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Ministero delle politiche agricole alimentari e forestali

DEPARTMENT FOR COMPETITIVENESS, AGRI-FOOD QUALITY, HORSE RACING AND FISHERIES
DIRECTORATE-GENERAL FOR SEA FISHING
PEMAC III

SUBJECT: Italy's Annual Report 2016 – Article 22 of Regulation (EC) No 1380/2013.

In compliance with Article 22 of the above Regulation, we are pleased to send you our report on our efforts made in 2016 to achieve a sustainable balance between the fishing capacity and the fishing opportunities of the Italian fleet.

Signed:

Riccardo Rigillo

Director-General

DG PEMAC
Outgoing ref. on 24 July 2017
Number: **0016516**
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Annual report on Italy's efforts during 2016 to achieve a sustainable balance between fishing capacity and fishing opportunities

(in accordance with Article 22 of Regulation (EU) No 1380/2013)

Contents

Introduction

This report has been drawn up in compliance with Article 22 of Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy (CFP). It contains an assessment of the balance between the fishing capacity of the Italian fleet and fishing opportunities.

The data used to calculate the indicators come from the National Data Collection Framework (DCF/DCR) updated to 2015. The state of resources in Italian geographic sub-areas (GSAs) was assessed by the General Fisheries Commission of the Mediterranean (GFCM), the Scientific, Technical and Economic Committee for Fisheries (STECF) and the International Commission for the Conservation of Atlantic Tunas (ICCAT) working groups.

The report contains the annual assessment of the capacity of the Italian fleet. Structural overcapacity, if applicable, and long-term profitability were assessed for each segment.

The following should be noted.

> 1. The report includes tuna catch data for the various segments of the fleet; see Table B1 of Annex B.
>
> 2. As in previous years, the sustainable harvest indicator (SHI), calculated using fishing mortality/maximum sustainable yield (F/FMSY) ratios, was used to assess the exploitation of fish stocks by the different segments of the fleet. As regards the economic indicators, we continued to use the return on fixed tangible assets (RoFTA) and the current revenue/break-even revenue (CR/BER), in addition to the inactive vessel (IVI) and average vessel activity (AVA) indicators.
>
> 3. The annual calculation of the SHI index took into account all the current fishing mortality (Fc) values and the available FMSY for stock analysed from 2013 to 2015 in the various Italian GSAs. Where the up-to-date F/FMSY ratio was not available the value for previous years was used.
>
> 4. On the basis of the previous year's annual plan the administration is taking forward the tasks involved in issuing the permanent cessation notice.

The administration's decisions are always based on an analytical approach to the segments with the greatest impact in each GSA. It bases its actions on length classes and adopts a progressive implementation approach which means that its actions have a less invasive social and economic impact.

In line with the provisions of the revised Common Fisheries Policy (CFP), the administration aims to achieve the FMSY for all stock by the end of 2020. It plans to reach this target by implementing the following measures:

- capacity reduction through permanent cessation;

- reduction of fleet activity;

- space- and time-related cessations;

- improved selectivity, especially with regard to towed gear.

Taken together, these measures, which will be implemented through multiannual stock management plans (pursuant to Regulation No 1380/2013), will involve – in different ways, therefore selectively – those segments identified as being over capacity.

This report was drawn up taking into account the Community guidelines and using the indicators listed below.[1]

- sustainable harvest indicator (SHI);

- return on fixed tangible assets (RoFTA);

- current revenue/break-even revenue (CR/BER);

- inactive vessel indicator (IVI);

- vessel use indicator (VUI).

A.1 Description of the fishing fleet

The commercial fishing fleet flying the Italian flag and entered in the Fisheries Licence Register at 31 December 2016 consisted of 12 295 vessels for a total of 157 465 GT and 984 267 kW   A comparison with 2015 shows that, albeit to a very slight degree, all the variables concerned continue to follow a downward trend. The number of fishing vessels fell by 17, while gross tonnage declined by 0.13 % and engine power by 0.19 % (see Table 1).

Table 1 – Fishing fleet entered in the Fisheries Licence Register – 2015-2016

Year	Vessels	GT	kW
2015	12 312	157 675	986 170
2016	12 295	157 465	984 377
% change	**-0.14%**	**-0.13%**	**-0.19%**

The situation for the fleet operating outside the Mediterranean is exactly the same as the previous year, since the core of vessels operating in those waters remains unchanged. It consists of 8 trawlers operating in FAO area 34_3 (Atlantic, Eastern Central) and one purse seiner operating in area 51_7 (Indian Ocean, Western).

In September 2016 the Italian administration issued a decree providing for aid for operators opting for permanent cessation. This should pave the way for a further reduction of the fleet (see Table 2).

Table 2 — Fishing fleet operating in the Mediterranean 2015-2016

Year	Vessels	GT	kW
2015	12 303	151 439	973 107
2016	12 286	151 229	971 203

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[1]   COM (2014) 545 final. Communication from the Commission to the European Parliament and the Council. Guidelines for the analysis of the balance between fishing capacity and fishing opportunities according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy.

% change	**-0.14%**	**-0.14%**	**-0.19%**

A.2 Description of the fishing fleets in relation to fisheries

A breakdown of the fleet by fishing method2, based on the frequency of use of the gear, shows that its structure is well established and that in numerical terms it consists mainly of small-scale fishing vessels (boats with passive gear and length <12 metres). These number 8 745, which equates to 71.1 % of the Italian fleet. However, in terms of size this segment accounts for just 13.6 % in GT and 29.7 % in engine power. The trawler fleet (bottom otter and rapido trawling), with 2 285 vessels, predominates in terms of size, accounting for 59.5 % of GT and 47.1 % of engine power. The hydraulic dredger segment (DRB) still stands at 704 vessels, or 5.7 % of the national fleet in numerical terms, 5.9 % the fleet in tonnage and 7.7 % in engine power. Purse seiners (PSs) represent a substantial share of total national tonnage, at 7.9 %, including the vessels in the bluefin tuna fleet. Annex B (Table B1) shows bluefin tuna catches in 2016 broken down by fishing method. Lastly, the fleet of fishing vessels mainly using pair trawling accounts for 5.7 % of total Italian GT (see Table 3).

