

## SWORDFISH DATA SUBSTITUTIONS AND RAISING MADE FOR 1991 SCRS

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The documentation of the substitution and raising of swordfish data which has been carried out for the 1991 SCRS is as follows:

**1989**

For 1989, updating of the swordfish catch-at-size file was carried out to reflect changes in Task I.

Catch-at-size data for the U.S.A., Japan and Spain (Mediterranean longline) were revised by the national scientists. All those countries for which Japanese data were used to substitute were revised using the new size data. Those countries that were substituted by U.S. and Spanish data were not redone, since the catches to be substituted were minor and the U.S. and Spanish revisions were also minor, as compared with the Japanese revision.

Cuba and Taiwan catches are reported only for north and south. Hence, the raising factors for the north were calculated by dividing the total north Task I by the Japanese total north Task I; a similar calculation was made for the south. In other words, it was assumed that their catches were distributed in the same proportion among time-area strata as were the Japanese catches.

When Japanese data were used, Japanese Task I (not estimated weight) were used to calculate the raising factors.

**1990**

All the substituted data were raised by factors derived by dividing Task I (data to be substituted) by Task I (data used for substitution), except for Portugal, where the raising factors were calculated by dividing Task I by estimated sample weight. Since the Portuguese size data were raw, the Task I catch data were divided into month using Task II catch and then matched with actual size data.

Taiwan, Cuba and Korea total Atlantic catch data were divided according to 1989 north-south proportion, and then the total north and total south data were matched with Japanese data.

For the Mediterranean countries, no catch or size data were available, except for Algerian and Japanese longline, and Spanish fisheries. Therefore, most of these data are carried over from 1989, and some even from 1988.

The NEI catch for west Atlantic was assumed 0 for 1990. NEI data for 1989 for the east Atlantic (Portuguese boats landing in Spain) was carried over for 1990 and assigned to Area 24.

The Japanese scientists revised total catch (in number of fish and weight) after the catch-at-size table had been provided. After some consultation with the Japanese scientists, the catch-at-size table previously sent was re-raised using [old number of fish in the table]/[new reported catch in number]. The new catch-at-size table was then used for substituting other fisheries.

Table 1 shows all the substitutions and raising done before and during the September meeting in Canada. Most of the Mediterranean catches were carried over from 1989 or even from 1988. Therefore, the 1990 catch at size for the Mediterranean is almost a total repetition of the 1989 file.

Table 2 compares catch estimates based on catch at size, using the length-weight relationship agreed upon by the SCRS with Task I catch. The Table covers only those fisheries for which catch at size data have been provided by the national scientists. In general, these figures are comparable, except for the Spanish Mediterranean catches. As mentioned earlier, Task I catch data, that supposedly came from the actual weight of fish at the time of landing, were used to raise these frequencies to other catches. This table also shows the sample sizes.

Table 3 gives 1990 Task I catch and sampling level, by fishery and by areas. This Table gives some idea of the level of sampling. In the Table, however, some sampling levels could be overestimated, as some of the samples could have been double counted.

Table 1. Substitution and raising carried out for creating swordfish catch at size, 1991 SCRS

