

SWORDFISH DATA SUBSTITUTIONS AND RAISING MADE FOR 1992

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The swordfish catch-at-size data bases that were created and updated in the past were updated again, for use by the 1992 Standing Committee on Research and Statistics (SCRS). The data bases are for the north Atlantic, south Atlantic and Mediterranean Sea. The criteria used for the data substitution (for matching size data for the catch) followed past SCRS decisions.

This year notable progress was made in data collection. Most of improvements are a result of the two intersessional meetings which the SCRS held in 1992, namely the "Data Preparatory Meeting for the Southwest Atlantic Tuna Fishery" (Recife, Brazil - June), and the "Second GFCM/ICCAT Expert Consultation on Stocks of Large Pelagic Fishes in the Mediterranean Sea" (Crete, Greece - September). The major improvements are given below.

Catch statistics

- Brazilian catch data were separated by each fleet based at different ports for the entire historical series. In the case of swordfish, longline catches that were reported all together in the past are now separated by fleets based at Santos, the State of Rio Grande del Sur, and the State of Pernambuco.
- Swordfish catches in Mediterranean areas reported by Italy, Greece, Malta, and Morocco as round live weight were found to have been gilled-and-gutted weight. Therefore, they were converted into round weight, using a factor of 1.12, which the above Consultation agreed upon.
- Many new historical and recent catch data were reported or corrected by the Mediterranean countries.

Size data

- New series of size data for the Brazilian longline fishery based at Rio Grande del Norte became available (1983-1986).
- New series of size data for the Brazil-Japan longline fleet became available for 1979-1983 and 1986-1988.
- Observer data collected on swordfish through the Enhanced Billfish Research Program aboard Venezuelan longline vessels become available for 1987 through 1992.
- Italian size data for 1990 and 1991 were submitted.
- Greek size data for 1991 were submitted.

Length-weight relationship

- The GFCM/ICCAT Consultation agreed to use the following new formula to convert lower-jaw fork length to round weight:

$$RWT = 8.90493 \times 10^{-7} \times LJFL^{3.554738}$$

This equation was also used in estimating sample weight.

- A conversion factor of 1.12 was used for Mediterranean fish to convert gilled-and-gutted weight (including fins and bills) to round live weight.

On the other hand, new size were not available for some fisheries for which size data was available in the past. Therefore, the Consultation was forced to make data substitutions. These were as follows:

- For Portuguese fisheries (mainland, Madeira and Azores), Spanish longline data were used.
- For Taiwanese longline data for 1990 and 1991, Japanese longline data were used.
- For Uruguayan longline data for 1990 and 1991, Japanese longline data were used.

The new catches reported for the French gillnet fishery do not have size data. Since this fishery is completely new, it was difficult to match the catch with any existing size data. Tentatively, the catch was matched to Spanish gillnet size data. However, this should be investigated further in the future.

All the measurements taken on swordfish during the port sampling and most of those taken during the observer program in Venezuela were on pectoral fin to fork length. Since there is no equation to convert pectoral-fork-length to lower-jaw-fork length, these data were not used.

The attached Table shows the data matching and substitutions made for swordfish in 1992. The catch-at-size data for the Mediterranean for 1985 through 1991 were all redone during the Second GFCM/ICCAT Expert Consultation on Stocks of Large Pelagic Fishes in the Mediterranean Sea. This new data file thus replaces the existing catch-at-size data file, since the catches were totally revised and many new size data sets became available.

Table. Updating of catch at size for Atlantic swordfish for 1992 SCRS.

