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Supplement of

Standardization of a geo-referenced fishing data set for the Indian Ocean bigeye tuna, *Thunnus obesus* (1952–2014)

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Table S1: List of sub-datasets and each threshold used for outliers' routine.

Sub datasets	Catch unit/effort unit	t value	Nb of records	Detected outliers (%)	Corrected outliers (%)
Japan LL	nb. individual/nb. hooks	3	31,963	3.8	95.1
Taiwan LL	tonnes/nb. hooks	3	24,918	2.0	98.6
Korea LL	nb. individual/nb. hooks	3	6,844	3.7	97.6
Seychelles LL	tonnes/nb. hooks	10	3,246	5.4	94.8
Korea LL	tonnes/nb. hooks	3	2,292	3.2	80.8
China LL	tonnes/nb. hooks	2	1,371	6.6	79.1
Mauritius LL	tonnes/nb. hooks	5	204	5.4	18.2
Thailand LL	tonnes/nb. sets	3	123	1.6	100.0
Thailand LL	tonnes/nb. fishing days	4	100	2.0	100.0
Thailand LL	tonnes/nb. hooks	4	75	4.0	100.0
Maldives LL	tonnes/nb. hooks	3	72	4.2	100.0
Philippine LL	tonnes/nb. fishing days	3	22	0.0	0.0
Australia ELL	tonnes/nb. hooks	5	949	3.7	28.6
La Reunion ELL	tonnes/nb. hooks	6	946	3.5	63.6
Seychelles ELL	tonnes/nb. hooks	4	549	5.3	62.1
South Africa ELL	tonnes/nb. hooks	5	440	4.1	16.7
Portugal ELL	tonnes/nb. fishing days	6	177	4.5	75.0
Mayotte ELL	tonnes/nb. fishing days	2	144	0.0	0.0
Mauritius ELL	tonnes/nb. hooks	8	139	6.5	22.2
Portugal ELL	tonnes/nb. hooks	10	51	5.9	33.3
Taiwan FLL	tonnes/nb. hooks	4	1,806	5.9	95.3
China FLL	tonnes/nb. hooks	2	110	6.4	14.3
Malaysia FLL	tonnes/nb. hooks	5	55	3.6	0.0
India LLEX	tonnes/nb. hooks	6	41	7.3	66.7
Spain PS (LS)	tonnes/nb. fishing hours	5	17,586	5.7	97.5
France PS (LS)	tonnes/nb. fishing hours	5	14,118	5.1	94.5
Seychelles PS (LS)	tonnes/nb. fishing hours	6	8,034	4.3	93.6
NEIPS PS (LS)	tonnes/nb. fishing hours	6	4,835	4.1	96.0
NEISU PS (LS)	tonnes/nb. fishing days	5	1,721	4.8	87.8
Spain PS (LS)	tonnes/nb. fishing days	9	1,140	4.9	83.9
Japan PS (LS)	tonnes/nb. fishing days	4	973	5.7	81.8
Japan PS (LS)	tonnes/nb. days at sea	8	548	4.2	91.3
Korea PS (LS)	tonnes/nb. sets	4	356	3.9	57.1
Thailand PS (LS)	tonnes/nb. fishing days	6	231	5.2	91.7
Japan PS (LS)	tonnes/nb. sets	5	187	2.7	80.0
Mauritius PS (LS)	tonnes/nb. fishing hours	5	144	3.5	40.0
Thailand PS (LS)	tonnes/nb. sets	6	130	5.4	71.4
Soviet PS (LS)	tonnes/nb. fishing days	4	104	4.8	100.0
France PS (MIX)	tonnes/nb. fishing hours	5	4,025	4.6	82.4
Spain PS (MIX)	tonnes/nb. fishing hours	5	3,355	3.8	64.8
Japan PS (MIX)	tonnes/nb. days at sea	5	2,288	5.2	98.3
Seychelles PS (MIX)	tonnes/nb. fishing hours	5	977	5.1	38
NEIPS PS (MIX)	tonnes/nb. fishing hours	5	787	4.7	35.1
Mauritius PS (MIX)	tonnes/nb. fishing hours	4	568	5.5	61.3
NEISU PS (MIX)	tonnes/nb. fishing days	6	502	4.8	87.5
Spain PS (MIX)	tonnes/nb. fishing days	6	179	2.2	75.0
Thailand PS (MIX)	tonnes/nb. fishing days	12	13	0.0	0.0
France PS (FS)	tonnes/nb. fishing hours	10	2,587	4.4	74.3
Spain PS (FS)	tonnes/nb. fishing hours	9	2,259	4.9	57.3
NEIPS PS (FS)	tonnes/nb. fishing hours	9	1,365	4.9	61.2
Seychelles PS (FS)	tonnes/nb. fishing hours	9	1,121	4.7	34.0

