

Section 20

FORESTS, FISHERIES, AND MINING

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

The most recent available statistics show 1.2 million acres of forest and water reserve and 948,000 acres of commercial forest in the State, most of it on the Big Island. More than 49,000 acres had been planted in eucalyptus and other species of trees by mid-1978. Forest products harvested in 1977 had a value of \$3.5 million. More than 400 forest and brushland fires burned 17,000 acres in 1978. According to a 1974 compilation, the tallest tree in the State is a 203-foot eucalyptus saligna.

The commercial fish catch in fiscal 1978 was 13.7 million pounds and had a value of \$11.2 million. Aku (Skipjack) accounted for 35 percent of the total value. Other important species are ahi, akule, opelu, and opakapaka. Commercial fishermen numbered 2,574; they operated 1,437 fishing vessels, serving 44 fishery wholesaling and processing establishments.

The value of mineral production reached \$44 million in 1977, most of it in cement and stone. The all-time high was \$49.7 million, recorded in 1975.

Important sources of data on these subjects are the United States Census of Agriculture, United States Census of Mineral Industries, and reports and records of the U.S. Bureau of Mines, National Marine Fisheries Service, and Hawaii State Department of Land and Natural Resources, Fish and Game Division and Forestry Division. Historical Statistics of Hawaii, Section 14, summarizes the data for earlier periods. Comparable Mainland statistics are reported in the Statistical Abstract of the United States: 1978, Sections 25, 26 and 27.

Table 326.-- FOREST ACREAGE AND FIRES, BY ISLANDS: 1970-1978

Island	Forest and water reserve, 1978 <u>1/</u> (acres)	Forest land, 1970 (acres)		Planted forest 1978 <u>2/</u> (acres)		Forest and brushland fires, 1978 <u>3/</u>	
		Total <u>4/</u>	Commercial <u>5/</u>	Latest year	Cumulative	Number	Acres burned
State total	1,186,462	1,986,400	947,800	19	49,328	401	17,308
Hawaii	697,361	1,152,500	569,400	-	22,793	} 208	15,779
Maui	155,247	239,800	67,500	2	10,677		
Kahoolawe	-	15,800	-	-	-	} 51	903
Lanai	6,150	43,900	4,500	-	512		
Molokai	46,445	78,100	34,000	5	2,854		
Oahu	119,319	205,300	126,500	12	7,224	} 75	574
Kauai	161,970	219,900	145,900	-	5,268		
Niihau	-	31,100	-	-	-	} 67	52
Northwestern Hawaiian Isl.	-	-	-	-	-		

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1/ Forest and water reserve within conservation district, as of June 30.

2/ Annual and cumulative totals to June 30.

3/ Calendar year.

4/ Includes commercial, unproductive, and productive-reserved acreage.

5/ Includes federal military, state, miscellaneous corporate, and miscellaneous individual forest land.

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

Table 327.-- FOREST PRODUCTS HARVESTED: 1977

Forest product	Output		Unit price (dollars)	Total value (dollars)
	Unit	Amount		
All products	3,465,233
Logs for lumber	MBF <u>1/</u>	2,750	209	574,833
Logs for craftwood	Cords <u>2/</u>	299	224	51,330
Logs for fiber	BDT <u>3/</u>	55,502	41	2,310,500
Tree fern	Cubic feet	95,000	1.42	135,000
Fuelwood from trees	Cords <u>2/</u>	4,191	47	194,563
Fuelwood for charcoal	Cords <u>2/</u>	800	34	26,820
Fuel from mill residue ...	Tons	5,000	10.50	52,500
Round posts	Posts	32,700	3.14	102,604
Split posts	Posts	3,525	2.93	10,321
Driftwood	Cords <u>2/</u>	2	300	600
Pallets	Number	20	20	400
Bamboo	Lineal feet	18,844	0.04	742
Kukui nuts	Tons	13.86	362	5,020

1/ Thousand board feet.

2/ One cord equals 128 cubic feet.

3/ Bone dry ton, equal to 2,000 lbs. of wood at 0% moisture content.

Source: Hawaii State Department of Land and Natural Resources, Division of Forestry, Hawaiian Forest Products 1977, table II.

Table 328.-- FISHERY OPERATING UNITS AND LANDINGS: 1970 TO 1976

Year	Fisher- men <u>1/</u>	Vessels and boats <u>2/</u>		Fishery estab- lish- ments <u>3/</u>	Landings <u>4/</u>	
		Motor vessels	Boats		Quantity (1,000 lb.)	Value (\$1,000)
1970	1,436	80	686	37	11,051	3,900
1971	1,533	89	812	44	16,873	5,238
1972	1,732	101	839	40	14,443	5,743
1973	2,091	104	1,097	41	14,035	6,115
1974 <u>5/</u> ..	1,992	97	1,066	42	10,990	6,028
1975	2,197	109	1,278	42	9,209	6,313
1976	2,367	101	1,336	44	14,761	8,879

1/ Persons licensed as commercial fishermen by the Hawaii State Department of Land and Natural Resources, Fish and Game Division. Data refer to June 30 of the following year.

2/ A vessel is defined as a craft with a capacity of 5 net tons or more; a boat, as a craft with a capacity of less than 5 net tons. Data on vessels and boats refer to June 30 of the following year.

3/ Fishery wholesaling and processing establishments, as of June 30 of the year indicated.

4/ Data may differ from corresponding totals reported by the State Fish and Game Division, which unlike the NMFS series shown here, include unsold fish.