North Atlantic															
CATCH DATA							MATCHED SIZE DATA								
A	COUNTRY	GEAR	Y	T	TASKI	CATCH	A	COUNT	GEAR	Y	T	SAMPLE	REMARKS		
R			E	I	REV	OLD	R			E	I				
E			A	M	(KG)	RAISING	E			A	M	WEIGH	NO		
A			R	E		FACTORS	A			R	E				
2	CANADA	LLHB	91	0	953	0	1.00000	2		91	0	881110	14172	RAISED BY NAT.SCI	
2	CANADA	HARP	91	0	73	0	1.00000	2		91	0	67176	1241	RAISED BY NAT.SCI	
13	CANADA	LLHB	91	0	*	0	1.00000	13		91	0	72389	531	RAISED BY NAT.SCI	
13	CANADA	HARP	91	0	*	0	1.00000	13		91	0	5490	44	RAISED BY NAT.SCI	
2	CHLTAI	LLFB	90	0	207	21	0.19696	2	JAPAN	LL	90	0		R.F.=TASKI/TASKI	
14	CHLTAI	LLFB	90	0	*	*	0.19696	14	JAPAN	LL	90	0		R.F.=TASKI/TASKI	
24	CHLTAI	LLFB	90	0	*	*	0.19696	24	JAPAN	LL	90	0		R.F.=TASKI/TASKI	
2	CHLTAI	GILL	90	0	1	0	0.00095	2	JAPAN	LL	90	0		R.F.=TASKI/TASKI	
2	CHLTAI	LLFB	91	0	239	0	0.25345	2	JAPAN	LL	91	0		R.F.=TASKI/TASKI	
14	CHLTAI	LLFB	91	0	0	0	0.25345	14	JAPAN	LL	91	0		R.F.=TASKI/TASKI	
24	CHLTAI	LLFB	91	0	0	0	0.25345	24	JAPAN	LL	91	0		R.F.=TASKI/TASKI	
24	FRANCE	UNCL	91	0	75	40	1.89365	24	SPAIN	GILL	91	0		R.F.=TASKI/EST.SAM	
2	JAPAN	LLHB	90	0	47	61	1.00000	2		90	0			REVISED BY NAT.SCI	
14	JAPAN	LLHB	90	0	410	523	1.00000	14		90	0			REVISED BY NAT.SCI	
24	JAPAN	LLHB	90	0	594	757	1.00000	24		90	0			REVISED BY NAT.SCI	
2	JAPAN	LLHB	91	0	943	0	1.00000	2		91	0			RAISING BY NAT.SCI	
14	JAPAN	LLHB	91	0	*	0	1.00000	14		91	0			RAISING BY NAT.SCI	
24	JAPAN	LLHB	91	0	*	0	1.00000	24		91	0			RAISING BY NAT.SCI	
6	KOREA	LLFB	91	0	3	0	0.15361	2	JAPAN	LL	91	0	787	10	R.F.=TASKI/TASKI
24	MOROCC	LL	90	0	18	4	4.50000	24		90	0			TASKI CHANGED. RE	
24	MOROCC	PS	90	0	18	4	4.50000	24		90	0			TASKI CHANGED. RE	
24	MOROCC	SURF	90	0	141	35	4.62857	24		90	0			TASKI CHANGED. RE	
24	MOROCC	LL	91	0	9	0	0.00231	24	SPAIN	LLHB	91	0		R.F.=TASKI/TASKI	
24	MOROCC	PS	91	0	18	0	0.45448	24	SPAIN	GILL	91	0		R.F.=TASKI/EST.SAM	
24	MOROCC	TRAP	91	0	10	0	0.25249	24	SPAIN	GILL	91	0		R.F.=TASKI/EST.SAM	
24	MOROCC	SUR	91	0	155	0	3.91355	24	SPAIN	GILL	91	0		R.F.=TASKI/EST.SAM	
