

Data revision report of Japan as of 2021

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Introduction

ISC Statistic Working Group (STATWG) decided that it is required to submit data revision report to the STATWG when data revision is made, and the revision meets the specific condition (Anon. 2014). After July 1, 2020, Japan revised the catch in weight (mt) data “Category 1c” including catch for shortfin mako for 1994-2019.

Data revision

1. Category 1c

1.1. Shortfin mako

The gear-specific annual catches of shortfin mako caught by Japanese fleets between 1994 and 2019 were updated using the same catch estimation methods used in the previous benchmark stock assessment in 2018 (ISC, 2018). The overall calculation methods of gear-specific annual catches were described in the working document paper (Uosaki and Kai, 2019) presented at STATWG meeting in 2019. The large differences of the annual catch tables between two tables in 2020 and 2021 (**Table 1**) were caused by the different values of annual CPUEs for longline fleets (Kai, 2021a,b) and proportions of the catch for shortfin mako shark to all sharks in the estimation of catches for other gears. The estimates of annual catches (Kai, 2021c; Kai and Yano, 2021) were largely affected by the values of annual CPUE and the proportion of the catches. Note that the catch in 2020 was the same values as that for 2019 for each gear.

Reference

- Anon. 2014. Report of the Statistics Working Group. International Scientific Committee for Tunas and Tuna-like Species in the North Pacific Ocean. July 10-11, 2014.
- ISC, 2021. Stock Assessment of Shortfin Mako Shark in the North Pacific Ocean Through 2019., ISC 21 Plenary Report and Documents.
- Kai, M., 2021a. Updated CPUE of shortfin mako, *Isurus oxyrinchus*, caught by Japanese research and training vessels in the western and central North Pacific. ISC/21/SHARKWG-1/03.
- Kai, M., 2021b. Updated CPUE of shortfin mako, *Isurus oxyrinchus*, caught by Japanese shallow-set longliner in the northwestern Pacific from 1994 to 2019. ISC/21/SHARKWG-1/04.
- Kai, M., 2021c. Estimation of catches for shortfin mako, *Isurus oxyrinchus*, caught by Japanese offshore and distant water fisheries. ISC/21/SHARKWG-1/05.
- Kai, M., and Yano, T., 2021. Updated catches of shortfin mako, *Isurus oxyrinchus*, caught by Japanese coastal fisheries. ISC/21/SHARKWG-1/06.
- Matsubara, N., Tsuda, Y., Minami, H., Nakatsuka, S., Fukuda, H., Kai, M., Tanaka, Y., Fujioka, K., Ijima, H., Semba,

Y., Aoki, Y., Tsukahara, Y., and Uosaki, K., 2021. National report of Japan.

Uosaki, K., and Kai, M., 2019. Data revision report of Japan as of 2019. ISC19/STATWG/WP-01.

Table 1. Category 1 shortfin mako catch by gear.

BEFORE (on July 1, 2020)

Species	year	GND 4	LLD 13	LLD 99	MIS 99	Total
SMA	1994	123.00	689.96	57.91	17.64	888.51
SMA	1995	103.06	929.09	56.16	13.19	1101.50
SMA	1996	101.06	804.08	348.32	14.00	1267.46
SMA	1997	127.49	696.62	180.65	15.05	1019.81
SMA	1998	130.23	648.95	18.07	12.14	809.39
SMA	1999	176.44	855.55	195.81	12.91	1240.71
SMA	2000	155.58	930.34	89.33	13.67	1188.92
SMA	2001	155.75	944.73	186.95	13.67	1301.10
SMA	2002	121.94	696.49	106.50	4.69	929.62
SMA	2003	228.74	832.39	16.53	5.68	1083.34
SMA	2004	133.50	897.76	22.20	0.79	1054.25
SMA	2005	154.89	888.85	48.87	42.85	1135.46
SMA	2006	177.88	988.09	7.97	5.65	1179.59
SMA	2007	243.83	1006.96	33.55	14.63	1298.97
SMA	2008	212.49	870.92	97.12	13.69	1194.22
SMA	2009	294.17	922.39	278.44	1.48	1496.48
SMA	2010	272.00	796.38	120.32	19.65	1208.35
SMA	2011	162.98	600.61	47.77	11.47	822.83
SMA	2012	229.46	706.78	9.49	1.83	947.56
SMA	2013	344.68	652.60	47.27	9.41	1053.96
SMA	2014	263.22	777.17	7.22	3.31	1050.92
SMA	2015	334.13	550.56	2.22	11.45	898.36
SMA	2016	448.29	379.98	32.52	25.68	886.47
SMA	2017	271.13	613.88	23.33	9.80	918.13
SMA	2018	223.22	555.51	19.28	28.24	826.24
SMA	2019	223.22	555.51	19.28	28.24	826.24

AFTER (on July 1, 2021)

