

BLUEFIN DATA SUBSTITUTION AND RAISING MADE FOR 1992

Miyake, P. M., P. Kebe
ICCAT Secretariat

The catch-at-size data base for the east Atlantic bluefin stock (including the Mediterranean Sea) was updated for the 1992 stock assessment. The updating included matching 1990 and 1991 catch data which had become available since the last version was made (in 1990); historical catch data were re-matched with more suitable size data that had been newly submitted; and matching or re-raising the historical catch data that were either revised or reported for the first time.

As a result of two meetings held concerning tuna data (i.e., GFCM and Data), major changes have been introduced in the Task I catch of bluefin tuna, which are as follows:

- Entirely new series of data became available for Tunisian purse seine and handline fisheries.
- Tunisian trap catches are entirely revised since 1970. In particular, the catches for Monastir trap (relatively small fish) which were missing from the ICCAT data base since 1983 became available up to and including 1991.
- Recent Italian catch data (since 1987) had been submitted and clarified.
- Greek catch estimates have been improved instead of repeating one figure for many years.
- A new series of Spanish Mediterranean purse seine data have been made available for the years 1986 to the present.
- Using the import data of bluefin to the Japanese market, the Mediterranean bluefin catches by longliners of ICCAT non-member countries were estimated for the period 1982 through the present (NEI-1).
- The magnitude of under-reporting of bluefin catches by some Mediterranean countries has been estimated and added as NEI-2.

The availability of matching size data to these catches is still inadequate, particularly for the Mediterranean fisheries. The major fisheries which have no accompanying size data are as follows:

- All the Moroccan catches
- Spanish unclassified, purse seine and baitboat catches
- French east Atlantic catches
- Recent Greek catches
- Italian trap and recent purse-seine catches
- Unconventional longline catches (NEI-1)
- Most of the Tunisian catches
- Turkish catches

These catches had to be matched with substituted size data and the proposed substitutions are given in Table 1. The major problem was that size frequencies are very variable for the same fishery between years and this made it extremely difficult to judge the substitutions for the years when the size data are missing. Change of the data substitutions results in a difference of the number of fish (particularly small fish) in the order of 100,000 to a million per year.

Revised

TABLE 1. East Atlantic and Mediterranean bluefin catches matched to size data (sample or substituted) for 1992 stock a