24	PORT-AZ	LL	91	0	471	0	0.12096	24	SPAIN	LLHB	91	0		R.F.=TASKI/TASKI	
24	PORT-MAI	LLHB	91	0	257	0	0.06600	24	SPAIN	LLHB	91	0		R.F.=TASKI/TASKI	
24	PORT-MAI	PS	91	0	1	0	0.89026	24	SPAIN	LLHB	91	0		R.F.=TASKI/TASKI	
24	PORT-MA	HAND	91	0	15	0	0.00385	24	SPAIN	LLHB	91	0		R.F.=TASKI/TASKI	
14	SPAIN	LLHB	91	0	1628	0	1.00000	14		91	0	1642203	38120	RAISED BY NAT.SCI	
24	SPAIN	LLHB	91	0	3894	0	1.00000	24		91	0	3946224	84523	RAISED BY NAT.SCI	
24	SPAIN	TRAP	91	0	3	0	0.07575	24	SPAIN	GILL	91	0		R.F.=TASKI/EST.SAM	
24	SPAIN	GILL	91	0	124	0	3.10251	24		91	0	39606	752	R.F.=REP.CAT/EST.SA	
2	USA	LL	90	0	2537	2430	1.00000	2		90	0	2660714	76065	REVISED BY NAT.SCI	
1	USA	LL	90	0	506	504	1.00000	1		90	0	533086	16792	REVISED BY NAT.SCI	
3	USA	LL	90	0	1059		1.00000	3		90	0	1080017	21177	REVISED BY NAT.SCI	
14	USA	LL	90	0	1005		1.00000	14		90	0	917653	20441	REVISED BY NAT.SCI	
2	USA	HARP	90	0	7		1.00000	2		90	0	6289	52	REVISED BY NAT.SCI	
2	USA	GILL	90	0	510		1.00000	2		90	0	512543	8319	REVISED BY NAT.SCI	
2	USA	LL	91	0	1656	0	1.00000	2		91	0	1711186	40208	BY NAT. SCL	
3	USA	LL	91	0	788	0	1.00000	3		91	0	806406	15129	BY NAT. SCL	
1	USA	LL	91	0	680	0	1.00000	1		91	0	709111	20072	BY NAT. SCL	
14	USA	LL	91	0	1065	0	1.00000	14		91	0	1045642	19923	BY NAT. SCL	
2	USA	TRAW	91	0	10	0	1.00000	2		91	0	10360	140	BY NAT. SCL	
2	USA	HARP	91	0	2	0	1.00000	2		91	0	2140	52	BY NAT. SCL	
2	USA	GILL	91	0	82	0	1.00000	2		91	0	81119	1061	BY NAT. SCL	
2	USA	MWDT	91	0	32	0	1.00000	2		91	0	32226	422	BY NAT. SCL	
2	VENEZUE	LL	87	0	86	0	138.73205	2		87	0	619.9	16	R.F.=TASKI/EST.SAM	
2	VENEZUE	LL	88	0	108	0	192.30769	2		88	0	561.6	20	R.F.=TASKI/EST.SAM	
2	VENEZUE	LL	89	0	57	0	10.06356	2		89	0	566.4	188	R.F.=TASKI/EST.SAM	
2	VENEZUE	LL	90	0	158	0	547.85021	2		90	0	288.4	16	R.F.=TASKI/EST.SAM	
2	VENEZUE	LL	91	0	86	0	18.10793	2		91	0	4749.3	169	R.F.=TASKI/EST.SAM	
24	LIBERIA	UNCL	89	0	35	20	1.75000	24		89	0			TASKI CHANGED. RE	
24	LIB	UNCL	90	0	3	19	0.15789	24		90	0			TASKI CHANGED. RE	
24	C.VERT	HAND	89	0	12	3	0.00368	24	SPAIN	LLHB	89	0		R.F.=TASKI/TASKI	