Sub datasets	Catch unit/effort unit	t value	Nb of records	Detected outliers (%)	Corrected outliers (%)
Spain PS (FS)	tonnes/nb. fishing days	14	265	3.8	60.0
NEISU PS (FS)	tonnes/nb. fishing days	6	61	4.9	0.0
Thailand PS (FS)	tonnes/nb. fishing days	5	37	5.4	100.0
Japan PS (FS)	tonnes/nb. days at sea	8	32	6.2	50.0
Mauritius PS (FS)	tonnes/nb. fishing hours	10	20	5.0	0.0
Korea PS (FS)	tonnes/nb. sets	5	7	0.0	0.0
Indonesia PSS	tonnes/nb. trips	2	75	0.0	0.0
Taiwan GILL	tonnes/nb. net-days	11	6,573	4.9	80.0
Sri Lanka GL	tonnes/nb. trips	7	2,178	5.5	34.5
La Reunion HATR	tonnes/nb. hooks	4	575	4.3	0.0
La Reunion HATR	tonnes/nb. boats	2	500	5.0	0.0
Sri Lanka UNCL	tonnes/nb. trips	29	469	5.3	0.0
Maldives LLCO	tonnes/nb. hooks	2	422	7.3	100.0
Maldives LLCO	tonnes/nb. fishing days	2	175	5.7	100.0
Maldives BB	tonnes/nb. fishing days	114	117	5.1	83.3
Australia BB	tonnes/nb. days at sea	2	4	0.0	0.0
Maldives HAND	tonnes/nb. fishing days	9	83	4.8	100.0
South Africa SPOR	tonnes/nb. days at sea	2	50	0.0	0.0
Indonesia TROL	tonnes/nb. trips	2	30	0.0	0.0

Table S2: Inputs and outputs of effort standardization procedure.

Fleet, effort unit, period	Range of raw effort	Range of ratio	Range of converted effort	Range of reference effort	Reference fleet, effort unit, period
Portuguese-ELL, nb. fishing days (2006,2007,2013,2014)	1-1,772	0.000006-0.004	267-3,233,350	1,005-104,640	Portuguese –ELL, nb.hooks (2008, 2010, 2011)
Mayotte-ELL, nb. fishing days (2005)	0.2-1.3	0.00007-0.002-	142-17,721	1,005-104,640	Portuguese –ELL, nb.hooks (2008, 2010, 2011)
Thailand-LL, nb. fishing days (2013-2014)	1-42	0.00003-0.0009	1,002-913,935	2,800-82,039	Thailand-LL, nb. hooks (2011)
Thailand-LL, nb sets (2007,2008)	0.02-40	0.00008-0.003	267-3,233,351	2,800-82,039	Thailand-LL, nb. hooks (2011)
Philippines-LL, nb. fishing days (2014)	19-31	0.00005-0.001	17,200-667,650	2,800-82,039	Thailand-LL, nb. hooks (2011)
Spanish-PS-LS, nb. fishing days, 1984-1990	1-181	0.06-0.16	6.15-1,856	2.9-1,883	Spanish-PS-LS, nb. fishing hours, 1991-2014
Spanish-PS-FS, nb. fishing days (1984-1990)	1-197	0.01-0.4	7.8-4,262	2.8-34,053	Spanish-PS-FS, nb. fishing hours (1991-2014)
Spanish-PS-MIX, nb. fishing days (1984-1990)	2-83	0.01-0.09	25-3,255	6.3-2,506	Spanish-MIX-, nb. fishing hours (1991-2014)
Japanese-PS-LS, nb. days at sea (1989-1999)	1-40	0.69-3.36	0.29-14	1-30	Japanese-PS-LS, nb. fishing days (2000-2010)
Japanese-PS-LS, nb. sets (2011-2014)	1-5	0.44-2.86	0.3-9	1-30	Japanese-PS-LS, nb. fishing days (2000-2010)
Thailand-PS-LS, nb. sets (2009)	1-35.2	0.33-1.43	0.7-44	1-57	Thailand-PS-LS, nb. fishing days (2006)
Maldives-LLCO, nb. fishing days (2013)	1-47	0.00006-0.001	870-403,239	795-389,630	Maldives-LLCO, nb. hooks (2014)
La Reunion-HATR, nb boats (2005,2006)	8.32-10	0.004-0.021	396-2,177	350-1,1150	La Reunion-HATR, nb hooks, (2011,2012)