AR	COUNTRY	GR	YR	TM	CATCH		TASKI BEFORE	CATCH RAISE	R.F.	I	M A T C H E D S I Z E			SAMPLE		REMARKS	
					MT	MT					AR	COUNTRY	GEAR	YR	TM		KG
<b>1989</b>																	
2	CUBA	LL	89	0	87	1572	0.05534	I	2	JAPAN	LL	89	0			TASKI CHGED. REV.JPN RE-RAISED	
14	CUBA	LL	89	0	87	1572	0.05534	I	14	JAPAN	LL	89	0			TASKI CHGED. REV.JPN RE-RAISED	
24	CUBA	LL	89	0	87	1572	0.05534	I	24	JAPAN	LL	89	0			TASKI CHGED. REV.JPN RE-RAISED	
6	CUBA	LL	89	0	830	4018	0.20657	I	6	JAPAN	LL	89	0			TASKI CHGED. REV.JPN RE-RAISED	
7	CUBA	LL	89	0	830	4018	0.20657	I	7	JAPAN	LL	89	0			TASKI CHGED. REV.JPN RE-RAISED	
24	LIBERIA	UNCL	89	0	20	19	1.05263	I	24	LIBERIA	UNCL	89	0			RE-RAISED FROM 1990 SCRS BASE	
7	TOGO	UNCL	89	0	2	26	0.07692	I	7	BENIN	GILL	89	0			BENIN 89 BASED SPAIN	
5	ALGERIE	UNCL	89	0	590	2621	0.22510	I	5	ALGERIE	UNCL	89	0			RE-RAISED FROM 1990 SCRS BASE	
5	MALTA	UNCL	89	0	108	185	0.58378	I	5	MALTA	UNCL	89	0			RE-RAISED FROM 1990 SCRS BASE	
5	SPAIN	LLHB	89	0	1132	1077	1.00000	I	5	SPAIN	LLHB	89	0	16802		REVISED BY NAT. SCIENTIST	
5	TUNISIE	UNCL	89	0	159	80	1.98750	I	5	TUNISIE	UNCL	89	0			RE-RAISED FROM 1990 SCRS BASE	
5	TURKEY	GILL	89	0	392	557	0.70377	I	5	TURKEY	GILL	89	0			RE-RAISED FROM 1990 SCRS BASE	
2	USA	GILL	89	0	524		1.00000	I	2	USA	GILL	89	0	8091		REVISED BY NAT. SCIENTISTS	
2	USA	HARP	89	0	26		1.00000	I	2	USA	HARP	89	0	114		REVISED BY NAT. SCIENTISTS	
1	USA	LL	89	0	1049		1.00000	I	1	USA	LL	89	0	14516		REVISED BY NAT. SCIENTISTS	
2	USA	LL	89	0	2296		1.00000	I	2	USA	LL	89	0	86081		REVISED BY NAT. SCIENTISTS	
3	USA	LL	89	0	949		1.00000	I	3	USA	LL	89	0	20310		REVISED BY NAT. SCIENTISTS	
14	USA	LL	89	0	1541		1.00000	I	14	USA	LL	89	0	31828		REVISED BY NAT. SCIENTISTS	
2	JAPAN	LL	89	0	99		1.00000	I	2	JAPAN	LL	89	0			REVISED BY NAT. SCIENTISTS	
14	JAPAN	LL	89	0	623		1.00000	I	14	JAPAN	LL	89	0			REVISED BY NAT. SCIENTISTS	
24	JAPAN	LL	89	0	850		1.00000	I	24	JAPAN	LL	89	0			REVISED BY NAT. SCIENTISTS	
5	JAPAN	LL	89	0	1		1.00000	I	5	JAPAN	LL	89	0			REVISED BY NAT. SCIENTISTS	
6	JAPAN	LL	89	0	816		1.00000	I	6	JAPAN	LL	89	0			REVISED BY NAT. SCIENTISTS	
7	JAPAN	LL	89	0	3202		1.00000	I	7	JAPAN	LL	89	0			REVISED BY NAT. SCIENTISTS	
2	CHI-TAI	LLFB	89	0	13	1572	0.00827	I	2	JAPAN	LL	89	0			JPN CHGED. REDONE BY SECRT	
14	CHI-TAI	LLFB	89	0	13	1572	0.00827	I	14	JAPAN	LL	89	0			JPN CHGED. REDONE BY SECRT	