* Task I catch is not broken down by area

Table. Continued..
South Atlantic

CATCH DATA						MATCHED SIZE DATA							
A	R	E	A	E	A	A	R	E	A	E	A		
COUNTR	GEAR	Y T	E I	TASKICA	RAISING	COUNT	GEA	E I	SAMPLE	REMARKS			
				REV	OL				WEIG	NO			
					FACTOR								
6	ARGENTI	UNCL	91	0	230	0	0.14613	6	JAPAN	LL	91	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLHB	71	0	154	113	1.36283	6			71	0	TASKI CHANGED. RE-RAISED
6	BRAZIL	LLHB	72	0	121	108	1.12037	6			72	0	TASKI CHANGED. RE-RAISED
6	BRAZIL	LLHB	73	0	161	137	1.17518	6			73	0	TASKI CHANGED. RE-RAISED
6	BRAZIL	LLHB	74	0	465	348	1.33621	6			74	0	TASKI CHANGED. RE-RAISED
6	BRAZIL	LLHB	75	0	514	318	1.61635	6			75	0	TASKI CHANGED. RE-RAISED
6	BRAZIL	LLHB	76	0	338	372	0.90860	6			76	0	TASKI CHANGED. RE-RAISED
6	BRAZIL	LLHB	77	0	323	330	0.97879	6			77	0	TASKI CHANGED. RE-RAISED
6	BRAZIL	LLHB	78	0	213	138	1.04317	6			78	0	204185 3328 REMATCHED TO SAMPLE
6	BRAZIL	LLHB	79	0	320	213	1.02592	6			79	0	311917 4927 REMATCHED TO SAMPLE
6	BRAZIL	LLHB	80	0	1169	1125	1.03282	6			80	0	113185 15810 REMATCHED TO SAMPLE
6	BRAZIL	LLHB	81	0	431	405	1.04077	6			81	0	414117 7081 REMATCHED TO SAMPLE
6	BRAZIL	LL	82	0	10	0	0.01675	6	BRAZIL	LLHB	82	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLHB	82	0	617	613	1.03378	6			83	0	596840 9919 REMATCHED TO SAMPLE
6	BRAZIL	LL	83	0	107	0	10.25297	6			83	0	10436 185 R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLMB	83	0	1	0	0.00289	6	BRAZIL	LLHB	83	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLHB	83	0	390	471	1.12549	6			83	0	346517 6101 REMATCHED TO SAMPLE
6	BRAZIL	LL	84	0	57	0	2.27869	6			84	0	25014 519 R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLMB	84	0	4	0	0.01515	6	BRAZIL	LLHB	84	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLHB	84	0	284	341	1.07558	6			84	0	264044 5755 REMATCHED TO SAMPLE
6	BRAZIL	LL	85	0	61	0	1.67755	6			85	0	36363 618 R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLHB	85	0	281	321	7.72764	6	BRAZIL	LL	85	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LL	86	0	83	0	8.46110	6			86	0	9610 160 R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLMB	86	0	26	0	2.84616	6	BRAZIL	LLHB	86	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLHB	86	0	348	417	38.09482	6			86	0	9135 159 REMATCHED TO SAMPLE
6	BRAZIL	LL	87	0	70	0	8.90121	6	BRAZ-JP	LLFB	87	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLMB	87	0	25	0	0.05330	6	BRAZIL	LLHB	87	0	R.F.=TASKI/TASKI
6	BRAZIL	LLHB	87	0	350	469	0.74627	6			87	0	TASKI CHANGE RE-RAISED
6	BRAZIL	LLMB	88	0	25	0	0.69201	6	BRAZ-JP	LLFB	88	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLHB	88	0	630	555	17.43853	6	BRAZ-JP	LLFB	88	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLMB	89	0	37	0	0.06679	6	BRAZIL	LLHB	89	0	ORIGINALY SUB BY JPN-LL-SOUTH