Table 3 – Fleet by fishing method, 2016

Fishing method	Vessels	GT	kW	% vessels	% GT	% kW
Demersal trawlers (DTS+TBB)	2 285	93 650	463 684	18.6%	59.5%	47.1%
Dredgers (DRB)	704	9 327	76 277	5.7%	5.9%	7.7%
Pelagic trawlers (TM)	126	8 965	45 313	1.0%	5.7%	4.6%
Purse seiners (PS)	217	12 431	55 778	1.8%	7.9%	5.7%
SS	40	423	4 240	0.3%	0.3%	0.4%
Vessel using hooks (HOK)	169	4 977	33 345	1.4%	3.2%	3.4%
Vessel using polyvalent passive gears only (PGP)	8 745	21 456	292 675	71.1%	13.6%	29.7%
A_Sub-total Mediterranean	**12 286**	**151 229**	**971 313**	**99.9%**	**96.0%**	**98.7%**
B_Sub-total outside the Mediterranean	9	6 236	13 064	0.1%	SS	1.3%
ITALY	**12 25**	**157 45**	**984 37**	**100.%**	**100%**	**100.%**

A geographical breakdown of the fleet based on the FAO-GFCM GSAs shows that more vessels are registered in the Northern Adriatic than in any other region. The Northern Adriatic is a composite region from a fisheries perspective, and includes nearly all of the Adriatic regions, from Molise to Friuli Venezia Giulia, with over 700 km of coastline. Just over 3 000 vessels are registered here, or 25 % of the national fleet. They account for 30.6 % of GT and 30.7 % of engine power. In terms of size and importance, the Northern Adriatic is followed by Southern Sicily, with 1 163 vessels; the smaller size in numerical terms is offset by the average size: at 27 GT, more than double the national average. Southern Sicily therefore accounts for 20.4 % of national GT and 13.7 % of national engine

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2   The fleet segmentation used in this report is based on the prevalent fishing method as established in Council Regulation (EC) No 199/2008 establishing a Community framework for the collection and management of the data needed to conduct the Common Fisheries Policy and Commission Regulation (EC) No 26/2004 of 30 December 2003 on the Community fishing fleet register, Annex I "Definition of data and description of a registration".

power. Lastly, the Southern Tyrrhenian has 2 500 vessels, which equates to 20.8 % of the national fleet in numerical terms, 11.6 % in GT and 13.9 % in engine power (see Table 4).

Table 4 – Fleet by geographical sub-area (GSA), 2016

GSA	Vessels	GT	KW	% Vessels	% GT	% KW
09 – Ligurian and North Tyrrhenian Sea	1 692	15 998	127 871	13.8%	10.2%	13.0%
10 – Southern and Central Tyrrhenian Sea	2.556	18 239	136 807	20.8%	11.6%	13.9%
11 – Sardinia	1 319	9 189	75 977	10.7%	5.8%	7.7%
16 – Southern Sicily	1 163	32 114	134 858	9.5%	20.4%	13.7%
17 – Northern Adriatic	3 052	48 229	302 535	24.8%	30.6%	30.7%
18 – Southern Adriatic	1 010	15 195	97 102	8.2%	9.6%	9.9%
19 – Western Ionian Sea	1 494	12 265	96 163	12.2%	7.8%	9.8%
A_Sub-total Mediterranean	**12 286**	**151 229**	**971 313**	**99.9%**	**96.0%**	**98.7%**
B_Sub-total outside the Mediterranean	9	6 236	13 064	0.1%	SS	1.3%
ITALY	**12 295**	**157 465**	**984 377**	**100.0%**	**100.0%**	**100.%**

Production in 2016

In terms of volume, 190 592 tons of fishery products were unloaded by the Italian fleet in 2016,[3] which corresponds to an economic value of € 916.5 million (Annex B, Table B2). In terms of fishing method, the bottom trawler segment (including *rapido*) predominates, accounting for over 61 000 tons, or 32 % of total production. The segment is even more important in economic terms: the high value of the catches, in which red shrimp and scampi have the highest commercial value, generates revenues totalling over € 460 million, or 50 % of Italian turnover. The pair trawling segment comes second in output terms, with nearly 46 000 tons, equating to 24 % of total catches landed. However, the lower commercial yield of the target products generates an economic return of just € 46 million, or 5 % of total turnover. The fixed gear segment produced 32 000 tons, with revenues of € 244 million, nearly 27 % of total turnover.

If we examine the geographical distribution of production, as with the distribution of the fleet the Northern Adriatic and Strait of Sicily are the regions with the highest production. 46.5 % of catches are concentrated in the former, with 88 660 tons and an economic value of 268 million, or 29 %. In Southern Sicily the volume of landings was 10.5 %, with revenue accounting for 17 % of the national total. Production in the Apulia-Adriatic region (GSA 18) was also significant, with both landings and revenue contributing 11 % of the Italian total.

As always, the main species caught were anchovies and sardines. Just under 38 000 tons of anchovies were caught, slightly up on 2015 (+1.4 %). Sardine catches amounted to 28 790 tons, essentially unchanged from 2015. The amount of clams harvested in 2016, at 16 280 tons, showed a significant increase on 2015 (+11 %). Other important species for Italian fishing include white or pink shrimp, with 8 800 tons, and hake, with 8 300 tons. Both of these species showed a decrease with respect to 2015.

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[3]   This figure includes production by the fleet operating outside the Mediterranean.

In economic terms, a group of five predominant species can be identified. Their value, of over € 50 million, is between the € 54 million for red shrimp and the € 66 million for hake; anchovies, white shrimp and cuttlefish sit between these two species in terms of turnover. With respect to 2015, the figures for cuttlefish, anchovies and red shrimp followed an upwards trend. Hake and white shrimp, however, saw a decline of 3 percentage points in revenue, which coincided with the reduction in landings.
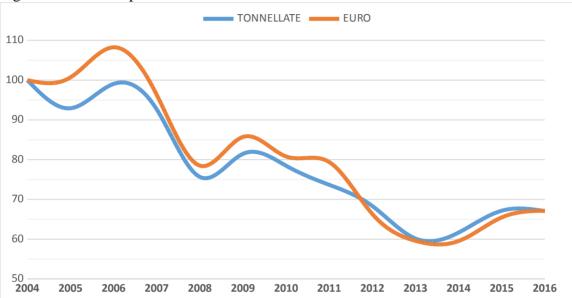
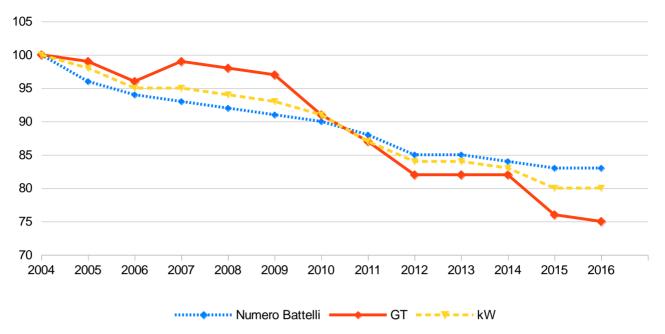Figure 1 – Trend of production from 2004 to 2016 – tons and €

The trend of production is shown in detail in Annex B (Tables B2, B3, B4, and B5).