24	CHI-TAI	LLFB	89	0	13	1572	0.00827	I	24	JAPAN	LL	89	0			JPN CHGED. REDONE BY SECRT	
6	ARGENTINA	UNCL	89	0	198	816	0.24265	I	6	JAPAN	LL	89	0			JPN CHGED. REDONE BY SECRT	
6	BRASIL	LL	89	0	463	816	0.56740	I	6	JAPAN	LL	89	0			JPN CHGED. REDONE BY SECRT	
6	BRASIL-JPN	LLFB	89	0	242	816	0.29657	I	6	JAPAN	LL	89	0			JPN CHGED. REDONE BY SECRT	
6	CHINA-TAIW	LLFB	89	0	469	4018	0.11672	I	6	JAPAN	LL	89	0			JPN CHGED. REDONE BY SECRT	
7	CHINA-TAIW	LLFB	89	0	469	4018	0.11672	I	7	JAPAN	LL	89	0			JPN CHGED. REDONE BY SECRT	
6	URUGUAY	LLHB	89	0	314	816	0.38480	I	6	JAPAN	LL	89	0			JPN CHGED. REDONE BY SECRT	
<b>1990</b>																	
1	U.S.A.	LL	90	0	504		1.00000	I	1	U.S.A.	LL	90	0	9958		RAISED BY NAT. SCIENTISTS	
2	CANADA	HARP	90	0	81	81	1.00000	I	2	CANADA	HARP	90	0	20315	151	RAISED BY NAT. SCIENTISTS	
2	CANADA	LL	90	0	618	618	1.00000	I	2	CANADA	LL	90	0	449191	7540	RAISED BY NAT. SCIENTISTS	
2	CHI-TAIWAN	LL	90	0	21	1341	0.01533	I	2	JAPAN	LL	90	0			SUBSTED & RAISED BY SECRT	
2	CUBA	LL	90	0	47	1341	0.03502	I	2	JAPAN	LL	90	0			SUBSTED & RAISED BY SECRT	
2	JAPAN	LL	90	0	61		0.56878	I	2	JPN(COLD)	LL	90	0	?		NAT.C/SIZE RE-RAISED BY SECRT	
2	U.S.A.	GILL	90	0	510		1.00000	I	2	U.S.A.	GILL	90	0	4594		RAISED BY NAT. SCIENTISTS	
2	U.S.A.	HARP	90	0	7		1.00000	I	2	U.S.A.	HARP	90	0	44		RAISED BY NAT. SCIENTISTS	
2	U.S.A.	LL	90	0	2430		1.00000	I	2	U.S.A.	LL	90	0	58826		RAISED BY NAT. SCIENTISTS	
3	U.S.A.	LL	90	0	1059		1.00000	I	3	U.S.A.	LL	90	0	13167		RAISED BY NAT. SCIENTISTS	
3	VENEZUELA	LL	90	0	158	1059	0.14920	I	3	U.S.A.	LL	90	0			SUBSTED & RAISED BY SECRT	
14	CANADA	HARP	90	0	11	11	1.00000	I	14	CANADA	HARP	90	0	2878	13	RAISED BY NAT. SCIENTISTS	
14	CANADA	LL	90	0	201	201	1.00000	I	14	CANADA	LL	90	0	197310	2745	RAISED BY NAT. SCIENTISTS	
14	CHI-TAIWAN	LL	90	0	21	1341	0.01533	I	14	JAPAN	LL	90	0			SUBSTED & RAISED BY SECRT	
14	CUBA	LL	90	0	47	1341	0.03502	I	14	JAPAN	LL	90	0			SUBSTED & RAISED BY SECRT	
14	JAPAN	LL	90	0	523		0.82718	I	14	JPN(COLD)	LL	90	0	?		NAT.C/SIZE RE-RAISED BY SECRT	
14	KOREA	LL	90	0	29	1341	0.02163	I	14	JAPAN	LL	90	0			SUBSTED & RAISED BY SECRT	
14	SPAIN	LL	90	0	1774		1.00000	I	14	SPAIN	LLHB	90	0	20829		RAISED BY NAT. SCIENTISTS	
14	U.S.A.	LL	90	0	875		1.00000	I	14	U.S.A.	LL	90	0	22902		RAISED BY NAT. SCIENTISTS	