6	BRAZIL	LLHB	89	0	519	554	0.63603	6	JAPAN	LL	89	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LL	90	0	50	0	0.02523	6	JAPAN	LL	90	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLHB	90	0	727	727	0.36680	6	JAPAN	LL	90	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLHB	91	0	727	777	0.45190	6	JAPAN	LL	91	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRAZIL	LLMB	91	0	12	0	0.00762	6	JAPAN	LL	91	0	R.F.=TASKI/EST.SAMPLE WGT
6	JAPAN	LLHB	90	0	6254	2389	1.00000	6			90	0	BY NATIONAL SCI
6	JAPAN	LLHB	91	0	3464	0	1.00000	6			91	0	BY NATIONAL SCI
6	SPAIN	LLHB	91	0	2876	0	1.00000	6			91	0	2822575 56562 BY NATIONAL SCI
6	URUGUA	LLHB	81	0	92	94	0.22216	6	BRAZIL	LLHB	81	0	R.F.=TASKI/EST.SAMPLE WGT
6	URUGUA	LLHB	82	0	575	583	0.96341	6	BRAZIL	LLHB	82	0	R.F.=TASKI/EST.SAMPLE WGT
6	URUGUA	LLHB	83	0	1064	1099	3.12827	6	BRAZIL	LLHB	83	0	R.F.=TASKI/EST.SAMPLE WGT
6	URUGUA	LLHB	84	0	1927	1953	7.29803	6	BRAZIL	LLHB	84	0	R.F.=TASKI/EST.SAMPLE WGT
6	URUGUA	LLHB	85	0	1125	1140	0.98684	6			85	0	TASKI CHANGED. ORIG. SUBST. JPN-L
6	URUGUA	LLHB	86	0	537	543	0.98895	6			86	0	TASKI CHANGED. ORIG. SUBST. JPN-L
6	URUGUA	LLHB	88	0	427	432	0.98843	6			88	0	TASKI CHANGED. ORIG. SUBST. JPN-L
6	URUGUA	LLHB	89	0	414	314	1.31847	6			89	0	TASKI CHANGED. ORIG. SUBST. JPN-L
6	URUGUA	LLHB	90	0	302	302	0.15237	6	JAPAN	LL	90	0	R.F.=TASKI/EST.SAMPLE WGT
6	URUGUA	LLHB	91	0	156	0	0.09912	6	JAPAN	LL	91	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	79	0	200	0	90.33016	6			79	0	2214 28 R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	80	0	410	409	7.93772	6			80	0	51652 675 R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	81	0	223	0	16.93692	6			81	0	13167 176 R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	82	0	391	321	12.50204	6			82	0	31275 483 R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	83	0	283	0	21.28700	6			83	0	13295 204 R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	84	0	122	0	4.87719	6	BRAZIL	LL	84	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	85	0	227	0	6.24270	6	BRAZIL	LL	85	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	86	0	304	0	82.48989	6			86	0	3685 76 R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	87	0	511	0	64.97883	6			87	0	7864 177 R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	88	0	470	467	13.00970	6			88	0	36127 729 R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	89	0	241	242	6.99587	6			89	0	TASKI CHANGED. ORIG. SUBST. JPN-L
6	BRASJPN	LLFB	90	0	679	679	0.34258	6	JAPAN	LL	90	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRASJPN	LLFB	91	0	122	0	0.07751	6	JAPAN	LL	91	0	R.F.=TASKI/EST.SAMPLE WGT
6	BRASCHI	LLFB	91	0	527	0	0.33483	6	JAPAN	LL	91	0	R.F.=TASKI/EST.SAMPLE WGT