CATCH DATA				MATCHING SIZE DATA				REMARKS					
AR	COUNTRY	GEA	YE	TASKI	CATC	RAISING AR	AR						
				NEW	OLD	FACTORS	COUNT						
E	ESPANA	TRAP	89	1174	1173	1.00000	1	0	0	89	0	3670	CATCH/SIZE REV. NAT. SCI
E-C	ESP-CANAR	BB	90	121	0	1.00000	1	0	0	90	76848	822	BY NAT. SCIENTISTS
E	ESPANA	BB	90	1493	0	1.00000	1	0	0	90	103556	5896	BY NAT. SCIENTISTS
E	ESPANA	LLHB	90	32	0	0.01675	1	SPAIN	TRAP	90	0	0	R.F.=TASKI/TASKI
E	ESPANA	TRAP	90	1911	0	1.00000	1	0	0	90	0	0	BY NAT. SCIENTISTS
E	ESPANA	BB	91	1141	0	1.00000	1	0	0	91	49645	4410	BY NAT. SCIENTISTS
E-C	ESP-CANAR	BB	91	59	0	1.00000	1	0	0	91	0	2363	BY NAT. SCIENTISTS
E	ESPANA	LLHB	91	32	0	0.03077	1	SPAIN	TRAP	91	0	0	R.F.=TASKI/TASKI
E	ESPANA	TRAP	91	1040	0	1.00000	1	0	0	91	0	1942	BY NAT. SCIENTISTS
E	FRANCE	BB	90	367	0	0.24581	1	SPAIN	BB	90	0	0	R.F.=TASKI/TASKI
E	FRANCE	GILL	90	42	0	0.02813	1	SPAIN	BB	90	0	0	R.F.=TASKI/TASKI
E	FRANCE	MWT	90	101	0	0.06765	1	SPAIN	BB	90	0	0	R.F.=TASKI/TASKI
E	FRANCE	BB	91	448	0	0.39264	1	SPAIN	BB	91	0	0	R.F.=TASKI/TASKI
E	FRANCE	GILL	91	47	0	0.04119	1	SPAIN	BB	91	0	0	R.F.=TASKI/TASKI
E	FRANCE	MWT	91	70	0	0.06135	1	SPAIN	BB	91	0	0	R.F.=TASKI/TASKI
E	JAPAN	LLHB	89	838	838	1.00000	1	0	0	89	0	0	CATCH/SIZE REV. NAT. SCI
E	JAPAN	LLHB	90	1464	1477	1.00000	1	0	0	90	0	0	BY NAT. SCIENTISTS
E	JAPAN	LLHB	91	1612	1477	1.00000	1	0	0	91	0	0	BY NAT. SCIENTISTS
E	MAROC	LL	90	8	0	0.12570	3	SPAIN	LLHB	90	0	0	R.F.=TASKI/EST.SAMPLE WGT
E	MAROC	PS	90	8	0	2000.00000	3	55cmFL	0	90	0	0	ASSUMED 4KG FISH (55CM)
E	MAROC	SURF	90	59	0	0.19932	3	SPAIN	HAND	90	0	0	R.F.=TASKI/EST.SAMPLE WGT
E	MAROC	TRAP	90	228	0	0.11931	1	SPAIN	TRAP	90	0	0	R.F.=TASKI/TASKI
E	MAROC	LL	91	2	0	0.12640	3	SPAIN	LLHB	91	0	0	R.F.=TASKI/TASKI
E	MAROC	PS	91	4	0	1000.00000	3	55cmFL	0	91	0	0	ASSUMED 4KG FISH (55CM)
E	MAROC	SURF	91	30	0	1.89602	3	SPAIN	LLHB	91	0	0	R.F.=TASKI/EST.SAMPLE WGT
E	MAROC	TRAP	91	759	0	0.72981	1	SPAIN	TRAP	91	0	0	R.F.=TASKI/TASKI
E-M	PORT-MDR	BB	89	1	0	0.03448	1	PORT-M	BB	88	0	0	R.F.=TASKI/TASKI
E-M	PORT-MDR	HAN	89	2	3	0.66667	1	0	0	89	0	0	TASKI CH'D;RE-RAISED
E-M	PORT-MDR	BB	90	12	0	0.41379	1	PORT-M	BB	88	0	0	R.F.=TASKI/TASKI
E-M	PORT-MDR	HAN	90	1	0	0.33333	1	PORT-M	HAND	89	0	0	R.F.=TASKI/OLDTASKE
E	PORTUGAL	SURF	90	14	0	2800.00000	1	60cmFIS	0	90	0	0	ASSUMED 5KG FISH (60CM)
