

The Hawaii and California-based Pelagic Longline Vessels Annual Report for 1 January–31 December 2022¹

Fisheries Research and Monitoring Division (FRMD)
Pacific Islands Fisheries Science Center (PIFSC), NOAA Fisheries
NOAA Inouye Regional Center
1845 Wasp Boulevard, Building 176, Honolulu, HI 96818

The Hawaii and California-based pelagic longline logbook annual report for 2022 (1 January–31 December; PIFSC 2023) contains summary data of fishing effort and catch statistics as reported from electronic or paper longline log sheets submitted by Hawaii and California-based pelagic longline fishers. Catch and effort statistics are based on date of longline haul. Vessel and trips statistics can cross over two summary periods (i.e., years, semi-annual or quarters) and are counted in both summary periods. For example, a trip total is for "partial and complete" trips within a time period and these statistics are not additive since partial trips are counted in the present time period when the trip began and again in the following period when the trip ended (i.e., sum of four quarters or two semi-annual reports is not the total for the year).

Catch and effort summaries in this report were based on RFMO standards and business rules. Longline catch and effort statistics in this report consists of U.S. longline fisheries in the North Pacific Ocean, attributions from CNMI, Guam and American Samoa in the North Pacific Ocean. Longline vessels operating from California were also included in this report to satisfy RFMO data reporting and NOAA confidentiality standards.

Tables 1-5 show fishery statistics for the stated time period, area, and shallow sets (<15 hooks between floats) or deep sets (\geq 15 hooks between floats). The longline effort includes number of vessels, trips, sets, and hooks set. Fish species were organized into pelagic management unit species (PMUS) groups of billfish, shark, tuna and other PMUS. Each table includes the number of fish caught, kept and released. The catch per unit effort (CPUE) is measured as the number of fish caught per 1000 hooks. Figures 1-26 show catch numbers, effort and spatial distributions for important species during the stated time period, area and set type, for years 2000–2022.

References: Pacific Islands Fisheries Science Center, 2023: Hawaii Longline Logbook, <https://www.fisheries.noaa.gov/inport/item/2721>

Southwest Fisheries Science Center, 2023: California Pelagic Longline Fishery, <https://www.fisheries.noaa.gov/inport/item/12906>

¹Data reported by fishers in electronic and paper logs were queried for 2022(1 January–31 December) from the Pacific Islands Fishery Science Center Information Management System oracle database from table LLDS_RPT_STATS_HC20230915_RFMO.

Table 1. Hawaii and California-based pelagic longline vessels annual statistics for all fishing areas and all fishing categories (set types), including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage		Number of vessels active		
Time Period	1 January-31 December 2022	147		
Set Types	All sets	Number of trips (partial or completed) 1,602		
Fishing Area	All Areas	Number of sets 22,184		
		Number of hooks set 64,482,868		
Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	7,158	7,117	41	0.11
Striped marlin	11,529	11,369	160	0.18
Shortbill spearfish	11,106	10,863	243	0.17
Swordfish	13,240	12,905	335	0.21
Other billfishes	465	455	10	0.01
Total	43,498	42,709	789	0.67
Shark PMUS				
Blue shark	85,055	0	85,055	1.32
Mako sharks	2,300	23	2,277	0.04
Thresher sharks	8,266	31	8,235	0.13
Oceanic whitetip shark	410	0	410	0.01
Silky shark	238	0	238	0.00
Total	96,269	54	96,215	1.49
Tuna PMUS				
Albacore	12,933	12,267	666	0.20
Bigeye tuna	172,552	169,979	2,573	2.68
Yellowfin tuna	85,110	83,253	1,857	1.32
Bluefin tuna	15	14	1	0.00
Skipjack tuna	12,619	12,459	160	0.20
Other tunas	0	0	0	0.00
Total	283,229	277,972	5,257	4.39
Other PMUS				
Mahimahi	37,256	36,695	561	0.58
Moonfish	4,984	4,978	6	0.08
Wahoo	17,541	17,446	95	0.27
Oilfish	9,893	7,970	1,923	0.15
Pomfret	31,708	31,301	407	0.49
Total	101,382	98,390	2,992	1.57
Total PMUS	524,378	419,125	105,253	8.13
Non-PMUS Sharks	252	1	251	0.00
Total Non-PMUS	6,546	162	6,384	0.10
Total All Species	530,924	419,287	111,637	8.23

Table 2. Hawaii and California-based pelagic longline vessels annual statistics for fishing within the U.S. EEZ (main Hawaiian Islands, Northwestern Hawaiian Islands, or the Pacific Remote Islands, and with all fishing categories (set types), including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage		Number of vessels active		
Time Period	1 January-31 December 2022	137		
Set Types	All sets	818		
Fishing Area	Inside U.S. EEZ	5,646		
		16,656,351		

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	1,738	1,729	9	0.10
Striped marlin	3,325	3,297	28	0.20
Shortbill spearfish	3,493	3,458	35	0.21
Swordfish	946	918	28	0.06
Other billfishes	94	93	1	0.01
Total	9,596	9,495	101	0.58
Shark PMUS				
Blue shark	20,212	0	20,212	1.21
Mako sharks	354	2	352	0.02
Thresher sharks	1,837	8	1,829	0.11
Oceanic whitetip shark	131	0	131	0.01
Silky shark	86	0	86	0.01
Total	22,620	10	22,610	1.36
Tuna PMUS				
Albacore	650	642	8	0.04
Bigeye tuna	35,421	35,003	418	2.13
Yellowfin tuna	20,551	20,127	424	1.23
Bluefin tuna	4	4	0	0.00
Skipjack tuna	3,605	3,566	39	0.22
Other tunas	0	0	0	0.00
Total	60,231	59,342	889	3.62
Other PMUS				
Mahimahi	5,764	5,664	100	0.35
Moonfish	479	478	1	0.03
Wahoo	3,786	3,768	18	0.23
Oilfish	2,990	2,440	550	0.18
Pomfret	6,016	5,916	100	0.36
Total	19,035	18,266	769	1.14
Total PMUS	111,482	87,113	24,369	6.69
Non-PMUS Sharks	66	0	66	0.00
Total Non-PMUS	2,472	67	2,405	0.15
Total All Species	113,954	87,180	26,774	6.84

Table 3. Hawaii and California-based pelagic longline vessels annual statistics for fishing outside the U.S. EEZ and with all fishing categories (set types), including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage		Number of vessels active		
Time Period	1 January-31 December 2022	145		
Set Types	All sets	Number of trips (partial or completed) 1,417		
Fishing Area	Outside U.S. EEZ	Number of sets 16,538		
		Number of hooks set 47,826,517		

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	5,420	5,388	32	0.11
Striped marlin	8,204	8,072	132	0.17
Shortbill spearfish	7,613	7,405	208	0.16
Swordfish	12,294	11,987	307	0.26
Other billfishes	371	362	9	0.01
Total	33,902	33,214	688	0.71
Shark PMUS				
Blue shark	64,843	0	64,843	1.36
Mako sharks	1,946	21	1,925	0.04
Thresher sharks	6,429	23	6,406	0.13
Oceanic whitetip shark	279	0	279	0.01
Silky shark	152	0	152	0.00
Total	73,649	44	73,605	1.54
Tuna PMUS				
Albacore	12,283	11,625	658	0.26
Bigeye tuna	137,131	134,976	2,155	2.87
Yellowfin tuna	64,559	63,126	1,433	1.35
Bluefin tuna	11	10	1	0.00
Skipjack tuna	9,014	8,893	121	0.19
Other tunas	0	0	0	0.00
Total	222,998	218,630	4,368	4.66
Other PMUS				
Mahimahi	31,492	31,031	461	0.66
Moonfish	4,505	4,500	5	0.09
Wahoo	13,755	13,678	77	0.29
Oilfish	6,903	5,530	1,373	0.14
Pomfret	25,692	25,385	307	0.54
Total	82,347	80,124	2,223	1.72
Total PMUS	412,896	332,012	80,884	8.63
Non-PMUS Sharks	186	1	185	0.00
Total Non-PMUS	4,074	95	3,979	0.09
Total All Species	416,970	332,107	84,863	8.72

Table 4. Hawaii and California-based pelagic longline vessels annual statistics for all fishing areas and with shallow set type, including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage

Time Period 1 January-31 December 2022
 Set Types Shallow sets
 Fishing Area All Areas

Number of vessels active	22
Number of trips (partial or completed)	69
Number of sets	857
Number of hooks set	1,077,193

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	49	49	0	0.05
Striped marlin	388	385	3	0.36
Shortbill spearfish	62	62	0	0.06
Swordfish	9,611	9,349	262	8.92
Other billfishes	12	11	1	0.01
Total	10,122	9,856	266	9.40
Shark PMUS				
Blue shark	6,355	0	6,355	5.90
Mako sharks	713	4	709	0.66
Thresher sharks	44	0	44	0.04
Oceanic whitetip shark	26	0	26	0.02
Silky shark	5	0	5	0.00
Total	7,143	4	7,139	6.63
Tuna PMUS				
Albacore	1,395	1,376	19	1.30
Bigeye tuna	954	947	7	0.89
Yellowfin tuna	1,067	1,055	12	0.99
Bluefin tuna	4	4	0	0.00
Skipjack tuna	31	31	0	0.03
Other tunas	0	0	0	0.00
Total	3,451	3,413	38	3.20
Other PMUS				
Mahimahi	1,501	1,498	3	1.39
Moonfish	29	27	2	0.03
Wahoo	35	35	0	0.03
Oilfish	227	131	96	0.21
Pomfret	6	4	2	0.01
Total	1,798	1,695	103	1.67
Total PMUS	22,514	14,968	7,546	20.90
Non-PMUS Sharks	5	0	5	0.00
Total Non-PMUS	18	10	8	0.02
Total All Species	22,532	14,978	7,554	20.92

Table 5. Hawaii and California-based pelagic longline vessels annual statistics for all fishing areas and with deep set type, including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage

Time Period 1 January-31 December 2022
 Set Types Deep sets
 Fishing Area All Areas