A.3 Developments during the previous year

The fleet entered in the Fisheries Licence Register at 31 December 2016 consisted of 12 295 fishing vessels for a gross tonnage (GT) of 157 465 and engine power of 984 377 kW. The number of vessels operating outside the Mediterranean was the same as in 2015: 9 vessels, for a total of 6 236 GT and 13 064 kW. The Mediterranean fleet therefore consists of 12 286 vessels, with 151 229 GT and 971 313 kW.

If we use 2004 as the base year, a picture emerges of a clear and constant contraction in the size of the fleet. The number of vessels fell from 14 873 in 2004 to 12 295 in 2016, a decrease of 2 600 units and 50 000 GT. This translates into a decline of 17 % in the number of vessels, 25 % in GT and 20 % in engine power. This mainly affects larger-than-average vessels, as witnessed by the decrease in average GT, from 13.5 to 12.3. The sharp reduction in the production structure is a result of the measures envisaged by the Common Fisheries Policy, which has supported and incentivised the voluntary exit of fishing vessels through permanent cessation measures.

Figure 2 – Size of the fishing fleet from 2004 to 2016 – number of vessels, GT and kW

[key: numero battelli = number of vessels]

In recent years the reduction has continued, although in 2016 the trend slowed somewhat. This can probably be explained by the possibility for operators to access the economic benefits envisaged by the new decree (of December 2016) for permanent withdrawal. Pending the outcome, it is clear that operators have preferred to maintain their fishing activity to ensure they are not excluded from potential financial aid. If this is the case, we should expect a new and substantial wave of exits from the sector in the near future, since the vessels eligible for the financial benefit will be joined by other operators who have decide to close their business. As things stand, however, the number of trawlers, the category mainly affected by the permanent withdrawal procedures, fell by just six units in 2016.

Table 5 – Size of the fleet, GT and kW, by fishing method – comparison 2015/2016

Sistemi di Pesca	Battelli			GT			KW		
	2015	2016	%	2015	2016	%	2015	2016	%
Demersal trawlers (DTS)	2291	2285	-0,3%	93.650	93.650	0,0%	463.185	463.684	0,1%
Dredgers (DRB)	704	704	0,0%	9.341	9.327	-0,1%	76.272	76.277	0,0%
Pelagic trawlers (TM)	129	126	-2,3%	9.137	8.965	-1,9%	44.968	45.313	0,8%
Purse seiners (PS)	219	217	-0,9%	12.605	12.431	-1,4%	56.043	55.778	-0,5%
Vessel using active and passive gears (PMP)	41	40	-2,4%	433	423	-2,3%	4.335	4.240	-2,2%
Vessel using hooks (HOK)	169	169	0,0%	4.979	4.977	0,0%	33.436	33.345	-0,3%
Vessel using polyvalent passive gears only (PGP)	8763	8745	-0,2%	21.439	21.456	0,1%	293.484	292.675	-0,3%
Sub Totale Mediterranea	**12.316**	**12.286**	**-0,2%**	**151.583**	**151.229**	**-0,2%**	**971.724**	**971.313**	**0,0%**

[key: Sistema di pesca = fishing method
Batelli = vessels
Sub Totale Mediterranean = Mediterranean sub-total]

In terms of activity and production, a comparison with 2015 reveals a slight increase in the level of overall activity (fishing days up 1.7 %); taking the average value, which rises from 115 to 119 days, this translates into about four additional fishing days per vessel. This trend is seen for all fishing methods, while in geographical terms it is concentrated in three regions: Southern Tyrrhenian, Strait of Sicily and Northern Adriatic

Table 6 – Trend of production in tons, by fishing method

Fishing method	TONS		
	2015	2016	% change
Demersal trawlers (DTS)	63 546	61 383	-3.40%
Dredgers (DRB)	16 127	17 773	10.21%
Pelagic trawlers (TM)	49 541	45 939	-7.27%
Purse seiners (PS)	21 895	26 288	20.07%
SS	690	673	-2.48%
Vessel using hooks (HOK)	4 005	4 061	1.40%
Vessel using polyvalent passive gears only (PGP)	32 947	31 903	-3.17%
Total	**188 752**	**188 020**	**-0.39%**

A comparison of the volume of landings for each technical segment in 2015 and 2016 reveals that trawling, which is the largest in terms of output, decreased slightly, by 3.4 percentage points. As mentioned earlier, the main target species for this segment, hake and white shrimp, are declining in numbers and this necessarily reflects negatively on overall performance. However, the satisfactory trend in the average price offset the reduction in quantity and resulted in a slight rise in overall revenue, of 0.5 %. As shown by the analysis by species, 2016 saw an increase in anchovies, sardines and clams. This is reflected in the trend for the segments concerned, with purse seining increasing by 20 % in quantitative terms and hydraulic dredging by 10 %. The reduction in trawling also indicates clearly that the increased production of small pelagics involved regions other than the Northern Adriatic, where Emilia Romagna and Veneto in fact saw a significant reduction. A marked increase was seen in Sicily, and throughout the Tyrrhenian.

Total revenues were also supported by the increased production from purse seining and hydraulic dredging. There was a notable contraction in the trawling segment, where prices also moved downwards.