E	PORTUGAL	SURF	91	18	0	3600.00000	1	60cmFIS	0	91	0	0	ASSUMED 5KG FISH (60CM)
E	SWEDEN	UNCL	91	1	0	0.00996	1	SPAIN	TRAP	91	0	0	R.F.=TASKI/TASKI
E	CHI-TAIW	LLFB	86	2	739	0.00271	1	JAPAN	LL	86	0	0	R.F.=TASKI/TASKI
E	CHI-TAIW	LLFB	87	10	900	0.01111	1	JAPAN	LL	87	0	0	R.F.=TASKI/TASKI
E	CHI-TAIW	LLFB	88	14	1169	0.01193	1	JAPAN	LL	88	0	0	R.F.=TASKI/TASKI
E	CHI-TAIW	LLFB	90	47	1464	0.03210	1	JAPAN	LL	90	0	0	R.F.=TASKI/TASKI
E	CHI-TAIW	LLFB	91	6	1612	0.00372	1	JAPAN	LL	91	0	0	R.F.=TASKI/TASKI
E	NEI-1	LL	84	6.3	1514	0.00416	1	JAPAN	LL	84	0	0	R.F.=TASKI/TASKI
E	NEI-1	LL	85	3.1	420	0.00738	1	JAPAN	LL	85	0	0	R.F.=TASKI/TASKI
E	NEI-1	LL	86	4.7	739	0.00636	1	JAPAN	LL	86	0	0	R.F.=TASKI/TASKI
E	NEI-1	LL	89	4.8	838	0.00573	1	JAPAN	LL	89	0	0	R.F.=TASKI/TASKI
E	NEI-1	LL	90	5.3	1464	0.00362	1	JAPAN	LL	90	0	0	R.F.=TASKI/TASKI
E	NEI-1	LL	91	2.3	1612	0.00143	1	JAPAN	LL	91	0	0	R.F.=TASKI/TASKI
ME	ALGERIE	UNCL	90	782	0	13.25424	3	SPAIN	LLHB	90	0	0	R.F.=TASKI/TASKI
ME	ALGERIE	UNCL	91	782	0	49.42298	3	SPAIN	LLHB	91	0	0	R.F.=TASKI/EST.CAT.WGT
ME	ESPANA	PS	85	45	56	0.80357	3	SPAIN	PS	85	0	0	TASKI CH'D;RE-RAISED
ME	ESPANA	PS	86	110	22	5.00000	3	SPAIN	PS	86	0	0	TASKI CH'D;RE-RAISED
ME	ESPANA	UNCL	86	57	0	1.96551	3	SPAIN	HAND	86	0	0	R.F.=TASKI/TASKI
ME	ESPANA	PS	87	170	0	0.03953	3	FRANCE	PSM	87	0	0	R.F.=TASKI/TASKI
ME	ESPANA	UNCL	87	92	0	0.51977	3	SPAIN	HAND	87	0	0	R.F.=TASKI/TASKI
ME	ESPANA	HAN	88	553	307	1.00000	3	0	0	88	0	0	TASKI CH'D BY CAT/SIZE
ME	ESPANA	LLHB	88	135	136	1.00000	3	0	0	88	0	0	TASKI CH'D BY CAT/SIZE
ME	ESPANA	PS	88	160	0	0.02783	3	FRANCE	PSM	88	0	0	R.F.=TASKI/TASKI
ME	ESPANA	UNCL	88	127	0	0.22966	3	SPAIN	HAND	88	0	0	R.F.=TASKI/TASKI
ME	ESPANA	PS	89	300	0	0.06812	3	FRANCE	PSM	89	0	0	R.F.=TASKI/TASKI
ME	ESPANA	UNCL	89	162	0	1.00000	3	0	0	89	0	0	BY NAT. SCIENTISTS
ME	ESPANA	BB	90	17.3	0	0.07225	1	SPAIN	BB	90	0	0	R.F.=TASKI/EST.CATCH WGT
0	ESPANA	BB	90	7.274	0	0.07225	1	SPAIN	BB	90	0	0	R.F.=TASKI/EST.CATCH WGT
ME	ESPANA	HAN	90	296	0	1.00000	3	0	0	90	0	0	BY NAT. SCIENTISTS
ME	ESPANA	LLHB	90	59	0	1.00000	3	0	0	90	746	23	BY NAT. SCIENTISTS
ME	ESPANA	PS	90	635	0	0.13618	3	FRANCE	PSM	90	0	0	R.F.=TASKI/TASKI
ME	ESPANA	SURF	90	247	0	1.96074	3	SPAIN	SURF	91	0	0	R.F.=TASKI/EST.WGT
ME	ESPANA	TRAP	90	470	0	11.04824	1	SPAIN	TRAP	90	0	0	R.F.=TASKI/TASKI