Table 1. Continued.

AR	COUNTRY	GR	YR	TH	CATCH		TASKI BEFORE CATCH RAISE	R.F.	I M A T C H E D S I Z E			SAMPLE		REMARKS		
					MT	HT			I	AR COUNTRY	GEAR	YR	TH		KG	#FISH
24	CHI-TAIWAN	LL	90	0	21	1341	0.01533	I	24	JAPAN	LL	90	0		SUBSTED & RAISED BY SECR	
24	CUBA	LL	90	0	47	1341	0.03502	I	24	JAPAN	LL	90	0		SUBSTED & RAISED BY SECR	
24	JAPAN	LL	90	0	757		1.65694	I	24	JPN(OLD)	LL	90	0	?	NAT.C/SIZE RE-RAISED BY SECR	
24	KOREA	LL	90	0	29	1341	0.02163	I	24	JAPAN	LL	90	0		SUBSTED & RAISED BY SECR	
24	LIBERIA	UNCL	90	0	20*	3962	0.00505	I	24	SPAIN	LLHB	90	0		SUBSTED & RAISED BY SECR	
24	MAROC	LL	90	0	4	3962	0.00101	I	24	SPAIN	LLHB	90	0		SUBSTED & RAISED BY SECR	
24	MAROC	SURF	90	0	35	646	0.05414	I	24	SPAIN	GILL	90	0		SUBSTED & RAISED BY SECR	
24	MAROC	TRAP	90	0	26	646	0.04025	I	24	SPAIN	GILL	90	0		SUBSTED & RAISED BY SECR	
24	MAROC	PS	90	0	4	646	0.00619	I	24	SPAIN	GILL	90	0		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	1	1	0	19.56522	I	24	PORT-AZO	LL	90	1		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	2	1	0	3.65497	I	24	PORT-AZO	LL	90	3		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	3	0	0	2.19298	I	24	PORT-AZO	LL	90	3		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	4	0	0	1.46199	I	24	PORT-AZO	LL	90	3		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	5	1	0	14.20455	I	24	PORT-AZO	LL	90	5		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	6	1	0	2.51572	I	24	PORT-AZO	LL	90	6		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	7	1	4	0.22075	I	24	PORT-AZO	LL	90	7		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	8	3	5	0.60801	I	24	PORT-AZO	LL	90	8		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	9	1	11	0.07230	I	24	PORT-AZO	LL	90	9		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	10	1	10	0.06885	I	24	PORT-AZO	LL	90	10		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	11	1	11	0.11602	I	24	PORT-AZO	LL	90	11		SUBSTED & RAISED BY SECR	
24	PORT-MADR	HAND	90	12	1	5	0.10881	I	24	PORT-AZO	LL	90	12		SUBSTED & RAISED BY SECR	
24	PORT-MADR	LL	90	3	1	0	5.84795	I	24	PORT-AZOR	LL	90	3		SUBSTED & RAISED BY SECR	
24	PORT-MADR	LL	90	10	1	10	0.11802	I	24	PORT-AZOR	LL	90	10		SUBSTED & RAISED BY SECR	
24	PORT-MADR	LL	90	11	2	11	0.18741	I	24	PORT-AZOR	LL	90	11		SUBSTED & RAISED BY SECR	
24	PORT-MADR	LL	90	12	2	5	0.34820	I	24	PORT-AZOR	LL	90	12		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	1	1	334	0.00396	I	24	SPAIN	LLHB	90	1		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	2	0	381	0.00063	I	24	SPAIN	LLHB	90	2		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	3	11	284	0.04705	I	24	SPAIN	LLHB	90	3		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	4	0	104	0.00348	I	24	SPAIN	LLHB	90	4		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	5	2	104	0.02198	I	24	SPAIN	LLHB	90	5		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	6	6	119	0.05565	I	24	SPAIN	LLHB	90	6		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	7	11	129	0.09805	I	24	SPAIN	LLHB	90	7		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	8	54	237	0.27441	I	24	SPAIN	LLHB	90	8		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	9	56	350	0.19298	I	24	SPAIN	LLHB	90	9		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	10	39	609	0.07767	I	24	SPAIN	LLHB	90	10		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	11	44	658	0.08101	I	24	SPAIN	LLHB	90	11		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	LLHB	90	12	22	653	0.04036	I	24	SPAIN	LLHB	90	12		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	PS	90	11	1	658	0.00198	I	24	SPAIN	LLHB	90	11		SUBSTED & RAISED BY SECR	
24	PORT-MAIN	PS	90	12	0	653	0.00029	I	24	SPAIN	LLHB	90	12		SUBSTED & RAISED BY SECR	
24	PORT-AZO	LL	90	1	2	0	43.47826	I	24	PORT-AZO	LL	90	1	46	1	RAISED BY SECR
24	PORT-AZO	LL	90	2	1	0	8.77193	I	24	PORT-AZO	LL	90	3		SUBSTED & RAISED BY SECR	
24	PORT-AZO	LL	90	3	1	0	10.23392	I	24	PORT-AZO	LL	90	3	137	2	RAISED BY SECR
24	PORT-AZO	LL	90	4	0	0	1.46199	I	24	PORT-AZO	LL	90	3		SUBSTED & RAISED BY SECR	
24	PORT-AZO	LL	90	5	0	0	5.68182	I	24	PORT-AZO	LL	90	5	35	1	RAISED BY SECR
24	PORT-AZO	LL	90	6	1	0	5.45073	I	24	PORT-AZO	LL	90	6	239	6	RAISED BY SECR
24	PORT-AZO	LL	90	7	9	4	2.34547	I	24	PORT-AZO	LL	90	7	3624	80	RAISED BY SECR
24	PORT-AZO	LL	90	8	24	5	5.16807	I	24	PORT-AZO	LL	90	8	4605	108	RAISED BY SECR
24	PORT-AZO	LL	90	9	54	11	4.85323	I	24	PORT-AZO	LL	90	9	11065	321	RAISED BY SECR
24	PORT-AZO	LL	90	10	52	10	5.14379	I	24	PORT-AZO	LL	90	10	10168	380	RAISED BY SECR
24	PORT-AZO	LL	90	11	54	11	4.81919	I	24	PORT-AZO	LL	90	11	11205	376	RAISED BY SECR
24	PORT-AZO	LL	90	12	15	5	3.28618	I	24	PORT-AZO	LL	90	12	4595	162	RAISED BY SECR
24	SPAIN	LL	90	0	3962		1.00000	I	24	SPAIN	LLHB	90	0		53129	RAISED BY NAT. SCIENTISTS
24	SPAIN	GILL	90	0	646		1.00000	I	24	SPAIN	GILL	90	0		5190	RAISED BY NAT. SCIENTISTS
24	SPAIN	TRAP	90	0	4	646	0.00619	I	24	SPAIN	GILL	90	0			SUBSTED & RAISED BY SECR
24	NEI	LL	90	0	930*	3962	0.23473	I	24	SPAIN	LLHB	90	0			SUBSTED & RAISED BY SECR