Table. Continued..
South Atlantic

CATCH DATA						MATCHED SIZE DATA							
A	R	E	A	E	A	A	R	E	A	E	A		
COUNTR	GEAR	Y T	E I	TASKICA	RAISING	COUNT	GEA	E I	SAMPLE	REMARKS			
				REV	OL				WEIG	NO			
					FACTOR								
6	CHLTAI	LLFB	90	0	689	741	0.11017	6	JAPAN	LL	90	0	R.F.=TASKI/EST.SAMPLE WGT
6	CHLTAI	GIL	90	0	4	0	0.00064	6	JAPAN	LL	90	0	R.F.=TASKI/EST.SAMPLE WGT
6	CHLTAI	LLFB	91	0	799	0	0.23066	6	JAPAN	LL	91	0	R.F.=TASKI/EST.SAMPLE WGT
6	KOREA	LLFB	91	0	19	0	2.42163	6			91	0	R.F.=TASKI/EST.SAMPLE WGT
7	CHLTAI	LLFB	90	0	*	*	0.11017	7	JAPAN	LL	90	0	R.F.=TASKI/TASKI
7	CHLTAI	GIL	90	0	*	*	0.00064	7	JAPAN	LL	90	0	R.F.=TASKI/TASKI
7	CHLTAI	LLFB	91	0	*	*	0.23066	7	JAPAN	LL	91	0	R.F.=TASKI/TASKI
7	KOREA	LLFB	91	0	128	0	24.21627	7			91	0	R.F.=TASKI/EST.SAMPLE WGT
7	JAPAN	LLHB	90	0	*	*	1.00000	7			90	0	BY NATIONAL SCI
7	JAPAN	LLHB	91	0	*	*	1.00000	7			91	0	BY NATIONAL SCI
7	S.AFRICA	TRAW	91	0	5	0	0.00235	7	JAPAN	LL	91	0	R.F.=TASKI/EST.SAMPLE WGT
7	SPAIN	LLHB	91	0	2862	0	1.00000	7			91	0	3079466 54546 BY NATIONAL SCI
7	GHANA	SURF	91	0	235	0	0.08211	7	SPAIN	LLHB	91	0	R.F.=TASKI/TASKI
7	C.IVOIRE	SURF	91	0	10	0	0.00349	7	SPAIN	LLHB	91	0	R.F.=TASKI/TASKI
7	BENIN	GILL	91	0	28	0	0.00978	7	SPAIN	LLHB	91	0	R.F.=TASKI/TASKI
7	TOGO	UNCL	90	0	3	2	1.50000	7			90	0	TASKI CHANGED. ORIG. SUBST. SPN-L
7	TOGO	UNCL	91	0	5	0	0.00175	7	SPAIN	LLHB	91	0	R.F.=TASKI/TASKI