TABLE 1. East Atlantic and Mediterranean bluefin catches matched to size data (sample or substituted) for 1992 stock a

CATCH DATA				MATCHING SIZE DATA				REMARKS					
AR	COUNTRY	GEA	YE	TASKI	CATC	RAISING AR	AR						
				NEW	OLD	FACTORS	COUNT						
ME	ESPANA	UNCL	90	90	0	1.00000	3	SPAIN	UNCL	90	0	0	BY NAT. SCIENTISTS
ME	ESPANA	BB	91	148	0	1.00000	3	0	0	91	0	0	WGT FREQ BY NAT. SCI.
ME	ESPANA	HAN	91	10	0	0.63201	3	SPAIN	LLHB	91	0	0	R.F.=TASKI/EST.WGT
ME	ESPANA	LLHB	91	51	0	3.22324	3	0	0	91	15822.6	245	R.F.=TASKI/EST.WGT
ME	ESPANA	PS	91	807	0	0.17659	3	FRANCE	PSM	91	0	0	R.F.=TASKI/TASKI
ME	ESPANA	SURF	91	126	0	1.00000	3	SPAIN	SURF	91	0	2339	TASKI ADJUSTED TO EST.WGT
ME	ESPANA	TRAP	91	24	0	1.51682	3	SPAIN	LLHB	91	0	0	R.F.=TASKI/EST.WGT
ME	ESPANA	UNCL	91	226	0	1.00000	3	0	0	91	0	727	BY NAT. SCIENTISTS
ME	FRANCE	PSM	90	4663	0	1.00000	3	0	0	90	0	0	BY NAT. SCIENTISTS
ME	FRANCE	SPOR	90	50	0	0.01072	3	FRANCE	PSM	90	0	0	R.F.=TASKI/TASKI
ME	FRANCE	PSM	91	4570	0	1.00000	3	0	0	91	0	0	BY NAT. SCIENTISTS
ME	FRANCE	SPOR	91	50	0	0.01094	3	FRANCE	PSM	91	0	0	R.F.=TASKI/TASKI
ME	GREECE	HAN	85	11	131	0.00675	1	SPAIN	TRAP	85	0	0	R.F.=TASKI/TASKI
ME	GREECE	HAN	87	99	131	0.75573	3	GREECE	UNCL	87	0	0	TASKI CH'D;RE-RAISING
ME	GREECE	HAN	88	102	131	0.04270	1	SPAIN	TRAP	88	0	0	R.F.=TASKI/TASKI
0	GREECE	HAN	89	131	0	0.11158	1	SPAIN	TRAP	89	0	0	R.F.=TASKI/TASKI
ME	GREECE	HAN	90	155	0	0.08111	1	SPAIN	TRAP	90	0	0	R.F.=TASKI/EST.WGT
ME	GREECE	HAN	91	79	0	0.07596	1	SPAIN	TRAP	91	0	0	R.F.=TASKI/EST.WGT
ME	ITALY-TYR	UNCL	87	1495	0	110.27188	3	0	0	87	13557.4	1097	NEW SAMPLE. REDONE
ME	ITALY-TYR	UNCL	88	1452	0	113.02162	3	0	0	88	12847.1	377	NEW SAMPLE. REDONE
ME	ITALY-TYR	UNCL	89	1452	0	40.79603	3	0	0	89	35591.7	648	NEW SAMPLE. REDONE
ME	ITALY-TYR	PSFB	89	450	0	5.88459	3	0	0	89	76470.9	395	NEW SAMPLE. REDONE
ME	ITALY-TYR	LLHB	90	60	0	31.86662	3	ITALY	LLHB	91	0	0	R.F.=TASKI/EST.WGT
ME	ITALY-TYR	LLHB	91	70	0	37.10772	3	0	0	91	1886.4	284	R.F.=TASKI/EST.WGT
ME	ITALY-TYR	TRAP	90	246	0	0.12873	1	SPAIN	TRAP	90	0	0	R.F.=TASKI/TASKI
ME	ITALY-TYR	TRAP	91	350	0	0.35654	1	SPAIN	TRAP	91	0	0	R.F.=TASKI/TASKI
ME	ITALY-LIGU	SPOR	90	51	0	0.17230	3	SPAIN	HAND	90	0	0	R.F.=TASKI/TASKI
ME	ITALY-TYR	UNCL	90	960	0	738.29116	3	ITALY	GILL	90	0	0	R.F.=TASKI/EST.WGT
ME	ITALY-TYR	UNCL	91	960	0	211.52363	3	ITALY	GILL	91	0	0	R.F.=TASKI/EST.WGT
ME	ITALY-TYR	HARP	91	2	0	0.00105	1	SPAIN</					

TABLE I. East Atlantic and Mediterranean bluefin catches matched to size data (sample or substituted) for 1992 stock a