Number of vessels active	147
Number of trips (partial or completed)	1,534
Number of sets	21,327
Number of hooks set	63,405,675

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	7,109	7,068	41	0.11
Striped marlin	11,141	10,984	157	0.18
Shortbill spearfish	11,044	10,801	243	0.17
Swordfish	3,629	3,556	73	0.06
Other billfishes	453	444	9	0.01
Total	33,376	32,853	523	0.53
Shark PMUS				
Blue shark	78,700	0	78,700	1.24
Mako sharks	1,587	19	1,568	0.03
Thresher sharks	8,222	31	8,191	0.13
Oceanic whitetip shark	384	0	384	0.01
Silky shark	233	0	233	0.00
Total	89,126	50	89,076	1.41
Tuna PMUS				
Albacore	11,538	10,891	647	0.18
Bigeye tuna	171,598	169,032	2,566	2.71
Yellowfin tuna	84,043	82,198	1,845	1.33
Bluefin tuna	11	10	1	0.00
Skipjack tuna	12,588	12,428	160	0.20
Other tunas	0	0	0	0.00
Total	279,778	274,559	5,219	4.41
Other PMUS				
Mahimahi	35,755	35,197	558	0.56
Moonfish	4,955	4,951	4	0.08
Wahoo	17,506	17,411	95	0.28
Oilfish	9,666	7,839	1,827	0.15
Pomfret	31,702	31,297	405	0.50
Total	99,584	96,695	2,889	1.57
Total PMUS	501,864	404,157	97,707	7.92
Non-PMUS Sharks	247	1	246	0.00
Total Non-PMUS	6,528	152	6,376	0.10
Total All Species	508,392	404,309	104,083	8.02

Table 7. Hawaii and California-based pelagic longline vessels annual statistics for fishing within the U.S. EEZ (main Hawaiian Islands, Northwestern Hawaiian Islands, or the Pacific Remote Islands, and with deep sets, including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage		Number of vessels active		
Time Period	1 January-31 December 2022	136		
Set Types	Deep sets	810		
Fishing Area	Inside U.S. EEZ	5,609		
		16,607,023		

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	1,725	1,716	9	0.10
Striped marlin	3,292	3,265	27	0.20
Shortbill spearfish	3,483	3,448	35	0.21
Swordfish	761	741	20	0.05
Other billfishes	85	85	0	0.01
Total	9,346	9,255	91	0.56
Shark PMUS				
Blue shark	20,022	0	20,022	1.21
Mako sharks	332	2	330	0.02
Thresher sharks	1,826	8	1,818	0.11
Oceanic whitetip shark	108	0	108	0.01
Silky shark	85	0	85	0.01
Total	22,373	10	22,363	1.35
Tuna PMUS				
Albacore	650	642	8	0.04
Bigeye tuna	35,414	34,997	417	2.13
Yellowfin tuna	20,500	20,077	423	1.23
Bluefin tuna	4	4	0	0.00
Skipjack tuna	3,602	3,563	39	0.22
Other tunas	0	0	0	0.00
Total	60,170	59,283	887	3.62
Other PMUS				
Mahimahi	5,751	5,651	100	0.35
Moonfish	478	477	1	0.03
Wahoo	3,783	3,765	18	0.23
Oilfish	2,935	2,400	535	0.18
Pomfret	6,016	5,916	100	0.36
Total	18,963	18,209	754	1.14
Total PMUS	110,852	86,757	24,095	6.68
Non-PMUS Sharks	64	0	64	0.00
Total Non-PMUS	2,461	59	2,402	0.15
Total All Species	113,313	86,816	26,497	6.82

Table 8. Hawaii and California-based pelagic longline vessels annual statistics for fishing outside the U.S. EEZ and with deep sets, including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage

Time Period 1 January-31 December 2022
 Set Types Deep sets
 Fishing Area Outside U.S. EEZ

Number of vessels active	145
Number of trips (partial or completed)	1,350
Number of sets	15,718
Number of hooks set	46,798,652

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	5,384	5,352	32	0.12
Striped marlin	7,849	7,719	130	0.17
Shortbill spearfish	7,561	7,353	208	0.16
Swordfish	2,868	2,815	53	0.06
Other billfishes	368	359	9	0.01
Total	24,030	23,598	432	0.51
Shark PMUS				
Blue shark	58,678	0	58,678	1.25
Mako sharks	1,255	17	1,238	0.03
Thresher sharks	6,396	23	6,373	0.14
Oceanic whitetip shark	276	0	276	0.01
Silky shark	148	0	148	0.00
Total	66,753	40	66,713	1.43
Tuna PMUS				
Albacore	10,888	10,249	639	0.23
Bigeye tuna	136,184	134,035	2,149	2.91
Yellowfin tuna	63,543	62,121	1,422	1.36
Bluefin tuna	7	6	1	0.00
Skipjack tuna	8,986	8,865	121	0.19
Other tunas	0	0	0	0.00
Total	219,608	215,276	4,332	4.69
Other PMUS				
Mahimahi	30,004	29,546	458	0.64
Moonfish	4,477	4,474	3	0.10
Wahoo	13,723	13,646	77	0.29
Oilfish	6,731	5,439	1,292	0.14
Pomfret	25,686	25,381	305	0.55
Total	80,621	78,486	2,135	1.72
Total PMUS	391,012	317,400	73,612	8.36
Non-PMUS Sharks	183	1	182	0.00
Total Non-PMUS	4,067	93	3,974	0.09
Total All Species	395,079	317,493	77,586	8.44

Table 10. Hawaii and California-based pelagic longline vessels annual statistics for fishing within the U.S. EEZ (main Hawaiian Islands, Northwestern Hawaiian Islands, or the Pacific Remote Islands, and with shallow sets, including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage

Time Period 1 January-31 December 2022
 Set Types Shallow sets
 Fishing Area Inside U.S. EEZ

Number of vessels active	8
Number of trips (partial or completed)	8
Number of sets	37
Number of hooks set	49,328

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	13	13	0	0.26
Striped marlin	33	32	1	0.67
Shortbill spearfish	10	10	0	0.20
Swordfish	185	177	8	3.75
Other billfishes	9	8	1	0.18
Total	250	240	10	5.07
Shark PMUS				
Blue shark	190	0	190	3.85
Mako sharks	22	0	22	0.45
Thresher sharks	11	0	11	0.22
Oceanic whitetip shark	23	0	23	0.47
Silky shark	1	0	1	0.02
Total	247	0	247	5.01
Tuna PMUS				
Albacore	0	0	0	0.00
Bigeye tuna	7	6	1	0.14
Yellowfin tuna	51	50	1	1.03
Bluefin tuna	0	0	0	0.00
Skipjack tuna	3	3	0	0.06
Other tunas	0	0	0	0.00
Total	61	59	2	1.24
Other PMUS				
Mahimahi	13	13	0	0.26
Moonfish	1	1	0	0.02
Wahoo	3	3	0	0.06
Oilfish	55	40	15	1.11
Pomfret	0	0	0	0.00
Total	72	57	15	1.46
Total PMUS	630	356	274	12.77
Non-PMUS Sharks	2	0	2	0.04
Total Non-PMUS	11	8	3	0.22
Total All Species	641	364	277	12.99

Table 11. Hawaii and California-based pelagic longline vessels annual statistics for fishing outside the U.S. EEZ and with shallow sets, including effort (number of vessels, trips, sets, and hooks set). For each listed species, organized by pelagic management unit species (PMUS) groups of billfish, shark, tuna, and other, the table includes the number of fish caught, kept, and released, and the catch per unit effort (CPUE, number per 1000 hooks, calculated as the sum of fish caught divided by the sum of hooks set). Data Source: PIFSC Information Management System, Longline Logbook Data.

Report Coverage		Number of vessels active		
Time Period	1 January-31 December 2022	22		
Set Types	Shallow sets	68		
Fishing Area	Outside U.S. EEZ	820		
		1,027,865		

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE Number Caught per 1000 Hooks
PMUS				
Billfish PMUS				
Blue marlin	36	36	0	0.04
Striped marlin	355	353	2	0.35
Shortbill spearfish	52	52	0	0.05
Swordfish	9,426	9,172	254	9.17
Other billfishes	3	3	0	0.00
Total	9,872	9,616	256	9.60
Shark PMUS				
Blue shark	6,165	0	6,165	6.00
Mako sharks	691	4	687	0.67
Thresher sharks	33	0	33	0.03
Oceanic whitetip shark	3	0	3	0.00
Silky shark	4	0	4	0.00
Total	6,896	4	6,892	6.71
Tuna PMUS				
Albacore	1,395	1,376	19	1.36
Bigeye tuna	947	941	6	0.92
Yellowfin tuna	1,016	1,005	11	0.99
Bluefin tuna	4	4	0	0.00
Skipjack tuna	28	28	0	0.03
Other tunas	0	0	0	0.00
Total	3,390	3,354	36	3.30
Other PMUS				
Mahimahi	1,488	1,485	3	1.45
Moonfish	28	26	2	0.03
Wahoo	32	32	0	0.03
Oilfish	172	91	81	0.17
Pomfret	6	4	2	0.01
Total	1,726	1,638	88	1.68
Total PMUS	21,884	14,612	7,272	21.29
Non-PMUS Sharks	3	0	3	0.00
Total Non-PMUS	7	2	5	0.01
Total All Species	21,891	14,614	7,277	21.30