Table 7 – Trend of production in €, by fishing method

Fishing method	€ (000)		
	2015	2016	% change
Demersal trawlers (DTS)	461 184	463 489	0.50
Dredgers (DRB)	40 406	46 993	16.30%
Pelagic trawlers (TM)	54 618	46 358	-15.12%
Purse seiners (PS)	56 367	73 649	30.66%
SS	4 698	4 022	-14.38%
Vessel using hooks (HOK)	24 558	24 715	0.64
Vessel using polyvalent passive gears only (PGP)	248 103	244 567	-1.43%
Total	**889 933**	**903 74**	**1.56**

Table 8 – Trend of average price, by fishing method

Fishing method	Price (€/kg)		
	2015	2016	% change
Demersal trawlers (DTS)	7.26	7.55	4.04%
Dredgers (DRB)	2.51	2.64	5.53%
Pelagic trawlers (TM)	1.10	1.01	-8.47%
Purse seiners (PS)	2.57	2.80	8.82%
SS	6.81	5.98	12.21
Vessel using hooks (HOK)	6.13	6.09	0.75
Vessel using polyvalent passive gears only (PGP)	7.53	7.67	1.80%
Total	**4.71**	**4.81**	**1.95%**

Taking 2004 as the base year, the trend in landings and revenues follows that seen for the structure of production. However, the decline is significantly more marked, since both quantity and value fell by 33 % with respect to 2004. The overall balance for the period shows a loss of 94 000 tons and € 448 million.

B. Impact on fishing capacity of fishing effort reduction schemes adopted under multiannual management or recovery plans or, if applicable, under national schemes

In 2016, in implementation of Measure 1.1 and in accordance with the action plan included in last year's report, the administration issued a permanent cessation notice through the Ministerial Decree of 29 September 2016 (Official Gazette No 268 of 16 November 2016).

The following table shows total GT submitted for withdrawal, by GSA and fishing method.

	Purse seining/trawling	No of vessels	GT	GT to be withdrawn	Total GT
GSA 17-18	**Total LOA<12**	194	588	53	53
	Total 12<=LOA<18	218	4 348	391	391
	Total 18<=LOA<24	107	7 365	663	663
	Total 24<=LOA<40	101	11 290	1 016	1 332

	Bottom trawling/*rapido*	No of vessels	GT	GT to be reduced	Total GT
GSA 9	**Total 18<=LOA<24**	124	6 507	521	2 419
	Total 24<=LOA<40	16	1 522	122	703
GSA 10	**Total LOA<12**	28	135	11	3
	Total 12<=LOA<18	171	3 045	244	683
	Total 18<=LOA<24	82	4 654	372	1 497
GSA 11	**Total 24<=LOA<40**	26	4 069	326	1 277
GSA 16	**Total 12<=LOA<18**	134	2 738	219	576
	Total 18<=LOA<24	148	8 840	707	1 887
	Total 24<=LOA<40	96	14 307	1 145	4 584
GSA 17	**Total LOA<12**	193	1 131	90	209

	Total 12<=LOA<18	516	9 955	796	2 009
	18<=LOA<24 Total	214	14 986	1 199	6 678
	Total 24<=LOA<40	103	12 203	976	4 564
GSA 18	**Total LOA<12**	56	401	32	76
GSA 19	**Total 12<=LOA<18**	192	3 136	251	664
	Total 18<=LOA<24	24	1 266	101	163

This situation is still provisional, as the examination and assessment of applications for the purpose of drawing up the definitive lists is still ongoing.

On the basis of the applications received, it is reasonable to assume that the target of an 8 % reduction in the size of the fleet can be achieved by implementing the "commitment" decrees by the end of 2017 and scrapping the vessels concerned by the end of 2018.

In the course of 2016, a number of provisions were adopted to safeguard stock at particularly high risk.

With the Ministerial Decree of 25 January 2016, published in Official Gazette No 122 of 26 May 2016, in compliance with Recommendation CGPM/39/2015/1 a list of vessels authorised for small pelagic fishing in GSA 17-18 in the Adriatic was drawn up. The Decree also reduced the number of fishing days for small pelagics, bringing the annual limit down to 180 days for the Mediterranean and, for vessels operating in the Adriatic ((GSA 17–18), to 144 days.

Similarly, the Ministerial Decree of 29 September 2016 (Official Gazette No 266 of 14 November 2016) introduced limits on catches and landings of long-finned tuna (*Thunnus alalunga*), and the use of drifting longlines (LLD) from 1 October to 30 November.

The Ministerial Decree of 16 February 2017 (Official Gazette No 53 of 4 March 2017) subsequently introduced regulations governing commercial long-finned tuna fishing whereby special permits are to be issued only for vessels meeting specific requirements.

As envisaged by Commission Decision C(2013) 8635 final of 6 December 2013, the Decree of 29 February 2016 introduced a list of vessels authorised to fish for swordfish using the longline system.

The Italian administration, in coordination with the Croatian administration, issued a number of provisions concerning the marine area known as "Fossa di Pomo", which is located in the Adriatic, off the coast of Pescara. This is an area of commercial interest for the Italian and Croatian merchant navies. At the same time, it is the main hake nursery in the Adriatic, making it particularly significant in biological terms and for fish restocking purposes. Article 6 of the Ministerial Decree No 3 of July 2015 prohibited trawling in this zone until 16 October 2016. Fishing has partly resumed, with specific fishery management measures envisaged. These include a ban on fishing using bottom-set longlines until 31 August 2017. In addition, the Departmental Decree of 7 December 2016 established the requirements and arrangements for submitting applications to obtain a "special permit for fishing in the Fossa di Pomo", thus establishing a list of authorised vessels.

C. Information on compliance with the entry/exit scheme and with the level of reference

To assess compliance with the entry/exit scheme, the snapshot as at March 2017 was used and, in accordance with Article 7 of Regulation (EU) No 1013/2010, the following table was drawn up.

Table 9 – Compliance with the entry/exit scheme

		GT	kW
Situation at 1/1/2003	$GT_{FR} - kW_{FR}$	**217 295**	**1 279 948**
At 31/12/2016	$GT_1 - kW_1$	1 520	4 717
At 31/12/2016	$GT_2 - kW_2$	784	2 348
At 31/12/2016	$GT_3 - kW_3$	6 200	21 218
At 31/12/2016	$GT_4 - kW_4$		
At 31/12/2016	$GT_{03} - kW_{03}$	**224 741**	**1 305 061**
Aided exits **2003-2006**	$GT_{a1} - kW_a$	12 457	63 486
Aided exits **2007- 2016**	$GT_{a2} - kW_a$	46 811	203 271
At 31/12/2016	$GT_{100} - kW_{100}$	1 227	2 735
At 31/12/2016	GTs	17	
kW replaced with 20% reduction	kWr		0
At 31/12/2016	$GT_t - kW_t$	167 057	1 037 347
Situation at 31/12/2016		**157 465**	**984 377**
Difference		**9 592**	**52 970**

The results in the table show that, as at 31 December 2016, available capacity was around 9 500 GT and 53 000 kW.