Table 1. Continued..

AR	COUNTRY	GR	YR	TM	C A T C H		R.F.	I M M A T C H E D S I Z E			S A M P L E					
					TASK I BEFORE			I	AR	COUNTRY	GEAR	YR	TM	KG	#FISH	REMARKS
					CATCH	RAISE										
					MT	MT										
5	ALGERIE	LL	90	0	23	8	2.85714	I	5	ALGERIE	LL	90	0	8200	431	RAISED BY SECRETAIAT
5	ALGERIE	UNCL	90	0	567	8	69.14634	I	5	ALGERIE	LL	90	0			SUBSTED & RAISED BY SECR
5	CYPRUS	LL	90	0	173	1251	0.13829	I	5	GREECE	LL	88	0			SUBSTED & RAISED BY SECR
5	GREECE	LL	90	0	1251*	1251	1.00000	I	5	GREECE	LL	88	0			SUBSTED & RAISED BY SECR
5	ITALY	GILL	90	0	2270*	6677	0.33997	I	5	ITALY	UNCL	89	0			SUBSTED & RAISED BY SECR
5	ITALY	LL	90	0	2669*	1251	2.13349	I	5	GREECE	LL	88	0			SUBSTED & RAISED BY SECR
5	ITALY	UNCL	90	0	6677*	6677	1.00000	I	5	ITALY	UNCL	89	0			SUBSTED & RAISED BY SECR
5	JAPAN	LL	90	0	2		0.62857	I	5	JPN(OLD)	LL	90	0	?		NAT.C/SIZE RE-RAISED BY SECR
5	HALTA	UNCL	90	0	109	1251	0.08713	I	5	GREECE	LL	88	0			SUBSTED & RAISED BY SECR
5	MAROC	LL	90	0	63	1322	0.04765	I	5	SPAIN	LLHB	90	0			SUBSTED & RAISED BY SECR
5	MAROC	SURF	90	0	360	84	4.30571	I	5	SPAIN	GILL	90	0			SUBSTED & RAISED BY SECR
5	SPAIN	LL	90	0	1322		1.00000	I	5	SPAIN	LLHB	90	0	22897		RAISED BY NAT. SCIENTISTS
5	SPAIN	GILL	90	0	84		1.00000	I	5	SPAIN	GILL	90	0	938		RAISED BY NAT. SCIENTISTS
5	TUNISIE	UNCL	90	0	159*	8	19.38977	I	5	ALGERIE	LL	90	0			SUBSTED & RAISED BY SECR
5	TURKEY	GILL	90	0	392*	1251	0.31335	I	5	GREECE	LL	88	0			SUBSTED & RAISED BY SECR
								I								
6	ARGENTINA	UNCL	90	0	230	2389	0.09628	I	6	JAPAN	LL	90	0			SUBSTED & RAISED BY SECR
6	BRAZIL	LL	90	0	773	2389	0.32357	I	6	JAPAN	LL	90	0			SUBSTED & RAISED BY SECR
6	BRAZ-JPN	LL	90	0	679	2389	0.28422	I	6	JAPAN	LL	90	0			SUBSTED & RAISED BY SECR
6	CHI-TAIWAN	LL	90	0	741	5838	0.12700	I	6	JAPAN	LL	90	0			SUBSTED & RAISED BY SECR
6	CUBA	LL	90	0	448	5838	0.07674	I	6	JAPAN	LL	90	0			SUBSTED & RAISED BY SECR
6	JAPAN	LL	90	0	2389		0.86181	I	6	JPN(OLD)	LL	90	0	?		NAT.C/SIZE RE-RAISED BY SECR
6	KOREA	LL	90	0	44	2389	0.01842	I	6	JAPAN	LL	90	0			SUBSTED & RAISED BY SECR
6	SPAIN	LL	90	0	2619		1.00000	I	6	SPAIN	LLHB	90	0	3139		RAISED BY NAT. SCIENTISTS
6	URUGUAY	LL	90	0	302	2389	0.12641	I	6	JAPAN	LL	90	0			SUBSTED & RAISED BY SECR
7	BENIN	GILL	90	0	28	3547	0.00789	I	7	SPAIN	LLHB	90	0			SUBSTED & RAISED BY SECR
								I								
7	CHI-TAIWAN	LL	90	0	741	5838	0.12700	I	7	JAPAN	LL	90	0			SUBSTED & RAISED BY SECR
7	C.IVOIRE	SURF	90	0	10*	3547	0.00282	I	7	SPAIN	LLHB	90	0			SUBSTED & RAISED BY SECR
7	CUBA	LL	90	0	448	5838	0.07674	I	7	JAPAN	LL	90	0			SUBSTED & RAISED BY SECR
7	GHANA	SURF	90	0	235*	3547	0.06625	I	7	SPAIN	LLHB	90	0			SUBSTED & RAISED BY SECR
7	JAPAN	LL	90	0	3449		1.89512	I	7	JPN(OLD)	LL	90	0	?		NAT.C/SIZE RE-RAISED BY SECR
7	KOREA	LL	90	0	28	3449	0.00812	I	7	JAPAN	LL	90	0			SUBSTED & RAISED BY SECR
7	SPAIN	LL	90	0	3547		1.00000	I	7	SPAIN	LLHB	90	0	10304		RAISED BY NAT. SCIENTISTS
7	TOGO	UNCL	90	0	2*	3547	0.00056	I	7	SPAIN	LLHB	90	0			SUBSTED & RAISED BY SECR