Active Vessels

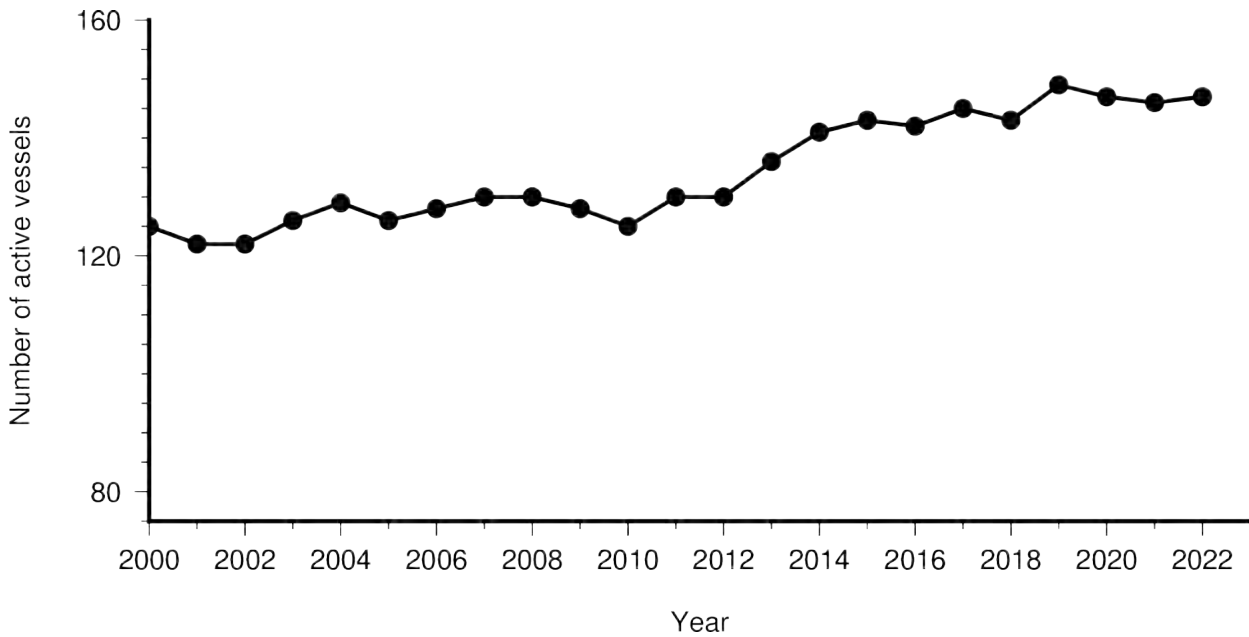


Figure 1: Number of active longline vessels based in Hawaii and California, by year for haul years 2000-2022.

Trips

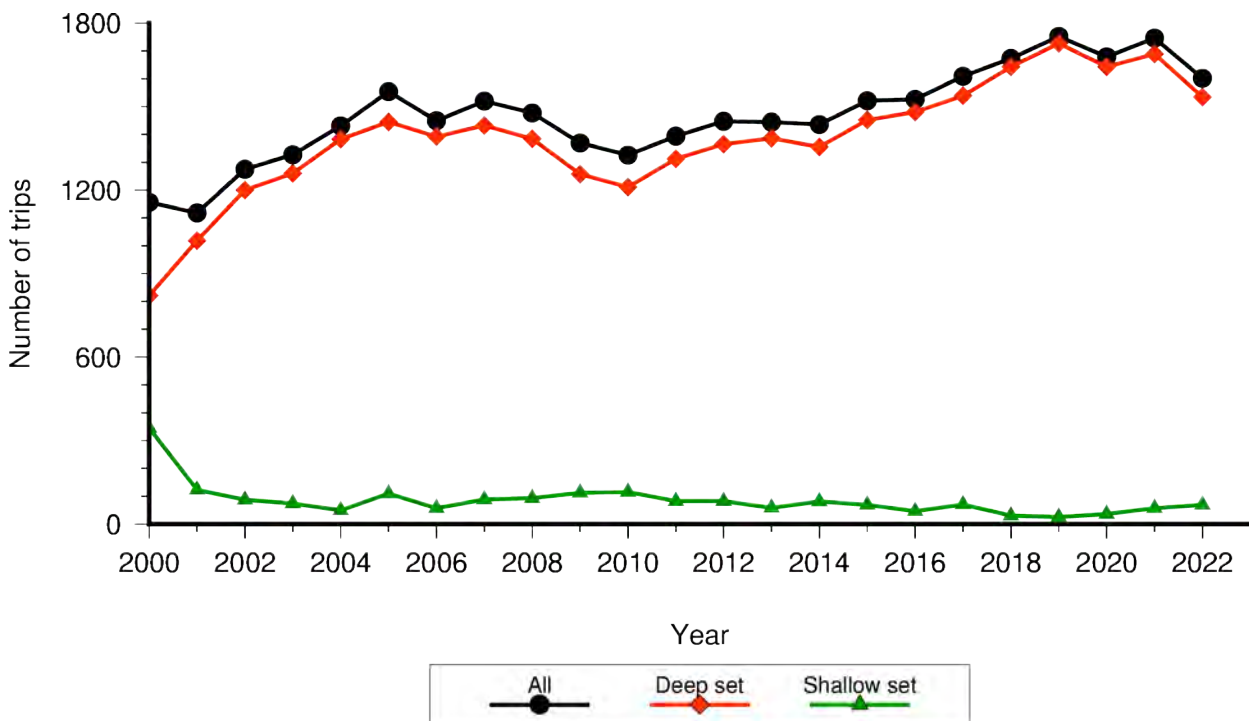


Figure 2: Number of longline trips based in Hawaii and California, by year for haul years 2000-2022.

Sets

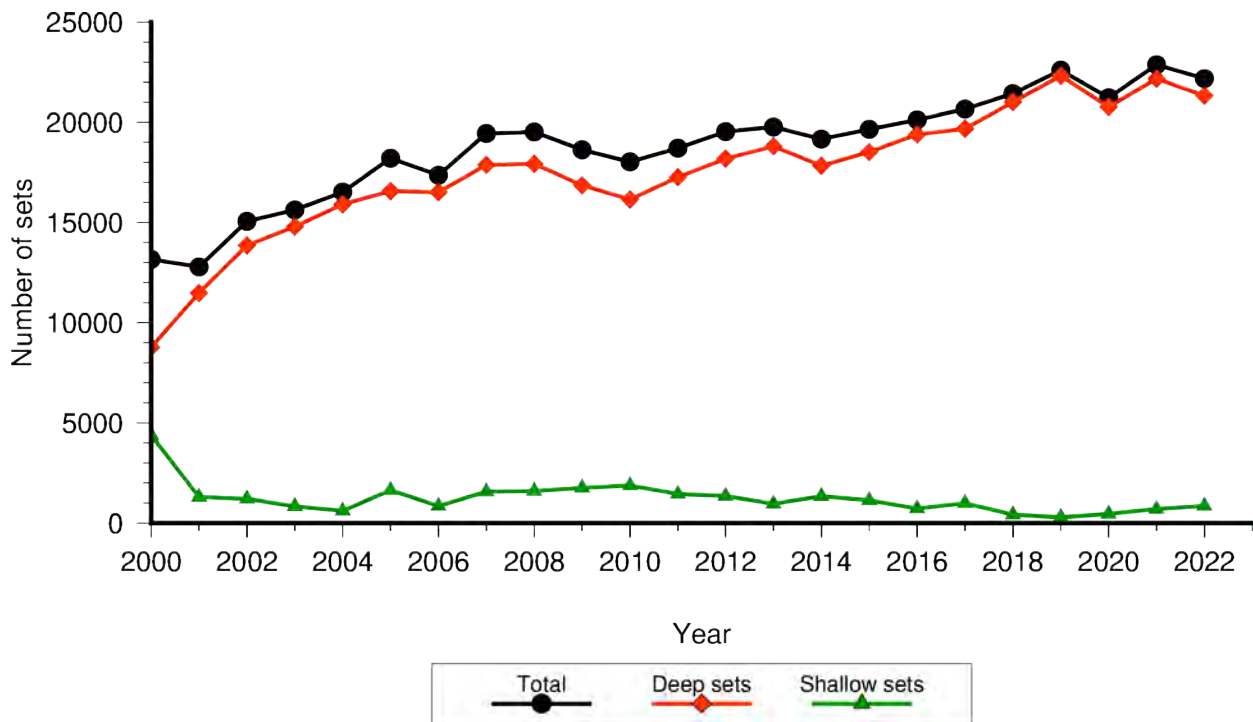


Figure 3: Number of fishing sets by vessels based in Hawaii and California, by year for haul years 2000-2022.

Hooks Set

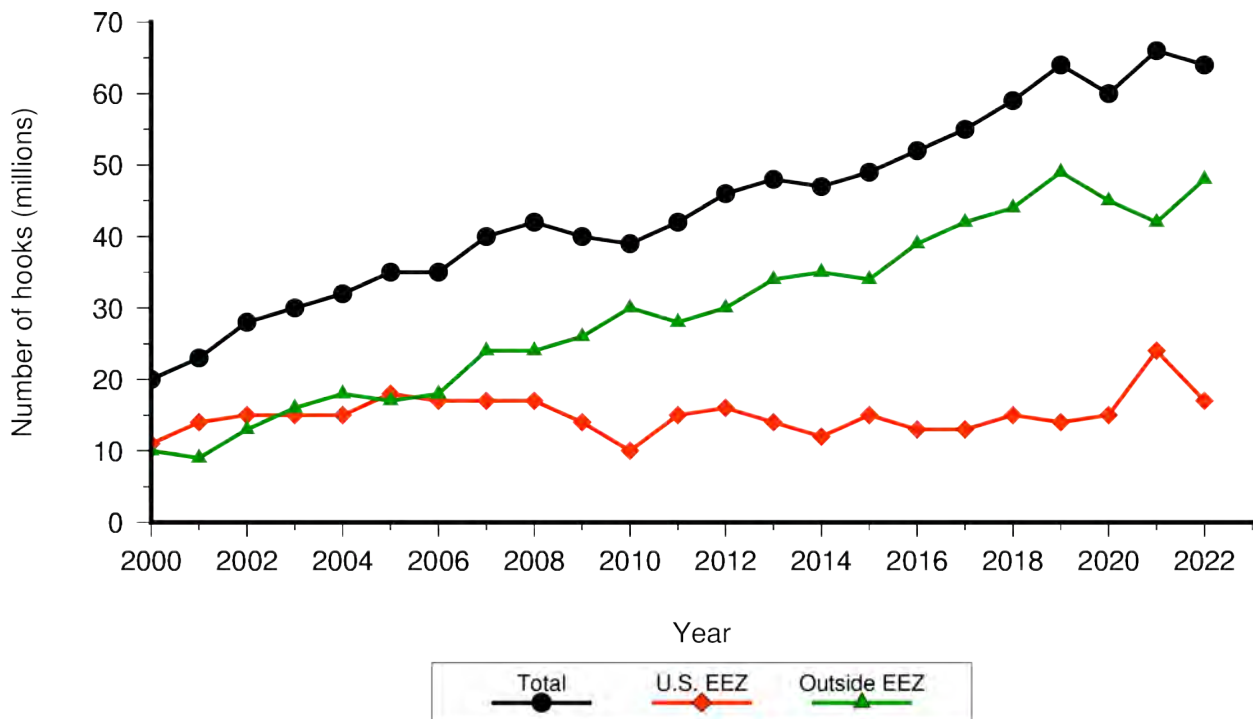


Figure 4: Number of hooks in millions, set by vessels based in Hawaii and California by year, 2000-2022.