BRAZIL LLHB = SANTOS-BASED FLEET

Mediterranean Sea

CATCH DATA					MATCHED SIZE DATA						
COUNTRY	GEA	Y T	REPTD	RAISIN	COUNT	GEA	Y T	SAMPLE	REMARKS		
		A M	CATCH	FACTO			A M	WEIG		NO FISH	
		R E	(MT)				R E	(KG)			
ALGERIE	UNCL	85	0	890	0.73011	SPAIN	LLHB	85	0	R.F.=TASKI/TASKI	
ALGERIE	UNCL	86	0	847	0.63351	SPAIN	LLHB	86	0	R.F.=TASKI/TASKI	
ALGERIE	UNCL	87	0	1820	1.60494	SPAIN	LLHB	88	0	R.F.=TASKI/TASKI	
ALGERIE	UNCL	88	0	2621	1.48920	SPAIN	LLHB	88	0	R.F.=TASKI/TASKI	
ALGERIE	UNCL	89	0	590	0.47280	SPAIN	LLHB	89	0	R.F.=TASKI/TASKI	
ALGERIE	LL	90	0	173	27.99534				6180	431	
ALGERIE	UNCL	90	0	539	87.22247	AGLERI	LL	90	0	R.F.=TASKI/EST.SMPL	
ALGERIE	LL	91	0	173	0.15283	SPAIN	LLHB	91	0	R.F.=TASKI/TASKI	
ALGERIE	UNCL	91	0	389	0.94364	SPAIN	LLHB	91	0	R.F.=TASKI/TASKI	
CYPRUS	LL	85	0	71	0.04143	GREECE	LL	86	0	R.F.=TASKI/TASKI	
CYPRUS	LL	86	0	154	0.08987	GREECE	LL	86	0	R.F.=TASKI/TASKI	
CYPRUS	LL	87	0	84	0.06449	GREECE	LL	87	0	R.F.=TASKI/TASKI	
CYPRUS	LL	88	0	121	2.17165	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
CYPRUS	LL	89	0	139	3.68899	GREECE	LL	90	0	R.F.=TASKI/EST.SMPL	
CYPRUS	LL	90	0	173	4.59133	GREECE	LL	90	0	R.F.=TASKI/EST.SMPL	
CYPRUS	LL	91	0	162	3.12422	GREECE	LL	91	0	R.F.=TASKI/EST.SMPL	
ESPANA	HAN	85	0	1	0.00082	ESPANA	LLHB	85	0	R.F.=TASKI/TASKI	
ESPANA	LLHB	85	0	1219	1.00000					11794	RAISED BY NAT.SCITS
ESPANA	SURF	85	0	2	0.00164	ESPANA	LLHB	85	0	R.F.=TASKI/TASKI	
ESPANA	TRAP	85	0	3	0.00246	ESPANA	LLHB	85	0	R.F.=TASKI/TASKI	
ESPANA	TRA	85	0	1	0.00082	ESPANA	LLHB	85	0	R.F.=TASKI/TASKI	
ESPANA	UNCL	85	0	1	0.00082	ESPANA	LLHB	85	0	R.F.=TASKI/TASKI	
ESPANA	LLHB	86	0	1337	1.00000				28217	RAISED BY NAT.SCITS	
ESPANA	LLHB	87	0	1134	0.64432	ESPANA	LLHB	88	0	R.F.=TASKI/TASKI	
ESPANA	LLHB	88	0	1760	1.00000				24895	RAISED BY NAT.SCITS	
ESPANA	TRAP	88	0	2	0.00114	ESPANA	LLHB	88	0	R.F.=TASKI/TASKI	
ESPANA	GILL	89	0	87	1.00000						RAISED BY NAT.SCITS
ESPANA	LLHB	89	0	1250	1.00000				33604	RAISED BY NAT.SCITS	
ESPANA	GILL	90	0	85	1.00000				928	RAISED BY NAT.SCITS	
ESPANA	LLHB	90	0	1438	1.00000				22897	RAISED BY NAT.SCITS	
ESPANA	GILL	91	0	39	1.00000				249	RAISED BY NAT.SCITS	
ESPANA	LLHB	91	0	1132	1.00000				12208	RAISED BY NAT.SCITS	
GREECE	LL	85	0	1036	0.60458	GREECE	LL	86	0	R.F.=TASKI/TASKI	
GREECE	LL	86	0	1714	1.00000				86	0	R.F.=TASKI/TASKI
GREECE	LL	87	0	1303	1.00000				87	0	R.F.=TASKI/TASKI
GREECE	LL	88	0	1008	18.09110				88	0	R.F.=TASKI/EST.SMPL
GREECE	LL	89	0	1120	20.10122	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
GREECE	LL	90	0	1344	35.66997				90	0	R.F.=TASKI/EST.SMPL
GREECE	LL	91	0	1904	36.71926				91	0	R.F.=TASKI/EST.SMPL
ITALY	GILL	85	0	1540	50.59365	ITALY	UNCL	85	0	R.F.=TASKI/EST.SMPL	
ITALY	LLHB	85	0	2493	39.21912				85	0	63569 2127
ITALY	UNCL	85	0	6830	224.37826				85	0	30439 707
ITALY	GILL	86	0	1620	52.39893	ITALY	UNCL	86	0	R.F.=TASKI/EST.SMPL	
ITALY	LLHB	86	0	2622	43.92525				86	0	59691 2106
ITALY	UNCL	86	0	7171	232.02653				86	0	30908 713
ITALY	GILL	87	0	1749	72.34352	ITALY	UNCL	87	0	R.F.=TASKI/EST.SMPL	
ITALY	LLHB	87	0	2831	2.17369	GREECE	LL	87	0	R.F.=TASKI/TASKI	
ITALY	UNCL	87	0	7745	320.26598				87	0	24182 590
ITALY	GILL	88	0	1846	78.80353	ITALY	UNCL	88	0	R.F.=TASKI/EST.SMPL	
ITALY	LLHB	88	0	2989	53.65017	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
ITALY	UNCL	88	0	8175	249.02123				88	0	23422 602
ITALY	GILL	89	0	2542	108.54613	ITALY	UNCL	89	0	R.F.=TASKI/EST.SMPL	
ITALY	LLHB	89	0	2989	53.65017	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
ITALY	UNCL	89	0	7478	319.27864				89	0	23422 640
ITALY	GILL	90	0	2946	129.54696				90	0	22738 842
ITALY	HARP	90	0	18	0.47559	GREECE	LL	90	0	R.F.=TASKI/EST.SMPL	
ITALY	LLHB	90	0	4592	249.65477				90	0	18393 833
ITALY	TRAP	90	0	2	0.12178	ITALY	LLHB	90	0	R.F.=TASKI/EST.SMPL	