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\* Task I catch carried over from 1989.

Table 2. Task I swordfish catch and estimated weight based on catch at size

COUNTRY	GEAR	YEAR	AREA	ESTIMATED CATCH		TASK I		SAMPLE		
				#	MT	MT	#	Wgt		
JAPAN	LL	89	2	1251	99	99	425			
			14	10230	638	623	1127			
			24	14571	915	850	780			
			5	30	2	1	5			
			6	16135	791	816	945			
			7	46355	3394	3202	3554			
			NORTH	26052	1652	1572	2332			
			SOUTH	62490	4185	4018	4499			
	TOTAL		88572	5839	5591	6836				
SPAIN	LLHB	89	5	67755	1604	1132	16802			
USA	LL	89	1	30656	1094	1049	14516	*		
			2	71965	2413	2296	86081	*		
			3	22876	977	949	20310	*		
			14	39761	1624	1541	31828	*		
	HARP	89	2	210	25	26	114	*		
			GILL	89	2	8772	527	524	8091	*
		TOTAL		174240	6660	6385	160940	*		
	CANADA	LL	90	2	10247	618	618	7540	449191	
14				2665	201	201	2745	197310		
HARP		90	2	540	81	81	151	20315		
			14	52	11	11	13	2878		
		TOTAL		13503	911	911	10449	669694		
JAPAN	LL	90	2	736	61	61	22			
			14	7797	541	523	137			
			24	13229	809	757	318			
			5	44	3	2	11			
			6	33346	2297	2389	2066			
			7	44126	3492	3449	1010			
			NORTH	21762	1412	1341	477			
			SOUTH	77472	5790	5838	3076			
	TOTAL		99278	7205	7181	3564				
SPAIN	LL	90	14	43101	1726	1774	20829			
			24	97296	4054	3962	53129			
			5	86574	1866	1322	22897			
			6	53956	2627	2619	3139			
			7	64811	3834	3547	10304			
			GILL	90	24	14087	546	646	5190	
					5	2227	95	84	938	
		LL		345738	14107	13223	110298			
		GILL		16314	641	730	6128			
		TOTAL		362052	14748	13953	116426			
USA	LL	90	1	16624	530	504	9050	270567		
			2	70984	2544	2430	36165	1182899		
			3	21099	1081	1059	12176	613152		
			14	20441	918	875	21370	921904		
	HARP	90	2	52	6	7	44	5565		
			GILL	90	2	8319	513	510	4594	281363
		TOTAL		137519	5592	5385	83399	3275450		

\* Perhaps overestimated.