CATCH DATA				MATCHING SIZE DATA								
AR	COUNTRY	GEA	YE	TASKI	CATC	RAISING	AR	COUNT	GEAR	YE	SAMPLE	REMARKS
				NEW	OLD	FACTORS					KG	NO
ME	NEI-1	LL	85	70.9	0	0.07048	3	JAPAN	LL	85	0	0 R.F.=TASKI/TASKI
ME	NEI-1	LL	86	162.9	0	0.47771	3	JAPAN	LL	86	0	0 R.F.=TASKI/TASKI
ME	NEI-1	LL	87	240	0	0.85714	3	JAPAN	LL	87	0	0 R.F.=TASKI/TASKI
ME	NEI-1	LL	88	638	0	2.47287	3	JAPAN	LL	88	0	0 R.F.=TASKI/TASKI
ME	NEI-1	LL	89	390.5	0	3.07480	3	JAPAN	LL	89	0	0 R.F.=TASKI/TASKI
ME	NEI-1	LL	90	128.2	0	0.74535	3	JAPAN	LL	90	0	0 R.F.=TASKI/TASKI
ME	NEI-1	LL	91	1146	0	13.80843	3	JAPAN	LL	91	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	79	18	0	0.18000	3	SPAIN	LL	79	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	80	27	0	0.27000	3	SPAIN	LL	80	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	81	1	0	0.00500	3	SPAIN	LL	81	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	82	2	0	0.00372	3	SPAIN	LL	82	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	83	13	0	0.08609	3	SPAIN	HAND	83	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	84	60	0	0.41379	3	SPAIN	HAND	84	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	85	79	0	0.29588	3	SPAIN	HAND	85	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	86	22	0	0.75862	3	SPAIN	HAND	86	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	87	34	0	0.19209	3	SPAIN	HAND	87	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	88	62	0	0.11212	3	SPAIN	HAND	88	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	89	74	0	0.54015	3	SPAIN	HAND	89	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	90	43	0	0.14527	3	SPAIN	HAND	90	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	HAN	91	50	0	3.16004	3	SPAIN	LLHB	91	0	0 R.F.=TASKI/EST.WGT
ME	TUNISIE	PS	77	11	0	0.00346	3	FRANCE	PSM	77	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	78	21	0	0.01341	3	FRANCE	PSM	78	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	79	113	0	0.07400	3	FRANCE	PSM	79	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	80	147	0	0.08642	3	FRANCE	PSM	80	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	81	97	0	0.04217	3	FRANCE	PSM	81	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	82	108	0	0.02242	3	FRANCE	PSM	82	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	83	110	0	0.03056	3	FRANCE	PSM	83	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	84	102	0	0.02857	3	FRANCE	PSM	84	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	85	127	0	0.02352	3	FRANCE	PSM	85	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	86	109	0	0.03150	3	FRANCE	PSM	86	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	87	148	0	0.03442	3	FRANCE	PSM	87	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	88	153	120	0.02661	3	FRANCE	PSM	88	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	89	94	50	0.02134	3	FRANCE	PSM	89	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	90	114	0	0.02445	3	FRANCE	PSM	90	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	PS	91	1073	0	0.23479	3	FRANCE	PSM	91	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	TRAP	70	127.7	207	0.61694	3			0	70	0 TASKI CH'D:RE-RAISED
ME	TUNISIE-MO	TRAP	70	26	0	0.61694	3			0	70	0 TASKI CH'D:RE-RAISED
ME	TUNISIE	TRAP	71	116	134	0.86555	3			0	71	0 TASKI CH'D:RE-RAISED
ME	TUNISIE-MO	TRAP	71	90.02	0	0.86555	3			0	71	0 TASKI CH'D:RE-RAISED
ME	TUNISIE	TRAP	72	29	33	0.89063	3			0	72	0 TASKI CH'D:RE-RAISED
ME	TUNISIE-MO	TRAP	72	28	0	0.89063	3			0	72	0 TASKI CH'D:RE-RAISED
ME	TUNISIE	TRAP	74	50	45	1.10569	3			0	74	0 TASKI CH'D:RE-RAISED
ME	TUNISIE-MO	TRAP	74	86	0	1.10569	3			0	74	0 TASKI CH'D:RE-RAISED
ME	TUNISIE	TRAP	75	49.31	60	0.82178	3			0	75	0 TASKI CH'D:RE-RAISED
ME	TUNISIE-MO	TRAP	75	33.69	0	0.82178	3			0	75	0 TASKI CH'D:RE-RAISED
ME	TUNISIE	TRAP	76	30.46	30	1.01538	3			0	76	0 TASKI CH'D:RE-RAISED
ME	TUNISIE-MO	TRAP	76	35.54	0	1.01538	3			0	76	0 TASKI CH'D:RE-RAISED
ME	TUNISIE	TRAP	79	81	65	1.22727	3			0	79	0 TASKI CH'D:RE-RAISED
ME	TUNISIE-MO	TRAP	79	50	66	0.75758	3			0	79	0 TASKI CH'D:RE-RAISED
ME	TUNISIE	TRAP	80	15	60	0.25000	3			0	80	0 TASKI CH'D:RE-RAISED
ME	TUNISIE-MO	TRAP	80	39	60	0.65000	3			0	80	0 TASKI CH'D:RE-RAISED
ME	TUNISIE	TRAP	81	47	49	0.95918	3			0	81	0 TASKI CH'D:RE-RAISED
ME	TUNISIE-MO	TRAP	81	73	49	1.48960	3			0	81	0 TASKI CH'D:RE-RAISED
ME	TUNISIE	TRAP	82	111	100	1.11000	3			0	82	0 TASKI CH'D:RE-RAISED
ME	TUNISIE-MO	TRAP	82	77	0	1.16667	3	SPAIN	TRAP	82	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	TRAP	83	109	80	1.36250	3			0	83	0 ***
ME	TUNISIE-MO	TRAP	83	61	0	1.64865	3	SPAIN	TRAP	83	0	0 R.F.=TASKI/TASKI
ME	TUNISIE-MO	TRAP	84	65	0	0.10467	3	SPAIN	TRAP	84	0	0 R.F.=TASKI/TASKI
ME	TUNISIE-MO	TRAP	85	83	0	0.27483	3	SPAIN	TRAP	85	0	0 R.F.=TASKI/TASKI
ME	TUNISIE-MO	TRAP	86	100	0	0.59513	3	SPAIN	TRAP	86	0	0 R.F.=TASKI/TASKI
ME	TUNISIE-MO	TRAP	87	191	0	0.87215	3	SPAIN	TRAP	87	0	0 R.F.=TASKI/TASKI
ME	TUNISIE-MO	TRAP	88	326	0	1.42982	3	SPAIN	TRAP	88	0	0 R.F.=TASKI/TASKI
ME	TUNISIE-MO	TRAP	89	410	0	1.77489	3	SPAIN	TRAP	89	0	0 R.F.=TASKI/TASKI
ME	TUNISIE	TRAP	90	100	0	0.95233	1	SPAIN	TRAP	90	0	0 R.F.=TASKI/TASKI