Tuna Catch

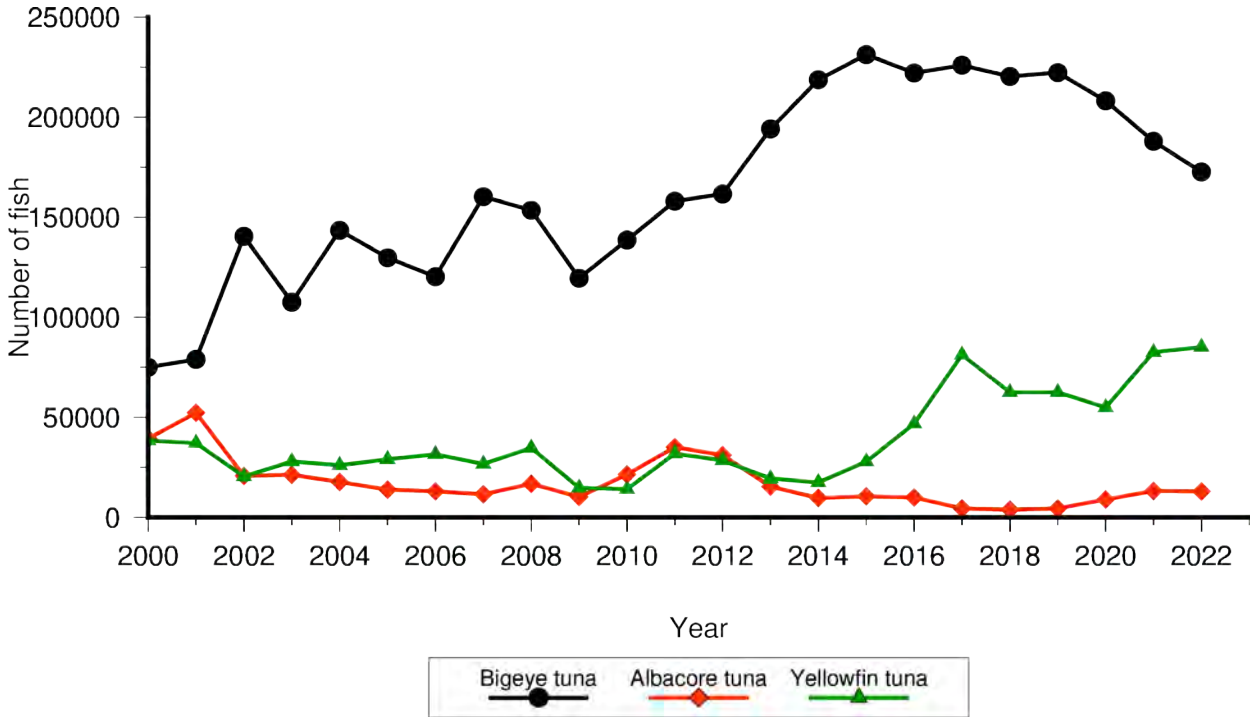


Figure 5: Annual catch (kept + released) of albacore tuna, bigeye tuna, and yellowfin tuna by longline vessels based in Hawaii and California by year, 2000-2022.

Billfish Catch

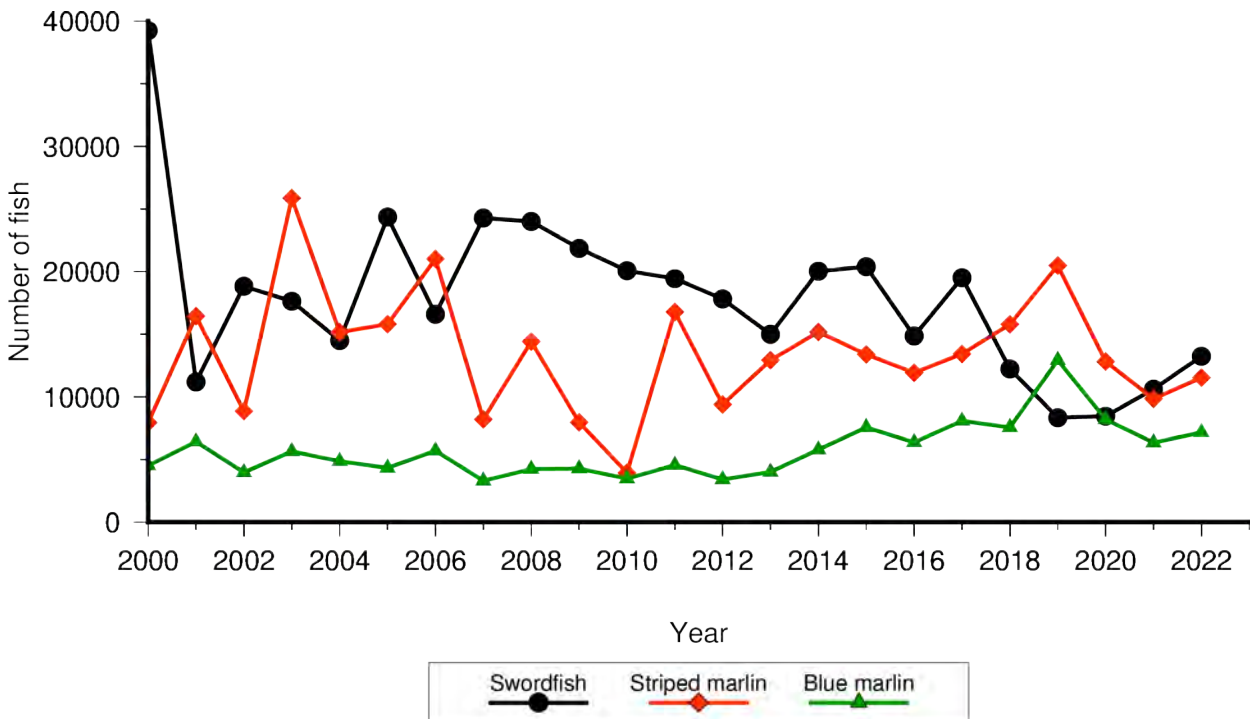


Figure 6: Annual catch (kept + released) of swordfish, striped marlin, and blue marlin by longline vessels based in Hawaii and California by year, 2000-2022.

Shark Catch

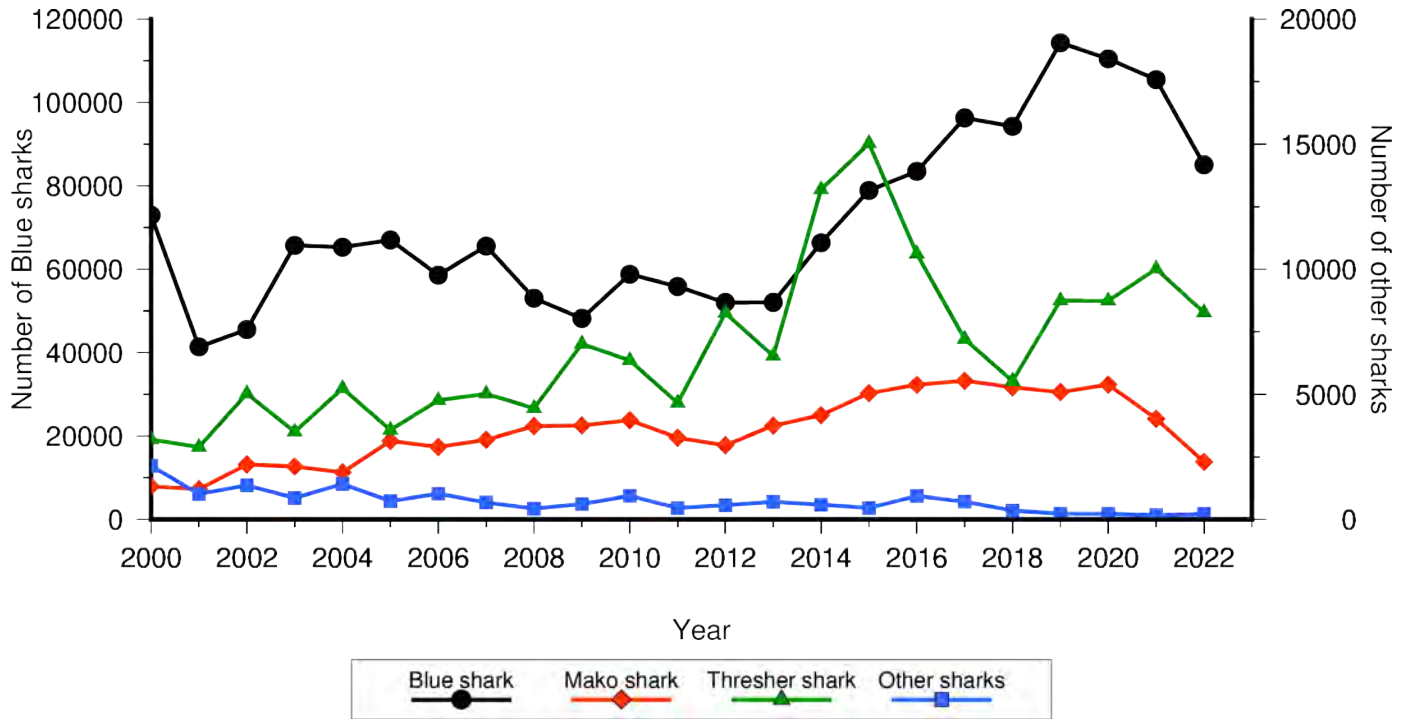


Figure 7: Annual catch (kept + released) of blue shark, mako shark, thresher shark, and other sharks by longline vessels based in Hawaii and California by year, 2000-2022.