The table below illustrates compliance with the reference levels.

Table 10 – Calculation of compliance with reference levels

		GT/TSL	kW
Ref level 1/1/2003	$GT_{FR} - kW_{FR}$	**229 862**	**1 338 971**
Vessels with GT>100	$GT_{100} - kW_{100}$	1 227	2 735
Aided exits **2003-2006**	$GT_{a1} - kW_a$	12 457	63 486
Aided exits **2007- 2016**	$GT_{a2} - kW_a$	46 811	203 271
At 31/12/2016	GTs	17	
kW replaced with 20% reduction	kWr		0
Reference level	$GT - kW$	172 179	1 071 257
Situation at 31/12/2016	$GT - kW$	**157 465**	**984 377**
Difference		**14 714**	**86 880**

D. Summary report on the weaknesses and strengths of the fleet management system.

The Italian administration's integrated information systems for fishing and fishing permits means that the fishing effort can be managed at the national level.

The Fleet Register Unit in the Directorate-General for Maritime Fisheries and Aquaculture is responsible for monitoring changes in fishing capacity as expressed through the GT and kW indicators. The IT archive includes a database for checking and inspection operations. The fleet register handles relations and the exchange of data on fishing vessels with the European Commission pursuant to Regulation (EC) No 26/2004 and Regulation (EC) No 741/2014. In addition, the operation of the information system enables compliance with the provisions of FAO-GFCM recommendation RES-GFCM/35/2011/1 on the submission of combined data on fishing vessels.

In recent years, strategies have been adopted to adjust the fishing effort on the basis of management plans by region and fishing system. The impact of the management plans on fleet capacity is checked by collecting fisheries data in accordance with Regulation (EC) No 199/2008, using EMFF funding. The fund will support the implementation of a control, inspection and enforcement system which, through the national data collection programme, will provide a unified management system for the achievement of the CFP objectives.

Similarly, as mentioned earlier the Ministerial Decree of 29 September 2016 (Official Gazette No 266 of 14 November 2016) implemented limits on catches and landings of long-finned tuna (*Thunnus alalunga*) and the use of drifting longlines (LLD) from 1 October to 30 November.

The Ministerial Decree of 16 February 2017 (Official Gazette No 53 of 4 March 2017) introduced regulations governing commercial long-finned tuna fishing whereby special permits are to be issued only for vessels meeting specific requirements.

As envisaged by Commission Decision C(2013) 8635 final of 6 December 2013, the Decree of 29 February 2016 introduced a list of vessels authorised to fish for swordfish using the longline system.

Moreover, to achieve the objective of sustainable exploitation of living marine resources, in the framework of the objectives of the new Common Fisheries Policy, in a more effective manner, the Italian authorities feel that further studies should be encouraged with a view to adjusting and updating the National Management Plans (Regulation (EC) No 1967/2006).

E. Information on changes in the administrative procedures relevant to the management of the fleet

No changes have been made to this procedure during the past year.

F. Application of balance indicators

The following pages provide a detailed examination of the proposed indicators by GSA with the aim of identifying the overall trends by fishing method and LOA class. The data used to calculate the indicators are from the National Data Collection Framework (DCF/DCR).

The decision to provide information by GSA reflects the need to identify geographical differences in terms of economic and social performance and the overall state of the

resources that in turn reflect on the state of fisheries and on differing levels of fishing capacity.

F.1 Biological sustainability indicators

The sustainable harvest indicator (SHI) was used to identify fleet segments with overcapacity. In view of the lack of biomass-based reference points for most of the stocks fished by the Italian fleet, it is not possible to estimate stocks at risk (SAR) using criterion "a" in the Commission Guidelines. Stock to which criteria "b", "c" and "d" of the Guidelines apply represent a small portion of the catches in weight terms.

The F/FMSY ratios for all the stock analysed since 2013 in the various Italian GSAs were used for the annual SHI calculation. The details are shown in Table B6 of Annex B.

In cases where the estimated F/FMSY ratio had not been up-dated, the values for 2014 and 2013 were assumed to be constant for, respectively, 2015 and for 2014 and 2015. To identify fleet segments showing an imbalance, segments with SHI values higher than 1 and threshold above 40 % for at least two out of three years in the period 2013-2015 were considered. For more than 60 % of the stock making up the catches in economic terms, the SHI was deemed to be unavailable in view of the lack of F and FMSY estimates.

An imbalance was found in 34 segments. Of these, 13 had a negative RoFTA net of the long-term interest rate, as illustrated in Table 11, below.

Table 11 – List of fleet segments with an SHI value >1 for at least two of the years from 2013 to 2015

GSA	Gear	VL	SHI 2013	SHI 2014	SHI 2015	RoFTA – Long-term interest rate (%) 2015	CR/BER 2015
GSA10	DTS	VL1218	1 38	1 90	1 99	-0.67	1.11
GSA10	DTS	VL1824	1 52	2 08	2 19	-7.69	0.86
GSA10	HOK	VL1218	1 96	2 07	2 06	-9.41	0.82
GSA10	PGP	VL1218	1 52	2 58	2 22	15.56	1.67
GSA10	PMP	VL0612	40	1 84	1 82	93.79	5.31
GSA10	PMP	VL1218	1 97	2 22	2 18	82.86	3.89
GSA11	DTS	VL2440	3 36	3 02	40	-14.15	0.56
GSA16	DTS	VL1218	2 78	2 66	1 80	22.84	1.82
GSA16	DTS	VL1824	2 76	2 69	1 80	-1.30	1.09
GSA16	HOK	VL1218	1 06	1 45	1 45	62.68	2.91
GSA16	HOK	VL1824	1 71	2 04	5 65	15.53	1.66
GSA16	PGP	VL1218	1 34	1 17	5 92	18.61	1.75
GSA17	DTS	VL0612	1 47	1 34	1 24	16.63	1.49
GSA17	DTS	VL1218	1 62	1 56	1 49	44.89	2.33
GSA17	DTS	VL1824	1 84	1 76	1 76	-0.48	1.12
GSA17	DTS	VL2440	1 89	1 86	1 87	-10.49	0.76
GSA17	PGP	VL1218	40	1 33	1 35	16.39	1.76
GSA17	PS	VL1218	1 66	1 89	1 89	76.98	3.31
GSA17	PS	VL2440	1 53	1 58	1 88	-11.72	0.73
GSA17	TBB	VL1824	1 49	1 37	1 28	5.32	1.27
GSA17	TBB	VL2440	40	1 36	1 27	-20.25	0.45
GSA17	TM	VL1218	1 56	1 60	1 68	309.40	5.20
GSA17	TM	VL1824	1 44	1 54	1 53	22.55	1.96
GSA17	TM	VL2440	1 54	1 63	1 60	-9.26	0.80
GSA18	DTS	VL0612	40	1 40	1 66	126.27	5.34
GSA18	HOK	VL1218	1 96	1 92	2 20	149.17	4.15

