**

[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	2009	2010	2011
Total catch	28,065,282	29,164,222	31,455,425
Tunas	15,528,812	17,066,495	18,801,218
Aku (skipjack)	1,034,769	842,972	439,044
Tombo	491,422	982,317	1,213,205
Bigeye (ahi)	11,164,105	12,293,460	13,766,508
Yellowfin (ahi)	2,818,856	2,910,195	3,371,689
Billfishes	6,176,962	4,913,195	5,062,601
Blue marlin	1,164,743	1,060,700	1,021,614
Shortnose spearfish	274,264	242,253	502,072
Striped marlin	794,885	406,315	774,696
Swordfish	3,920,161	3,173,909	2,725,657
Miscellaneous pelagic species	4,459,253	5,209,892	5,510,850
Mahimahi	952,326	1,469,554	2,001,806
Monchong	675,165	621,885	454,445
Ono	740,747	725,930	781,064
Opah	1,576,650	1,808,524	1,596,252
Walu	492,139	563,637	631,777
Deep bottom fishes	491,348	396,800	474,381
Ehu	27,551	24,882	24,522
Hapuupuu	23,434	11,110	8,212
Opakapaka	146,302	109,557	147,096
Uku	124,545	125,142	126,294
Ulaula (onaga)	85,488	59,408	67,755
Akule/opelu	622,556	724,968	738,696
Akule	316,555	408,846	452,710
Opelu	305,982	316,074	282,068
Jacks	43,324	43,035	46,046
Inshore fishes	304,680	396,073	470,252
Sharks	312,163	259,992	214,001
Mako	236,311	207,366	167,119
Lobsters	18,467	23,182	11,640
Crabs	43,142	54,636	41,522
Shells	(NA)	(NA)	(NA)
Shrimps	(1/)	(1/)	(1/)
Seaweeds	7,684	12,028	13,573
Unclassified / miscellaneous	56,891	63,926	70,645

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

Source: Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources, *Commercial Fish Landings, State of Hawaii--Fiscal Years 2009-2011* and records.

**Table 20.06-- COMMERCIAL SEA LANDINGS, BY ISLAND: 2009 TO 2011**

[Fiscal year ending June 30, pounds landed]

<b>Island</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
State total	28,065,282	29,164,222	31,455,425
Hawaii	2,266,356	2,867,404	2,674,953
Maui	680,341	679,976	734,809
Lanai	19,135	13,634	13,108
Molokai	43,434	34,119	39,497
Oahu	24,410,059	24,774,566	27,232,594
Kauai and Niihau	645,957	794,523	760,464

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



**Table 20.07-- COMMERCIAL SEA LANDINGS, BY FISHING METHOD:  
2009 TO 2011**

[Fiscal year ending June 30, pounds landed]

<b>Fishing method</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>
All methods	28,065,282	29,164,222	31,455,425
Aku pole and line	646,795	(1/)	(1/)
Longline	21,819,806	22,369,598	24,795,513
Handline	1,710,456	2,096,754	2,127,947
Trolling	2,864,895	2,989,823	2,853,215
Net	508,328	603,915	649,912
Trap	58,601	82,978	89,234
All other methods	456,401	1,021,154	939,604

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

Source: Hawaii State Department of Land and Natural Resources, Division of Aquatic Resources, *Commercial Fish Landings, State of Hawaii--Fiscal Years 2009-2011* 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](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: 2006 TO 2008**

[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	2006	2007	2008
QUANTITY (1,000 METRIC TONS)			
Gemstones	(NA)	(NA)	(NA)
Sand and gravel (construction)	1,230	1,570	1,410
Stone (crushed)	1/ 8,980	8,800	7,540
VALUE (\$1,000)			
Total	1/ 154,000	161,000	162,000
Gemstones	107	151	151
Sand and gravel (construction)	15,900	20,400	25,600
Stone (crushed)	1/ 138,000	141,000	136,000

NA Not available.

1/ Revised from previous *Data Book*.

Source: U.S. Geological Survey, Minerals Information, "2008 Minerals Yearbook, Hawaii 2008 [Advance Release]" (February 2011) <<http://minerals.er.usgs.gov/minerals/pubs/state/hi.html>> accessed June 6, 2011.