Other PMUS Catch

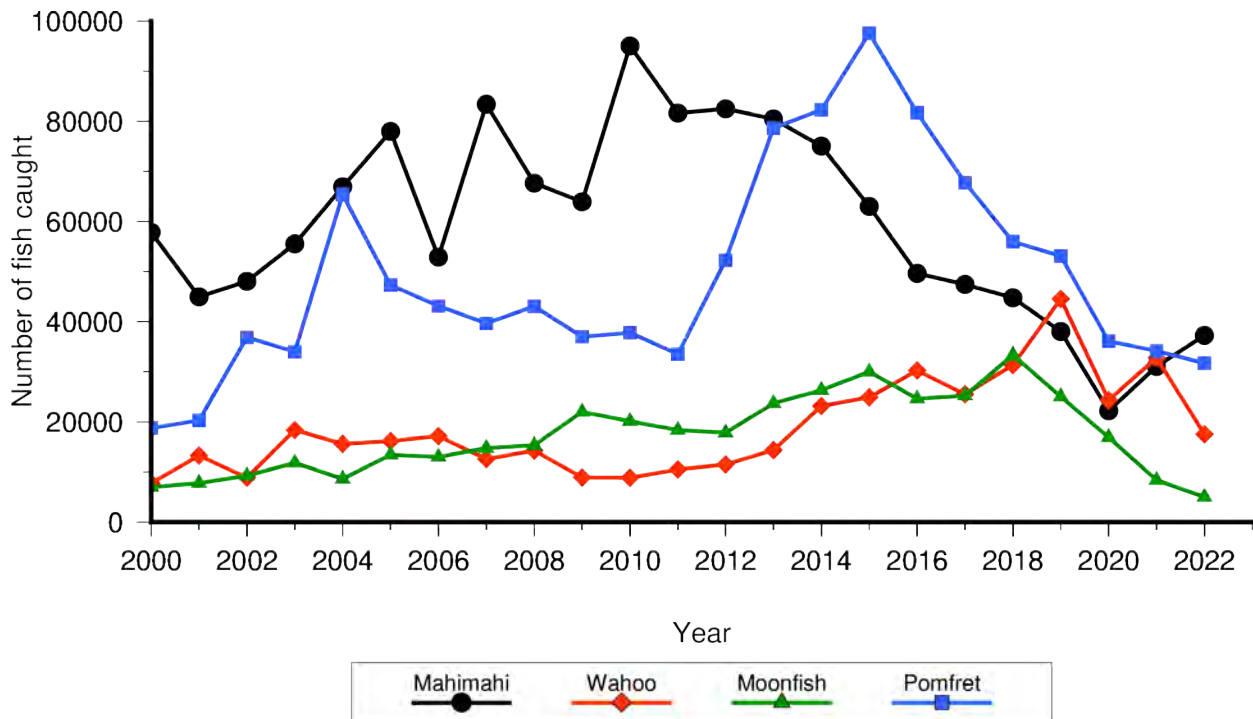


Figure 8: Annual catch (kept + released) of mahimahi, wahoo, moonfish, and pomfret by longline vessels based in Hawaii and California by year 2000-2022.

Sets

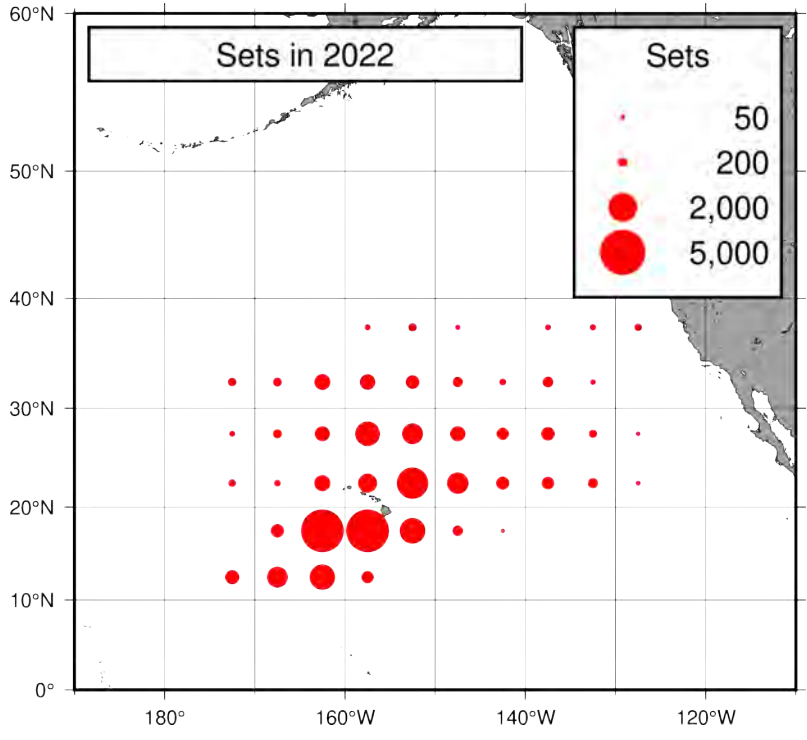


Figure 9: Spatial distribution of the total number of sets by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

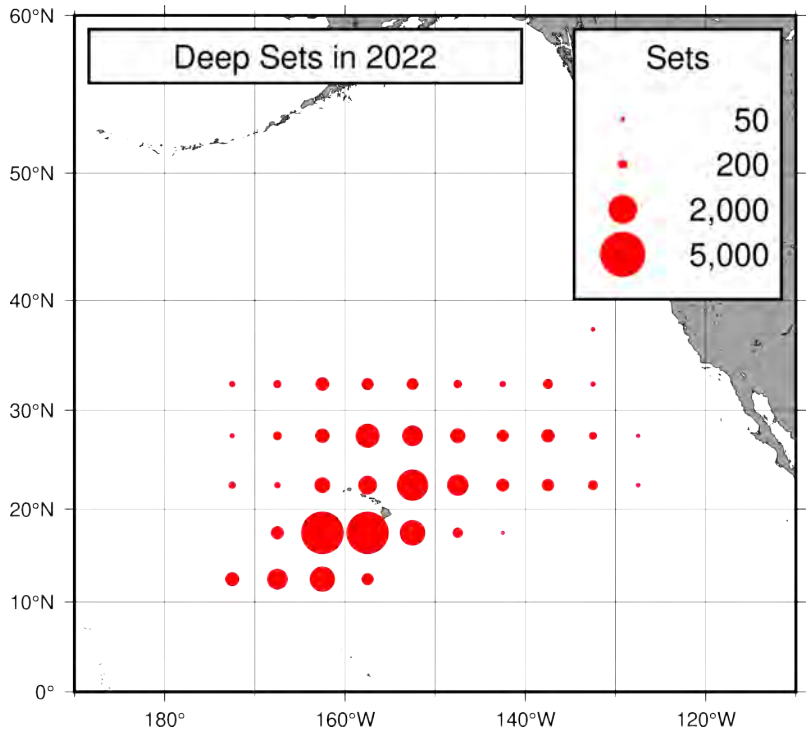


Figure 10: Spatial distribution of the number of deep-set sets by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

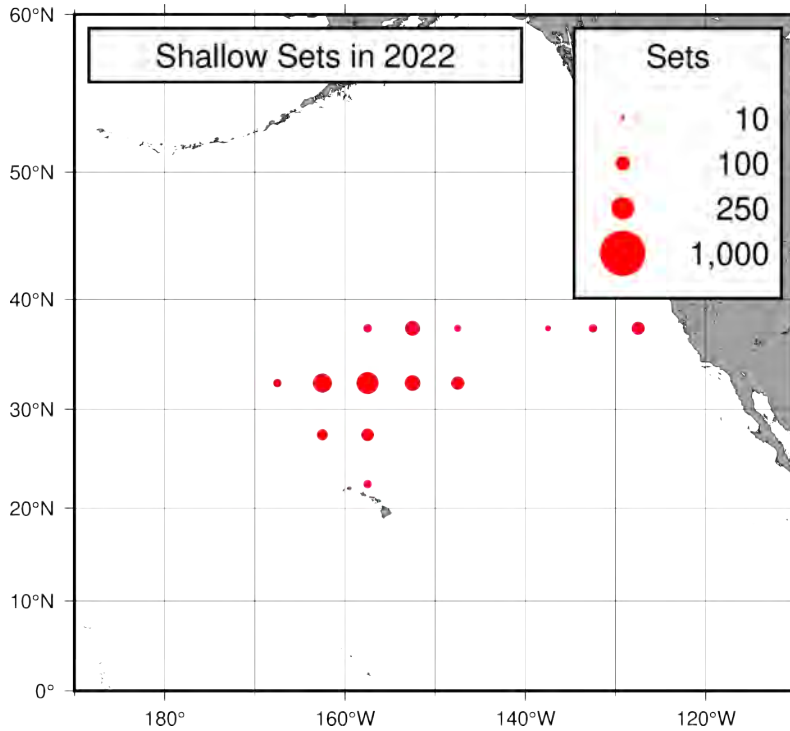


Figure 11: Spatial distribution of the number of shallow-set sets by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