GSA18	PS	VL2440	1 65	1 81	1 76	-1.68	1.09
GSA18	TM	VL2440	1 66	1 82	1 85	26.13	2.11
GSA19	DTS	VL1218	1 94	1 73	1 62	17.71	1.63
GSA19	DTS	VL1824	1 86	1 99	2 64	-11.21	0.72
GSA19	HOK	VL1218	1 97	2 54	40	4.80	1.30
GSA19	HOK	VL1824	1 84	1 84	1 85	-12.18	0.69
GSA9	DTS	VL2440	2 12	2 16	2 00	1.72	1.21
GSA9	PGP	VL1218	2 50	2 36	2 08	51.21	2.87

F2. Economic indicators

Following the methodology proposed in the guidelines, two economic indicators were calculated: RoFTA (long-term return) and the CR/BER (short-term return).

RoFTA

The RoFTA is the return per unit (as a percentage) on capital invested in the fisheries sector. The RoFTA was compared with the harmonised long-term interest rate calculated by the European Central Bank. To take into account the high variability in interest rates in the last few years due to the economic crisis, the arithmetic average interest rate for the previous three years (2013-2015) was used.

This interest rate represents the profitability that the same invested capital would obtain if it was invested in the next best available alternative. If the return on investment is less than zero and less than the best available long-term risk-free interest rate, this is an indication of long-term economic inefficiency that could indicate the existence of an imbalance. Table B11 in Annex B shows the values of the indicator for all fleet segments by GSA. Table 12 contains a list of fleet segments for which the indicator was negative in 2015.

Table 12 – List of fleet segments with a negative RoFTA value in 2015

GSA	Fishing method	Length class	RoFTA – Long-term interest rate		
			2013	2014	2015
9	DRB	VL1218	7.44	-18.17	-7.98
10	DRB	VL1218	-3.12	-8.59	-8.09
10	DTS	VL1218	-18.89	3.38	-0.67
10	DTS	VL1824	-5.94	-2.22	-7.69
10	HOK	VL1218	-26.99	-16.15	-9.41
11	DTS	VL1824	10.68	-4.56	-4.00
11	DTS	VL2440	-21.15	-14.95	-14.15
16	DTS	VL1824	-5.27	-9.67	-1.30
16	DTS	VL2440	-14.94	-13.42	0.00
16	PS	VL1824	36.17	16.09	-8.15
17	DTS	VL1824	15.03	-3.01	-0.48
17	DTS	VL2440	-22.29	-13.89	-10.49
17	PS	VL2440	-0.01	-7.23	-11.72
17	TBB	VL2440	24.52	-12.69	-20.25

17	TM	VL2440	-8.43	-8.22	-9.26
18	DTS	VL1824	17.24	3.77	-2.03
18	DTS	VL2440	-11.73	-21.83	-4.15
18	PGP	VL0612	-4.15	6.58	-5.17
18	PS	VL2440	-3.94	-6.60	-1.68
19	DTS	VL1824	-28.62	-14.11	-11.21
19	HOK	VL1824	-27.47	-21.31	-12.18
19	PGP	VL1218	-9.69	8.20	-3.25

In 2015, out of a total of 76 fleet segments, 22 had a RofTA indicator lower than the long-term interest rate. Compared with 2014, the indicator showed a notable improvement.

2015 saw an upwards trend both in fishing activity and in production, which was accompanied by a slight increase in the prices of fish products. The sector benefited from the fall in oil prices that began in late 2014 and continued throughout 2015. The price of oil fell from € 0.75/litre in 2013 to € 0.53/litre in 2015. This led to a proportionate reduction in the price of fuel, which is the main cost heading in the fishing sector.

The reduction in operating costs had particularly positive repercussion on profits and value added in the sector and fostered the growth of the Italian fishing sector in line with the trends seen at the European level. This positive trend did not affect all segments of production, however. Segments with a negative indicator include those in the over-18-metre length class (16 segments out of a total of 23) and, in terms of technique, 11 trawling segments. For these segments, low average productivity and high costs translate into a situation of continuing crisis and financial losses.

CR/BER

The break even revenue (BER) is the revenue required to cover both fixed and variable costs so that no losses are incurred and no profits are generated. Current revenue (CR) is the total operating revenue of the fleet segment, which consists of the profits from landings and non-fishing activities. The calculation of the ratio does not take into account the opportunity cost; the indicator as calculated therefore gives a short-term view of financial viability.

The ratio between a fleet's current revenue and break-even revenue shows how close its current revenue is to the revenue required for it to break even in the short term.

Table 8 in Annex B shows the values of the indicator for all fleet segments by GSA, while Table 13, below, shows a list of fleet segments for which the indicator was less than 1 for the latest year available.

Table 13 – List of fleet segments with a CR/BER value of less than 1 in 2015.

GSA	Fishing method	Length class	CR/BER		
			2013	2014	2015
9	DRB	VL1218	1.37	0.53	0.88
10	DRB	VL1218	1.03	0.83	0.86
10	DTS	VL1824	0.92	1.14	0.86
10	HOK	VL1218	0.21	0.53	0.82
11	DTS	VL1824	1.61	1.01	1.00
11	DTS	VL2440	0.21	0.56	0.56
16	PS	VL1824	2.15	1.68	0.87
17	DTS	VL2440	0.24	0.63	0.76
17	PS	VL2440	1.16	0.87	0.73
17	TBB	VL2440	2.11	0.72	0.45
17	TM	VL2440	0.82	0.88	0.80
18	DTS	VL2440	0.70	0.48	0.99
18	PGP	VL0612	0.99	1.48	0.96
19	DTS	VL1824	-0.05	0.68	0.72
19	HOK	VL1824	0,21	0,36	0,69

In 2015, this indicator was less than 1 for only 15 out of a total of 76 fleet segments.

None of the segments has a negative CR/BER ratio.