Table 3. Task I swordfish catch and sampling levels by fishery and area, 1990

AR COUNTRY	C A T C H		
	GR	TASKI CATCH	SAMPLE KG #FISH

AR COUNTRY	C A T C H		
	GR	TASKI CATCH	SAMPLE KG #FISH

NORTH ATLANTIC

1 U.S.A.	LL	504	270567	9050
AREA 1 TOTAL		504		9050

2 CANADA	HARP	81	20315	151
2 CANADA	LL	618	449191	7540
2 CHI-TAIWAN	LL	1		
2 CUBA	LL	16		
2 JAPAN	LL	61		22
2 U.S.A.	GILL	510	281363	4594
2 U.S.A.	HARP	7	5565	44
2 U.S.A.	LL	2430	1182899	36165
AREA 2 TOTAL		3755		48516

3 U.S.A.	LL	1059	613152	12176
3 VENEZUELA	LL	158		
AREA 3 TOTAL		1255		12176

14 CANADA	HARP	11	2878	13
14 CANADA	LL	201	197310	2745
14 CHI-TAIWAN	LL	10		
14 CUBA	LL	16		
14 JAPAN	LL	523		137
14 KOREA	LL	15		
14 SPAIN	LL	1774		20829
14 U.S.A.	LL	875	921904	21370
AREA 14 TOTAL		3433		45094

24 CHI-TAIWAN	LL	10		
24 CUBA	LL	15		
24 JAPAN	LL	757		318
24 KOREA	LL	14		
24 LIBERIA	UNCL	20*		
24 MAROC	LL	4		
24 MAROC	SURF	35		
24 MAROC	TRAP	26		
24 MAROC	PS	4		
24 PORT-MADR	HAND	10		
24 PORT-MADR	LL	6		
24 PORT-MAIN	LLHB	246		
24 PORT-MAIN	PS	2		
24 PORT-AZO	LL	214	46	1
24 SPAIN	LL	3962		53129
24 SPAIN	GILL	646		5190
24 SPAIN	TRAP	4		
24 NEI	LL	930*		
AREA 24 TOTAL		6905		60074

NORTH TOTAL		15082		175818
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MEDITERRANEAN

5 ALGERIE	UNCL	567		
5 ALGERIE	LL	23	8200	431
5 CYPRUS	LL	173*		
5 GREECE	LL	1251*		
5 ITALY	GILL	2270*		
5 ITALY	LL	2669*		
5 ITALY	UNCL	6677*		
5 JAPAN	LL	2		?
5 MALTA	UNCL	108*		
5 MAROC	LL	63		
5 MAROC	SURF	360		
5 SPAIN	LL	1322		22897
5 SPAIN	GILL	84		938
5 TUNISIE	UNCL	159*		
5 TURKEY	GILL	392*		
MEDIT. TOTAL		15553		24266+

SOUTH ATLANTIC

6 ARGENTINA	UNCL	198*		
6 BRAZIL	LL	773		
6 BRAZ-JPN	LL	679		
6 CHI-TAIWAN	LL	370		
6 CUBA	LL	224		
6 JAPAN	LL	2389		2066
6 KOREA	LL	44		
6 SPAIN	LL	2619		3139
6 URUGUAY	LL	302		
AREA 6 TOTAL		7598		5205

7 BENIN	GILL	28		
7 CHI-TAIWAN	LL	371		
7 C.IVOIRE	SURF	10*		
7 CUBA	LL	224		
7 GHANA	SURF	235*		
7 JAPAN	LL	3449		1010
7 KOREA	LL	28		
7 SPAIN	LL	3547		10304
7 TOGO	UNCL	2*		
AREA 7 TOTAL		7894		11314

SOUTH TOTAL		15931		16519
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\* Figures carried over from 1989