Total Effort

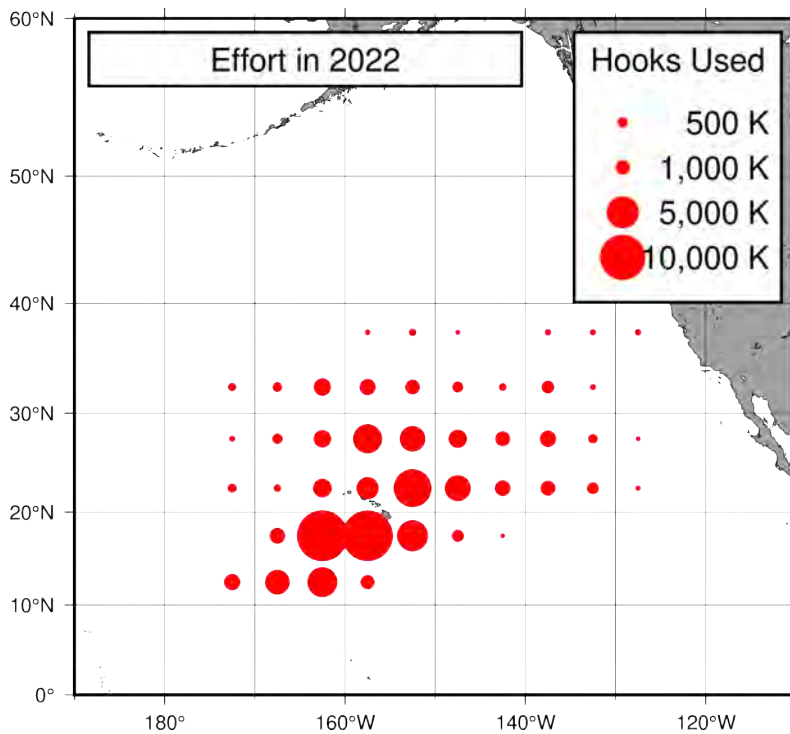


Figure 12: Spatial distribution of the total number of hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

Deep Effort

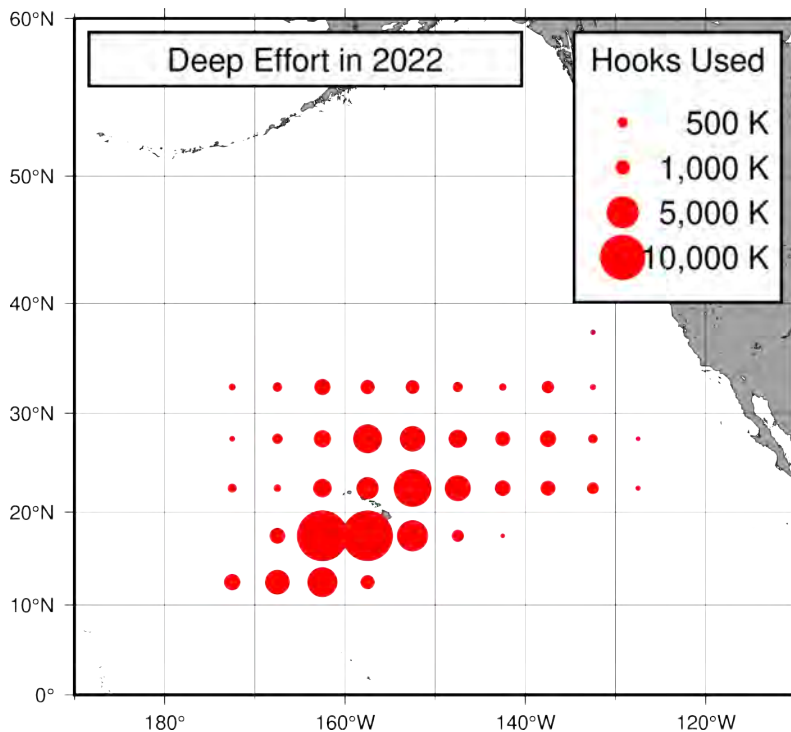


Figure 13: Spatial distribution of the number of deep-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

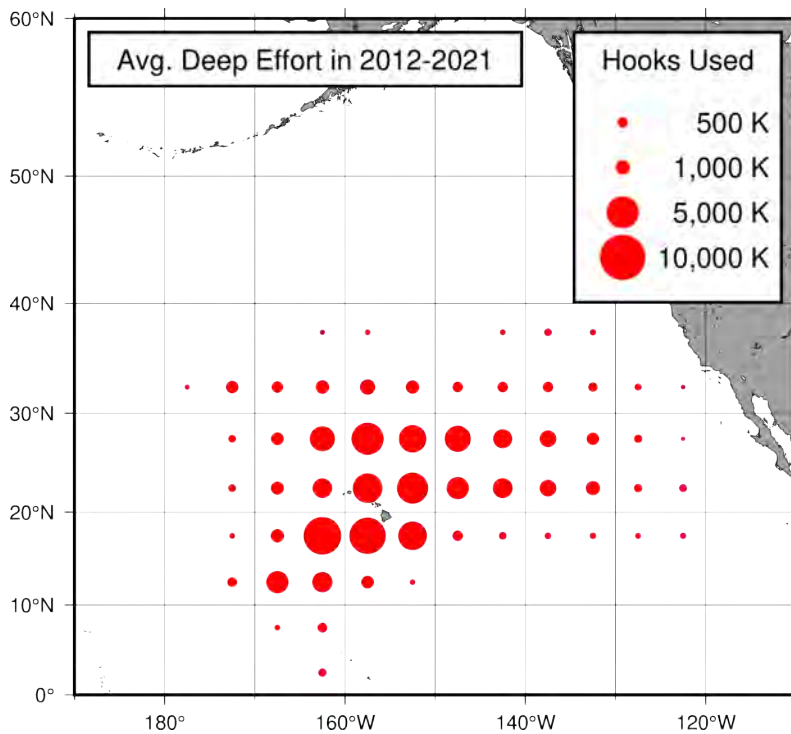


Figure 14: Spatial distribution of the average number of deep-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2012-2021 .

Shallow Effort

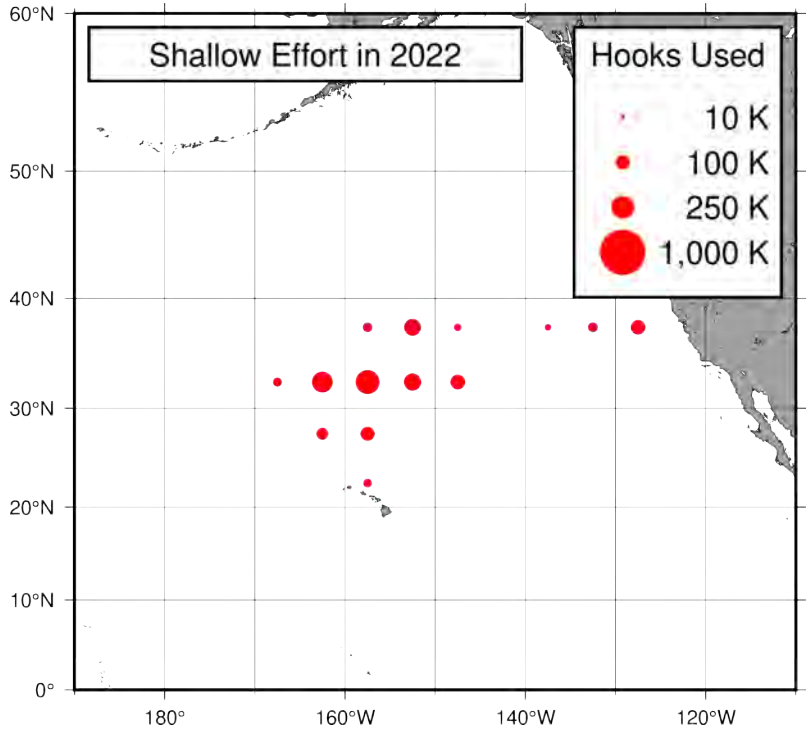


Figure 15: Spatial distribution of the number of shallow-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

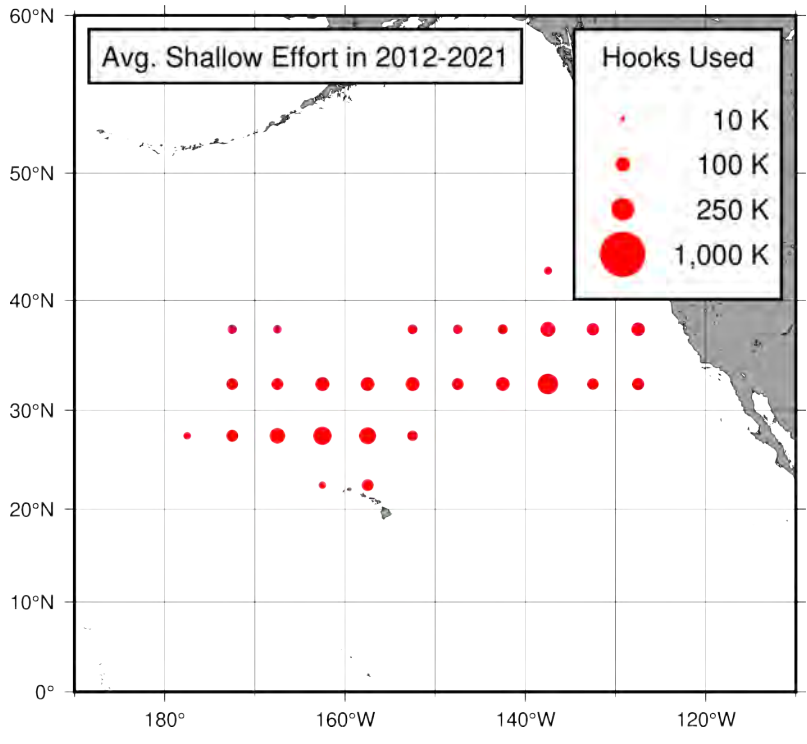


Figure 16: Spatial distribution of the average number of shallow-set hooks set by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2012-2021 .