Species	year	GND 4	LLD 13	LLD 99	MIS 99	Total
SMA	1994	123.00	906.54	68.92	20.62	1119.08
SMA	1995	103.06	892.13	65.43	14.72	1075.35
SMA	1996	101.06	750.75	398.68	17.08	1267.56
SMA	1997	127.49	838.02	205.95	15.95	1187.41
SMA	1998	130.23	898.81	21.08	12.61	1062.73
SMA	1999	176.44	1154.87	218.93	13.66	1563.90
SMA	2000	155.58	1002.45	104.37	15.18	1277.58
SMA	2001	155.75	943.62	210.23	14.94	1324.54
SMA	2002	121.94	843.25	120.39	4.69	1090.26
SMA	2003	228.74	951.26	19.30	5.68	1204.97
SMA	2004	133.50	901.02	26.27	0.79	1061.58
SMA	2005	154.89	960.18	61.32	42.85	1219.24
SMA	2006	177.88	1052.90	9.56	5.65	1245.99
SMA	2007	243.83	1144.20	43.08	14.63	1445.75
SMA	2008	212.49	895.85	121.07	13.69	1243.09
SMA	2009	294.17	889.34	341.85	1.48	1526.84
SMA	2010	272.00	830.05	150.87	19.65	1272.57
SMA	2011	162.98	668.84	47.74	11.00	890.56
SMA	2012	229.46	696.90	9.53	1.83	937.72
SMA	2013	344.68	696.45	46.76	9.11	1096.99
SMA	2014	263.22	747.54	7.23	3.16	1021.15

SMA	2015	334.13	845.14	2.25	11.00	1192.51
SMA	2016	445.69	954.81	32.32	15.66	1448.48
SMA	2017	271.13	651.13	23.33	9.80	955.38
SMA	2018	223.22	819.34	19.28	28.24	1090.08
SMA	2019	195.46	774.76	15.54	2.39	988.15

Difference

Species	year	GND 4	LLD 13	LLD 99	MIS 99	Total
SMA	1994	+0.00	+216.58	+11.01	+2.98	+230.57
SMA	1995	-0.00	-36.96	+9.27	+1.53	-26.15
SMA	1996	+0.00	-53.33	+50.36	+3.08	+0.10
SMA	1997	-0.00	+141.40	+25.30	+0.90	+167.60
SMA	1998	+0.00	+249.86	+3.01	+0.47	+253.34
SMA	1999	+0.00	+299.32	+23.12	+0.75	+323.19
SMA	2000	0.00	+72.11	+15.04	+1.51	+88.66
SMA	2001	-0.00	-1.11	+23.28	+1.27	+23.44
SMA	2002	-0.00	+146.76	+13.89	-0.00	+160.64
SMA	2003	-0.00	+118.87	+2.77	-0.00	+121.63
SMA	2004	+0.00	+3.26	+4.07	-0.00	+7.33
SMA	2005	+0.00	+71.33	+12.45	+0.00	+83.78
SMA	2006	-0.00	+64.81	+1.59	+0.00	+66.40
SMA	2007	+0.00	+137.24	+9.53	+0.00	+146.78
SMA	2008	-0.00	+24.93	+23.95	-0.00	+48.87
SMA	2009	+0.00	-33.05	+63.41	+0.00	+30.36
SMA	2010	+0.00	+33.67	+30.55	-0.00	+64.22
SMA	2011	-0.00	+68.23	-0.03	-0.47	+67.73
SMA	2012	+0.00	-9.88	+0.04	-0.00	-9.84
SMA	2013	-0.00	+43.85	-0.51	-0.30	+43.03
SMA	2014	+0.00	-29.63	+0.01	-0.15	-29.77
SMA	2015	-0.00	+294.58	+0.03	-0.45	+294.15
SMA	2016	-2.60	+574.83	-0.20	-10.02	+562.01
SMA	2017	0.00	+37.24	0.00	0.00	+37.24
SMA	2018	0.00	+263.84	0.00	0.00	+263.84
SMA	2019	-27.75	+219.25	-3.74	-25.85	+161.91

Ratio

Species	year	GND 4	LLD 13	LLD 99	MIS 99	Total
SMA	1994	100%	131%	119%	117%	126%
SMA	1995	100%	96%	117%	112%	98%
SMA	1996	100%	93%	114%	122%	100%
SMA	1997	100%	120%	114%	106%	116%
SMA	1998	100%	139%	117%	104%	131%
SMA	1999	100%	135%	112%	106%	126%
SMA	2000	100%	108%	117%	111%	107%
SMA	2001	100%	100%	112%	109%	102%
SMA	2002	100%	121%	113%	100%	117%
SMA	2003	100%	114%	117%	100%	111%
SMA	2004	100%	100%	118%	100%	101%
SMA	2005	100%	108%	125%	100%	107%
SMA	2006	100%	107%	120%	100%	106%
SMA	2007	100%	114%	128%	100%	111%
SMA	2008	100%	103%	125%	100%	104%
SMA	2009	100%	96%	123%	100%	102%
SMA	2010	100%	104%	125%	100%	105%

SMA	2011	100%	111%	100%	96%	108%
SMA	2012	100%	99%	100%	100%	99%
SMA	2013	100%	107%	99%	97%	104%
SMA	2014	100%	96%	100%	95%	97%
SMA	2015	100%	154%	101%	96%	133%
SMA	2016	99%	251%	99%	61%	163%
SMA	2017	100%	106%	100%	100%	104%
SMA	2018	100%	147%	100%	100%	132%
SMA	2019	88%	139%	81%	8%	120%