5/ Methods of collecting data on operating units were changed in 1974.

Source: U.S. Department of Commerce, National Marine Fisheries Service, Fishery Statistics of the United States (annual, 1970-1975), and records.

Table 329.— COMMERCIAL FISHING: 1968 TO 1978

[Years ended June 30]

Year	Fishermen licensed during year	Commercial fish landings				
		Pounds	Value (dollars)	Value per pound (dollars)	Per fisherman	
					Pounds	Value (dollars)
1968	760	12,829,326	3,253,622	0.254	16,881	4,281
1969	1,028	11,096,116	3,378,553	0.304	10,794	3,287
1970	1,264	9,786,726	3,584,936	0.366	7,743	2,836
1971	1,373	15,176,525	4,633,877	0.305	11,054	3,375
1972	1,544	15,577,302	5,536,385	0.355	10,089	3,586
1973	1,677	14,029,491	5,676,780	0.405	8,366	3,385
1974	2,085	13,997,435	6,234,933	0.445	6,713	2,990
1975	1,991	10,801,380	6,242,572	0.578	5,425	3,135
1976	2,283	11,891,275	7,503,964	0.631	5,209	3,287
1977	2,367	15,298,457	9,433,770	0.617	6,463	3,986
1978	2,574	13,681,344	11,169,917	0.816	5,315	4,340

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

Table 330.— COMMERCIAL FISH LANDINGS, BY SPECIES AND ISLAND:
JULY 1, 1977 TO JUNE 30, 1978

Island and species	Pounds caught	Value (dollars)
Total landings	13,681,344	11,169,917
ISLAND		
Hawaii	2,734,892	2,526,381
Maui	902,108	511,817
Lanai	27,137	14,912
Molokai	29,933	23,923
Oahu	9,518,598	7,750,529
Kauai	468,676	342,355
SPECIES <u>1/</u>		
Sea catch, total <u>2/</u>	13,658,827	11,140,212
Aku	7,298,669	3,952,550
Ahi (Yellowfin)	2,288,483	2,316,769
Ahi (Bigeye)	578,931	1,264,347
Pacific Blue Marlin	469,386	152,471
Akule	456,584	376,890
Opelu	361,348	328,019
Ono	227,486	221,815
Opakapaka	193,086	310,725
Striped Marlin	139,443	150,345
Mahimahi	128,825	213,492
Ahipalaha (Albacore)	117,471	108,967
Kawakawa	106,367	38,659
Uku	99,655	137,283
Ulaula Koa (Onaga)	66,505	166,456
Ula (Lobster)	60,956	176,500
Pond catch, total	22,517	29,705

1/ Shown separately for all species over 100,000 pounds or \$100,000.

2/ Includes species not shown separately.

Source: Hawaii State Department of Land and Natural Resources, Division of Fish and Game, Commercial Fish Landings for Fiscal Year -- July, 1977 through June, 1978 (November 20, 1978).

Table 331.— MINERAL OPERATIONS: 1972

[Excluding operations in manufactures]

Subject	Number
Establishments	15
With 20 or more employees	5
All employees (1,000)	0.3
Payroll (millions of dollars)	2.4
Production, development, and exploration	
workers (1,000)	0.2
Man-hours (million)	0.4
Wages (millions of dollars)	1.8
Value added in mining (millions of dollars)	9.0
Cost of supplies, etc. (millions of dollars)	4.1
Value of shipments and receipts (millions of dollars)	11.0
Capital expenditures (millions of dollars)	2.0

Source: U.S. Bureau of the Census, U.S. Census of Mineral Industries, 1972, MIC72(2)-9, table 1.

Table 332.-- MINERAL PRODUCTION: 1960 TO 1978

[Production as measured by mine shipments, sales, or marketable production, including consumption by producers.]

Year	Quantity (1,000 short tons)		Value (\$1,000)			
	Cement	Stone	Total	Cement	Stone	Other minerals <u>1/</u>
1960	21	3,535	9,254	571	6,443	2,240
1961	202	4,429	14,588	5,574	7,656	1,358
1962	212	4,071	14,844	6,055	6,883	1,906
1963	279	3,844	15,307	7,125	6,480	1,702
1964	323	5,282	19,605	8,877	8,765	1,963
1965	294	5,172	20,835	8,297	9,353	3,185
1966	329	5,079	21,253	9,046	9,482	2,725
1967	262	4,100	16,936	7,360	7,207	2,369
1968	346	5,211	23,225	9,254	11,273	2,698
1969	390	6,534	29,539	10,544	16,059	2,936
1970	406	6,331	28,965	10,334	15,538	3,093
1971	386	6,056	28,107	10,627	14,357	3,123
1972	415	5,005	28,074	11,116	13,494	3,464
1973	469	7,180	35,147	13,750	18,466	2,931
1974	502	7,638	42,042	17,111	21,370	3,561
1975	469	7,569	49,710	20,704	25,319	3,687
1976	339	6,092	42,252	18,410	21,193	2,649
1977	330	5,759	39,980	16,922	19,880	3,178
1978 <u>2/</u> ...	458	5,851	50,924	26,518	20,504	3,902

1/ Chiefly sand and gravel; pumice, pumicite, and volcanic cinder; and lime.

2/ Preliminary.

Source: U. S. Bureau of Mines, Minerals Yearbook (annual), "The Mineral Industry in Hawaii," Mineral Industry Surveys (annual preliminary and advance summary reports), and Minerals in the Economy of Hawaii (annual, 1978 and 1979).