Bigeye Catch

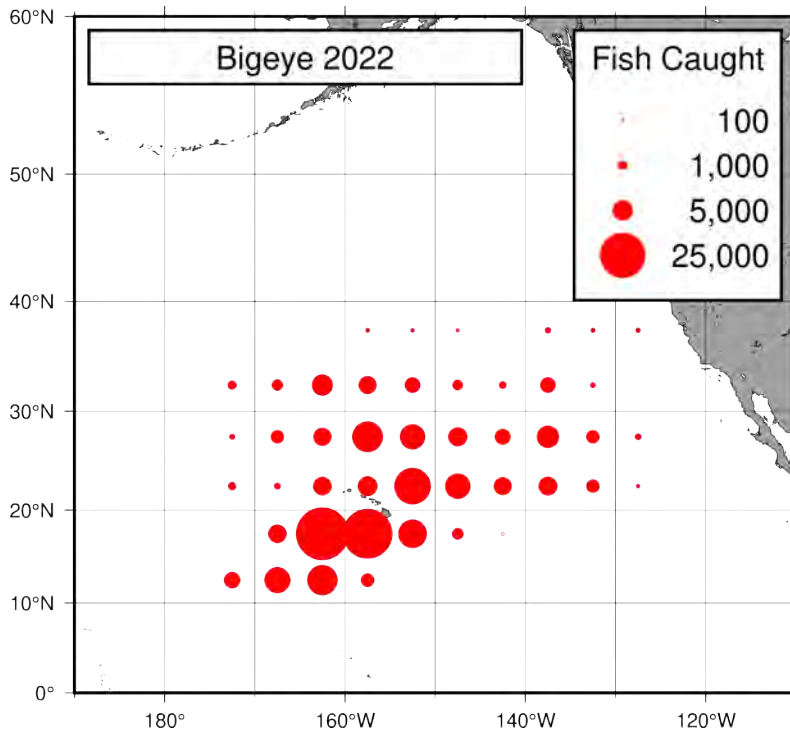


Figure 17: Spatial distribution of the total number of bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

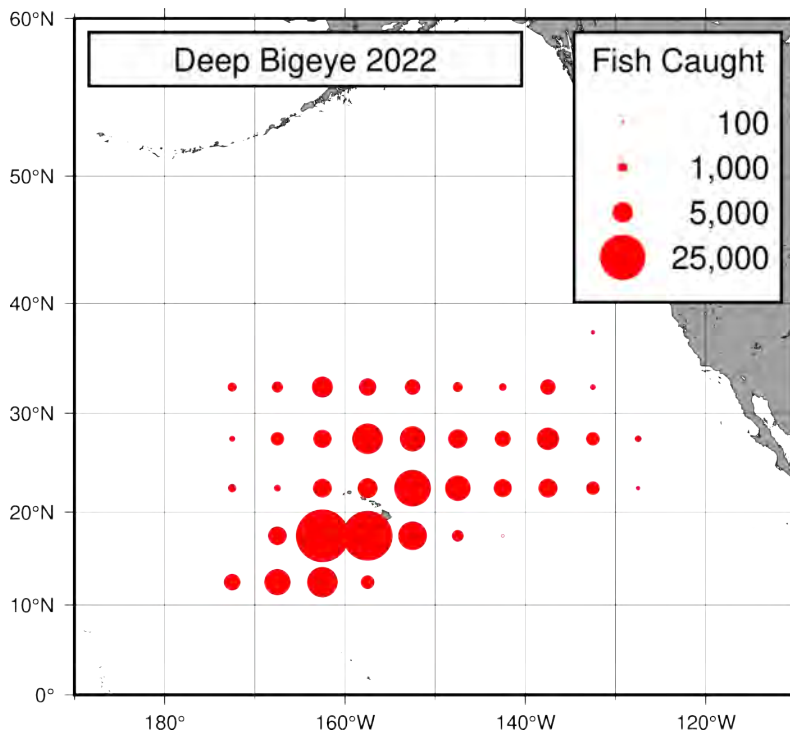


Figure 18: Spatial distribution of the number of deep-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

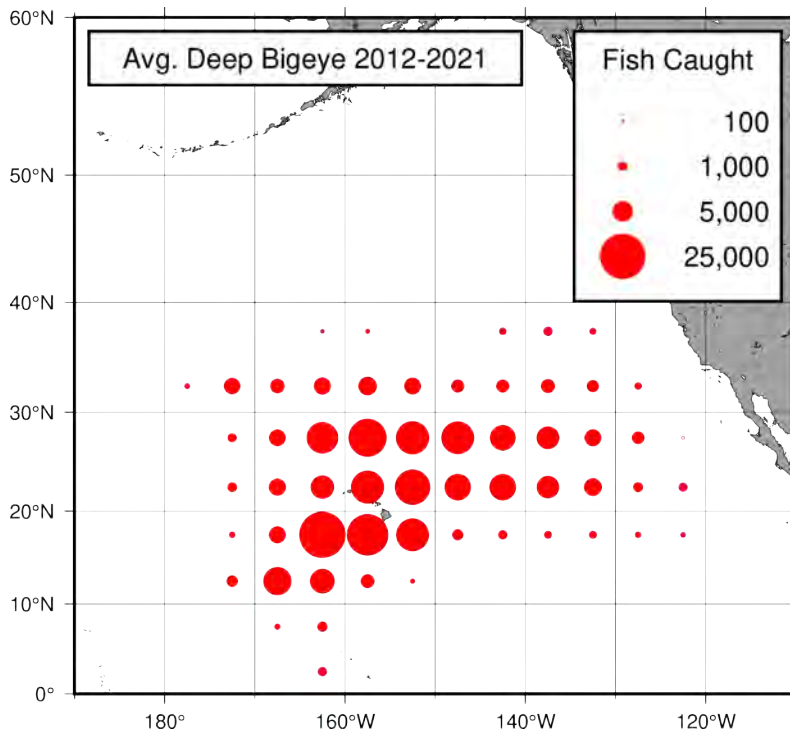


Figure 19: Spatial distribution of the average number of deep-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2012-2021.

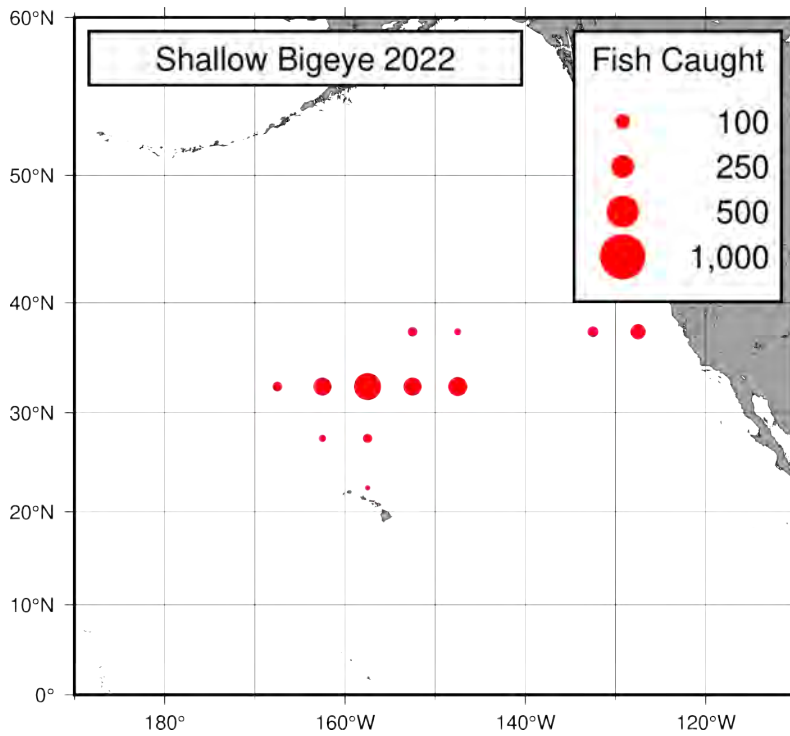


Figure 20: Spatial distribution of the number of shallow-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

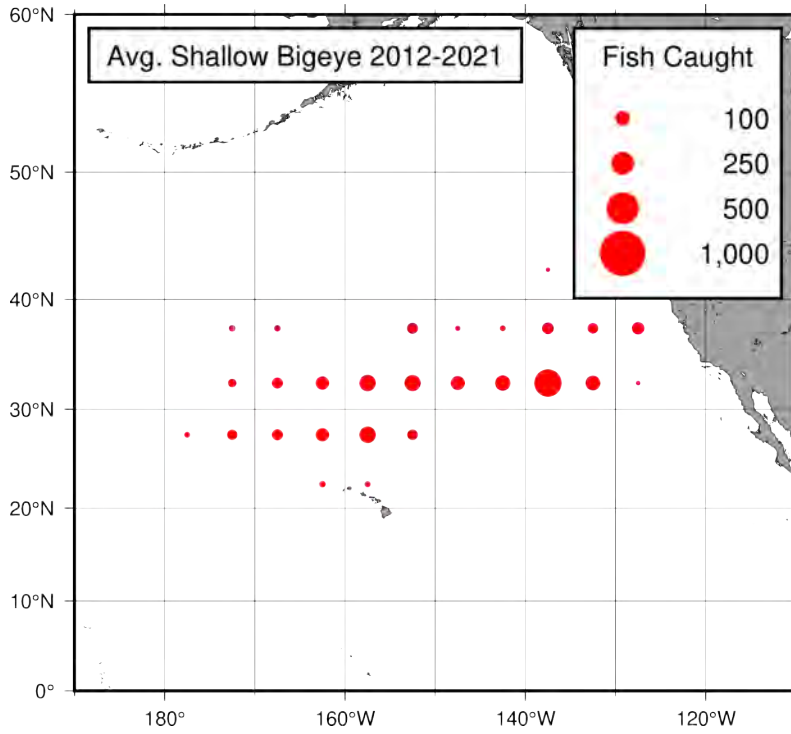


Figure 21: Spatial distribution of the average number of shallow-set bigeye tuna caught by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2012-2021.