Mediterranean Sea

CATCH DATA					MATCHED SIZE DATA						
COUNTRY	GEA	Y T	REPTD	RAISIN	COUNT	GEA	Y T	SAMPLE	REMARKS		
		A M	CATCH	FACTO			A M	WEIG		NO FISH	
		R E	(MT)				R E	(KG)			
ITALY	GILL	91	0	3192	60.09342						
ITALY	HARP	91	0	11	0.21606	GREECE	LL	91	0	R.F.=TASKI/EST.SMPL	
ITALY	LLHB	91	0	3629	50.55011				91	0	71786 3393
ITALY	TRAP	91	0	1	0.03452	ITALY	LLHB	91	0	R.F.=TASKI/EST.SMPL	
JAPAN	LLHB	85	0	14	1.00000				85	0	14694 156
JAPAN	LLHB	86	0	7	1.00000				86	0	10796 127
JAPAN	LLHB	87	0	3	1.00000				87	0	422 6
JAPAN	LLHB	88	0	4	1.00000				88	0	
JAPAN	LLHB	89	0	1	1.00000				89	0	
JAPAN	LLHB	90	0	2	1.00000				90	0	
JAPAN	LLHB	91	0	1	1.00000				91	0	
MALTA	UNCL	85	0	108	1.69139	ITALY	LLHB	85	0	R.F.=TASKI/EST.SMPL	
MALTA	UNCL	86	0	97	0.65686	GREECE	LL	86	0	R.F.=TASKI/TASKI	
MALTA	UNCL	87	0	131	0.16860	GREECE	LL	87	0	R.F.=TASKI/TASKI	
MALTA	UNCL	88	0	207	3.71873	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
MALTA	UNCL	89	0	121	2.17093	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
MALTA	UNCL	90	0	122	3.23994	GREECE	LL	90	0	R.F.=TASKI/EST.SMPL	
MALTA	LL	91	0	119	2.28955	GREECE	LL	91	0	R.F.=TASKI/EST.SMPL	
MAROC	LL	85	0	38	0.03117	SPAIN	LLHB	85	0	R.F.=TASKI/TASKI	
MAROC	LL	86	0	92	0.06881	SPAIN	LLHB	86	0	R.F.=TASKI/TASKI	
MAROC	LL	87	0	40	0.02273	SPAIN	LLHB	88	0	R.F.=TASKI/TASKI	
MAROC	LL	88	0	62	0.03523	SPAIN	LLHB	88	0	R.F.=TASKI/TASKI	
MAROC	LL	89	0	97	0.07760	SPAIN	LLHB	89	0	R.F.=TASKI/TASKI	
MAROC	GILL	90	0	246	2.89412	SPAIN	GILL	90	0	R.F.=TASKI/TASKI	
MAROC	LL	90	0	43	0.02990	SPAIN	LLHB	90	0	R.F.=TASKI/TASKI	
MAROC	GILL	91	0	454	11.64103	SPAIN	GILL	91	0	R.F.=TASKI/TASKI	
MAROC	LL	91	0	24	0.02120	SPAIN	LLHB	91	0	R.F.=TASKI/TASKI	
NEI-2	GILL	85	0	231	7.57985	ITALY	UNCL	85	0	R.F.=TASKI/TASKI	
NEI-2	LL	85	0	498	7.84030	ITALY	LLHB	85	0	R.F.=TASKI/EST.SMPL	
NEI-2	GILL	86	0	245	7.95594	ITALY	UNCL	86	0	R.F.=TASKI/EST.SMPL	
NEI-2	LL	86	0	524	8.78130	ITALY	LLHB	86	0	R.F.=TASKI/EST.SMPL	
NEI-2	GILL	87	0	262	10.83763	ITALY	UNCL	87	0	R.F.=TASKI/EST.SMPL	
NEI-2	LL	87	0	567	0.43508	GREECE	LL	87	0	R.F.=TASKI/TASKI	
NEI-2	GILL	88	0	277	11.81097	ITALY	UNCL	88	0	R.F.=TASKI/EST.SMPL	
NEI-2	LL	88	0	598	10.73405	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
NEI-2	GILL	89	0	382	16.30583	ITALY	UNCL	89	0	R.F.=TASKI/EST.SMPL	
NEI-2	LL	89	0	598	10.73405	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
NEI-2	GILL	90	0	442	8.32874	ITALY	GILL	90	0	R.F.=TASKI/EST.SMPL	
NEI-2	LL	90	0	918	49.93095	ITALY	LLHB	90	0	R.F.=TASKI/EST.SMPL	
NEI-2	GILL	91	0	560	10.54270	ITALY	GILL	91	0	R.F.=TASKI/EST.SMPL	
NEI-2	LL	91	0	734	10.21923	ITALY	LLHB	91	0	R.F.=TASKI/EST.SMPL	
TUNISIE	UNCL	85	0	61	0.03560	GREECE	LL	86	0	R.F.=TASKI/TASKI	
TUNISIE	UNCL	86	0	64	0.03735	GREECE	LL	86	0	R.F.=TASKI/TASKI	
TUNISIE	UNCL	87	0	63	0.04837	GREECE	LL	87	0	R.F.=TASKI/TASKI	
TUNISIE	UNCL	88	0	80	1.43580	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
TUNISIE	UNCL	89	0	159	2.85366	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
TUNISIE	UNCL	90	0	176	4.67095	GREECE	LL	90	0	R.F.=TASKI/EST.SMPL	
TUNISIE	UNCL	91	0	176	3.39422	GREECE	LL	91	0	R.F.=TASKI/EST.SMPL	
TURKEY	GILL	85	0	190	0.11888	GREECE	LL	86	0	R.F.=TASKI/TASKI	
TURKEY	GILL	86	0	226	0.13189	GREECE	LL	86	0	R.F.=TASKI/TASKI	
TURKEY	GILL	87	0	557	0.42762	GREECE	LL	87	0	R.F.=TASKI/TASKI	
TURKEY	GILL	88	0	589	10.57109	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
TURKEY	GILL	89	0	209	3.75103	GREECE	LL	88	0	R.F.=TASKI/EST.SMPL	
TURKEY	GILL	90	0	243	6.44910	GREECE	LL	90	0	R.F.=TASKI/EST.SMPL	
TURKEY	GILL	91	0	243	4.68633	GREECE	LL	91	0	R.F.=TASKI/EST.SMPL	