The indicator shows an overall improvement on the previous two years. In 2013, 34 fleet segments had a value of less than 1 and of these, 7 had a negative value. In 2014 the number fell to 19, and in 2015 to 15.

As noted for the previous economic indicator (RoFTA), segments with unsatisfactory short-term profitability fall within LOA classes of more than 18 metres (only in four cases did the segments have an LOA of 12 to 18 metres). The indicator expresses the fishing fleet's short-term profitability; the overall improvement seen in 2015 is largely related to the reduction in operating costs, most notably fuel costs, and to the increase in production in terms of both quantity and value.

F.3 Vessel use indicators

The guidelines suggest two indicators to measure how intensively the ships in a fleet segment are being used: the inactive vessel indicator (IVI) and the vessel use indicator (VUI).

The first indicator describes the percentage of inactive vessels in the total fleet, in terms of number of ships, tonnage (GT) and engine power (kW).

The second indicator concerns the average activity levels of vessels that did fish at least once over the year, taking account of the seasonality of the fishery and other restrictions. It

refers to the average, for each fleet segment, of the ratio between observed fishing effort (the average number of days at sea per vessel) and the potential maximum effort of the fleet (the maximum days at sea observed in one fleet segment).

Under the "traffic light" system, an indicator of over 0.9 was observed only for fleet segments with a largely homogeneous level of activity. These can be given a green light. Values lower than 0.7 are considered as potentially indicating an under-use, which in turn may indicate technical overcapacity (red light). Values below 0.7 could be considered as showing substantial under-utilisation, which in turn may indicate technical overcapacity (red light).

Indicators situated between the threshold values are shown in yellow and indicate a situation of relative stability, which means that the available technical capacity is, in general, moderately utilised.

The details are shown in Table B10 of Annex B.

Application and interpretation

The indicator that measures the rate of capacity utilisation shows that the situation as a whole is essentially balanced, because inactivity levels remain below the threshold value of 20 % for all segments of the fleet.

The overall proportion of inactive vessels was 8.8 % of the total in 2015, about 4.6 % in terms of capacity (GT) and 5.6 % in terms of engine power (kW) (Table B9). This situation does not diverge greatly from that seen in the previous two years, notwithstanding the slight downwards trend in the inactive fleet. These percentages are based on values that could be described as "par for the course". In normal conditions, we would expect 10 % or less of the vessels in a fleet segment to be inactive: for repairs, refits, conversions or pending sales and transfers.

A more detailed analysis of the individual annual values shows a clear improvement in the rate of utilisation for the large vessel segment (LOA >40 metres); this consists of 13 vessels, of which one has been inactive since 2015. As might be expected, it is the smaller boat class (LOA <6 metres), with its high rate of small-scale fishing and only occasional use, that is pushing the rate of vessel inactivity upwards. There are various reasons for this:

- o the marked dependency on weather conditions;
- o the ownership structure: most owner-operators are elderly and many have already retired;
- o alternating use with bigger vessels.

The second indicator shows a diverse range of situations and the scenario that emerges is one of extreme variability by fishing segment and geographical area.

In 2015, out of a total of 80 fleet segments (Annex B, Table B10), 13 used their full fishing capacity and 31 reported moderate use. For 36, or 46 % of those surveyed, the indicator corresponded to a potential technical under-utilisation of the vessels.

The indicator reveals that the situation was largely unchanged with respect to 2014. Then, of the 79 segments analysed, 12 were in full use and 30 in moderate use, while 38 segments reported a utilisation level below the threshold value of 0.7.

Again in 2015, the segments with low technical utilisation were mainly in the LOA<18 metres classes. 17 cases were in the LOA<12 metres class, 14 in the 12/18 metres class, and 5 were in the LOA>18 metres class.

Annex B, Table B10 shows the vessel utilisation ratio by GSA, LOA and fishing method in 2012-2015.

G. Conclusions: achievement of a balance between the fleet and the available fishing opportunities

The biological, economic, social and technical indicators proposed in the European Commission guidelines are the instrument through which measures can be implemented to manage fishing capacity to achieve a balance between capacity and fishing opportunities.

The following indicators are used:

- sustainable harvest indicator (SHI);

- return of fixed tangible assets (RoFTA)

- current revenue/break-even revenue (CR/BER)

- inactive vessel indicator (IVI)

- vessel utilisation indicator (VUI)

The indicator values were calculated taking into account the data collected under the National Data Collection Framework (DCR/DCF). These were examined at geographical sub-area (GSA) level with the aim of identifying the overall trends at fishing method and LOA level. The decision to provide information at GSA level responds to the need to capture differences at geographical level with regard to economic/social performance and the overall state of the resources, which reflect on the state of the fisheries and on the varying fishing capacity levels.

RoFTA
In 2015, out of a total of 76 fleet segments, 22 had a RofTA indicator lower than the long-term interest rate. Compared with 2014, the indicator showed a notable improvement.

2015 was characterised by an upwards trend in both fishing activity and production; this was accompanied by a slight increase in the prices of fish products. The sector benefited from the fall in oil prices, the main cost heading for fishing, that began in late 2014 and continued throughout 2015. The price of fuel fell from € 0.75/litre in 2013 to € 0.53/litre in 2015. The reduction in operating costs had positive repercussion on profits and on value added and fostered the growth of the Italian fishing sector in line with the trends seen at the European level. However, this positive trend did not affect all segments of production. Segments with a negative indicator include those in the over-18-metre length class (16 segments out of a total of 23) and, in terms of technique, 11 trawling segments. For these segments, low average productivity and high costs translate into a situation of continuing crisis and financial losses.

CR/BER
In 2015, of a total of 76 fleet segments, only 15 had an indicator value below 1. No segment has a negative CR/BER ratio. The indicator shows an overall improvement on the previous two years. In 2013, 34 fleet segments had a value of less than 1 and of these, 7 had a negative value. In 2014 the number fell to 19, and in 2015 to 15.

As noted for the previous economic indicator (RoFTA), segments with unsatisfactory short-term profitability fall within LOA classes of more than 18 metres (only in four cases did the segments have an LOA of 12 to 18 metres). The indicator expresses the fishing fleet's short-term profitability; the overall improvement seen in 2015 is largely related to the

reduction in operating costs, most notably fuel costs, and to the increase in production in terms of both quantity and value.

VUI

The indicator that measures the rate of capacity utilisation shows that the situation as a whole is essentially balanced, because inactivity levels remain below the threshold value of 20 % for all segments of the fleet.