Swordfish

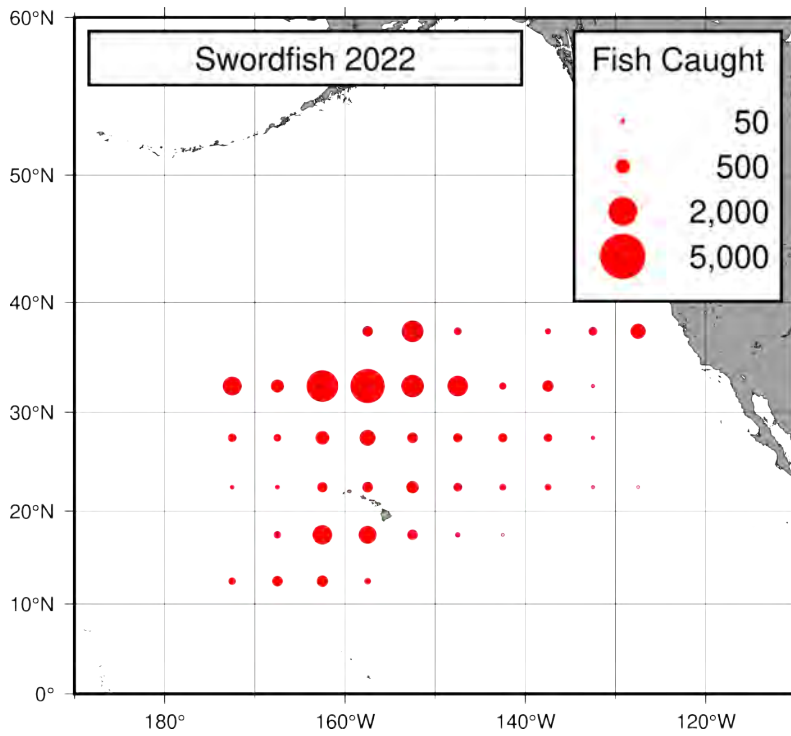


Figure 22: Spatial distribution of the total number of swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

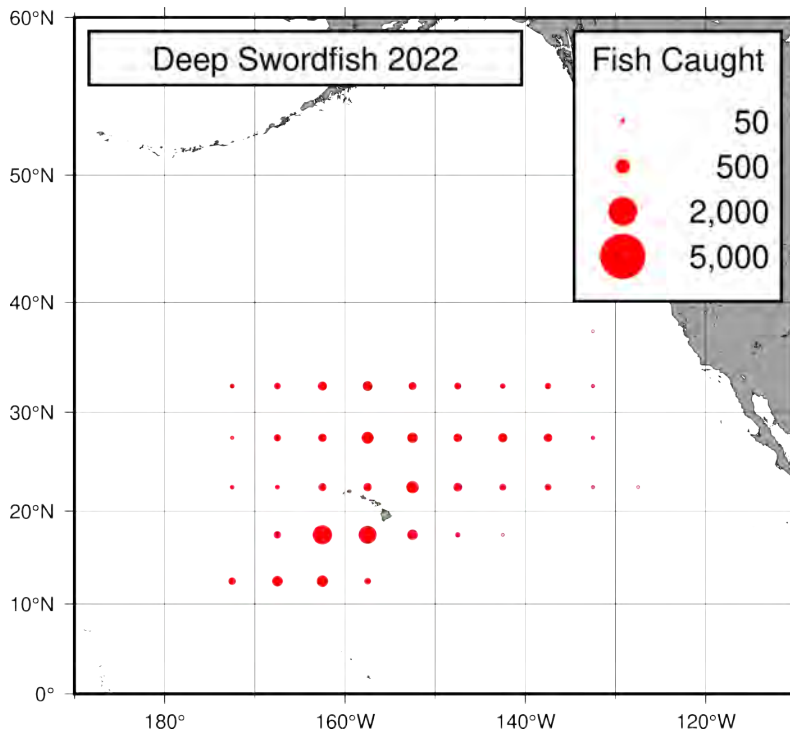


Figure 23: Spatial distribution of the number of deep-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

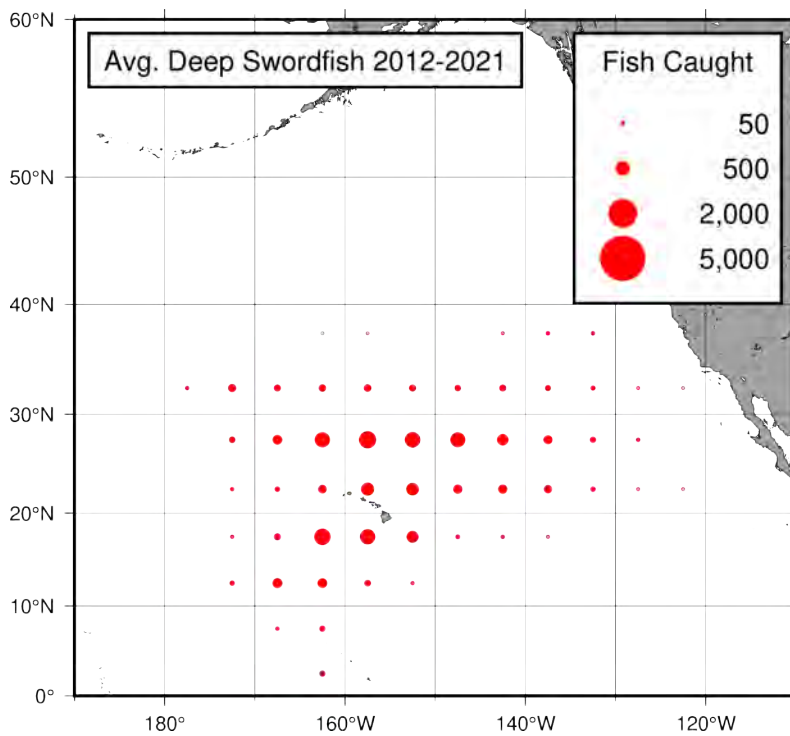


Figure 24: Spatial distribution of the average number of deep-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2012-2021.

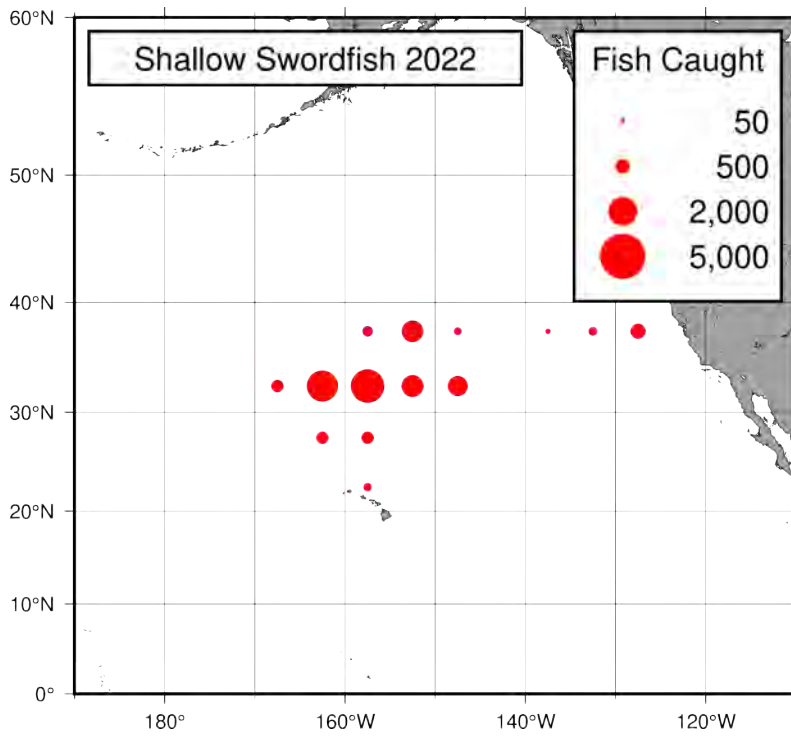


Figure 25: Spatial distribution of the number of shallow-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2022 (provisional data).

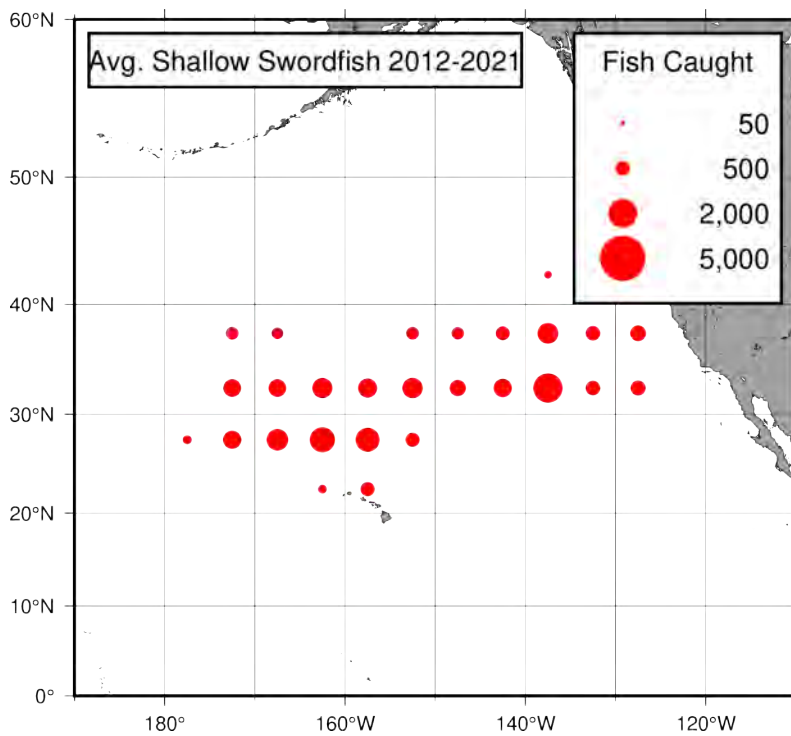


Figure 26: Spatial distribution of the average number of shallow-set swordfish caught, by longline vessels based in Hawaii and California fishing within the North Pacific Ocean, 2012-2021.