TABLE L. East Atlantic and Mediterranean bluefin catches matched to size data (sample or substituted) for 1992 stock a

CATCH DATA				MATCHING SIZE DATA								
AR	COUNTRY	GEA	YE	TASKI	CATC	RAISING	AR	COUNT	GEAR	YE	SAMPLE	REMARKS
				NEW	OLD	FACTORS					KG	NO
ME	TUNISIE-MO	TRAP	90	149	0	3.50253	1	SPAIN	TRAP	90	0	0 R.F.=TASKI/EST.CATCH WGT
ME	TUNISIE	TRAP	91	100	0	0.09615	1	SPAIN	TRAP	91	0	0 R.F.=TASKI/TASKI
ME	TUNISIE-MO	TRAP	91	143	0	9.03771	3	SPAIN	LLHB	91	0	0 R.F.=TASKI/EST.WGT
ME	TURKEY	PS	88	1550	910	854.84227	3			0	88	0 TASKI CH'D:RE-RAISED
ME	TURKEY	PS	89	2809	910	2091.27457	3			0	89	0 TASKI CH'D:RE-RAISED
ME	TURKEY	PS	90	1228	0	677.03713	3	TURKE	PS	88	0	0 R.F.=TASKI/SMP WGT **88+89
ME	TURKEY	PS	90	909.4	0	677.03713	3	TURKE	PS	89	0	0 R.F.=TASKI/SMP WGT **88+89
ME	TURKEY	PS	91	1228	0	677.03713	3	TURKE	PS	88	0	0 R.F.=TASKI/SMP WGT **88+89
ME	TURKEY	PS	91	909.4	0	677.03713	3	TURKE	PS	89	0	0 R.F.=TASKI/SMP WGT **88+89
ME	YUGOSLAV	PS	90	940	0	0.20159	3	FRANCE	PSM	90	0	0 R.F.=TASKI/TASKI
ME	NEL-2	PS	90	19	0	14.61201	3	ITALY-T	GILL	90	0	0 R.F.=TASKI/EST.WGT
ME	NEL-2	PS	91	49	0	10.79652	3	ITALY-T	GILL	91	0	0 R.F.=TASKI/EST.WGT