In 2015 the overall proportion of inactive vessels was 8.8 % of the total, about 4.6 % in terms of capacity (GT) and 5.6 % in terms of engine power (kW) (Table B9). This situation does not diverge greatly from that seen in the previous two years, notwithstanding the slight downwards trend in the inactive fleet. These percentages are based on values that could be described as "par for the course": in normal conditions, we would expect 10 % or less of the vessels in a fleet segment to be inactive: for repairs, refits, conversions or pending sales and transfers.

IVI

In 2015, out of a total of 80 fleet segments (Annex B, Table B10), 13 used their full fishing capacity and 31 reported moderate use. For 36, or 46 % of those surveyed, the indicator corresponded to a potential technical under-utilisation of the vessels.

The indicator reveals that the situation was largely unchanged with respect to 2014. Then, of the 79 segments analysed, 12 were in full use and 30 in moderate use, while 38 segments reported a utilisation level below the threshold value of 0.7.

Again in 2015, the segments with low technical utilisation were mainly in the LOA<18 metres classes. 17 cases were in the LOA<12 metres class, 14 in the 12/18 metres class, and 5 were in the LOA>18 metres class.

Annex B, Table B10 shows the vessel utilisation ratio by GSA, LOA and fishing methods in 2012-2015.

SHI

The F/FMSY ratios for all the stock analysed since 2013 in the various Italian GSAs were used for the annual SHI calculation. The details are shown in Table B6 of Annex B.

In cases where the estimated F/FMSY ratio had not been up-dated, the values for 2014 and 2013 were assumed to be constant for, respectively, 2015 and for 2014 and 2015. To identify fleet segments showing an imbalance, segments with SHI values higher than 1 and threshold above 40 % for at least two out of three years in the period 2013-2015 were considered. For more than 60 % of the stock making up the catches in economic terms, the SHI was deemed to be unavailable in view of the lack of F and FMSY estimates.

An imbalance was found in 34 segments. Of these, 13 had a negative RoFTA net of the long-term interest rate.

It should be noted that in 2016 the number of available assessments taken into consideration to evaluate the state of resources increased. Consequently, the number of segments showing an imbalance also increased. This increase does not indicate, in itself, an overall deterioration in the state of resources as the new segments refer to fishing units that continually exploit the same stocks, even though in some cases they use different gear from that previously surveyed and reported in the permanent cessation plan. In the light of the above, we should consider that for the same target species, catch volumes can differ in

percentage terms, depending on the type of gear used. The reduction in the fishing effort by the vessels referred to in the permanent cessation plan will have a generally positive effect on the state of the resources.

In conclusion, to achieve a sustainable balance between capacity and fishing opportunities, the primary goal continues to be to reduce the fleet by implementing the procedures introduced through the Ministerial Decree of 29 September 2016 (Official Gazette No 268 of 16 November 2016) regarding permanent cessation. The further reduction of fishing mortality will be achieved, taking 2020 as the timeframe to achieve the FMSY for all stocks, by reducing fleet activity and improving the fishery exploitation pattern by adopting space- and time-related cessations and using more selective towed gear.

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ANNEX A: Action plan setting out adjustment objectives and tools for achieving a balance between fleet segments where an imbalance has been demonstrated

Taking into account the Commission guidelines, the Italian action plan is intended to significantly reduce current fishing mortality (FC) through the synergistic action of a number of different measures.

In 2016 the number of available assessments taken into consideration to evaluate the state of resources increased. Consequently, the number of segments showing an imbalance also increased. This increase does not indicate, in itself, an overall deterioration in the state of resources as the new segments refer to fishing units that continually exploit the same stocks, even though in some cases they use different gear from that previously surveyed and reported in the permanent cessation plan. In the light of the above, we should consider that for the same target species, catch volumes can differ in percentage terms, depending on the type of gear used. The reduction in the fishing effort by the vessels referred to in the permanent cessation plan will have a generally positive effect on the state of the resources.

In conclusion, to achieve a sustainable balance between capacity and fishing opportunities, the primary goal continues to be to reduce the fleet by implementing the procedures introduced through the Ministerial Decree of 29 September 2016 (Official Gazette No 268 of 16 November 2016) regarding permanent cessation. In 2017 the list resulting from that notice will be published. The following table shows total GT submitted for withdrawal, by GSA and fishing method.

	Purse seining/trawling	No of vessels	GT	GT to be withdrawn	Total GT
GSA 17-18	**Total LOA<12**	194	588	53	53
	Total 12<=LOA<18	218	4 348	391	391
	Total 18<=LOA<24	107	7 365	663	663
	Total 24<=LOA<40	101	11 290	1 016	1 332

	Bottom trawling/*rapido*	No of vessels	GT	GT to be withdrawn / GT for withdrawal	Total GT
GSA 9	**Total 18<=LOA<24**	124	6 507	521	2 419
	Total 24<=LOA<40	16	1 522	122	703
GSA 10	**Total LOA<12**	28	135	11	3
	Total 12<=LOA<18	171	3 045	244	683
	Total 18<=LOA<24	82	4 654	372	1 497
GSA 11	**Total 24<=LOA<40**	26	4 069	326	1 277
GSA 16	**Total 12<=LOA<18**	134	2 738	219	576
	Total 18<=LOA<24	148	8 840	707	1 887
	Total 24<=LOA<40	96	14 307	1 145	4 584
GSA 17	**Total LOA<12**	193	1 131	90	209
	Total 12<=LOA<18	516	9 955	796	2 009
	Total 18<=LOA<24	214	14 986	1 199	6 678
	Total 24<=LOA<40	103	12 203	976	4 564
GSA 18	**Total LOA<12**	56	401	32	76
GSA 19	**Total 12<=LOA<18**	192	3 136	251	664
	Total 18<=LFT<24	24	1 266	101	163

On the basis of the applications received, which were well in excess of the financial resources earmarked for this measure, it is reasonable to assume that the target of an 8 % reduction in the size of the fleet can be achieved by implementing the "commitment decrees" by the end of 2017 and scrapping the vessels concerned by the end of 2018.

The Italian administration has issued provisions designed to reduce the fishing effort not only by scrapping vessels, but also through a reduction in activity, space- and time-related cessations, and the introduction of lists of vessels expressly authorised to carry out specific fishing activities. This is in line with the actions already undertaken to safeguard certain stocks at particularly high risk, and takes into account previous experience and the data collected.

The following legislative provisions are worthy of note in this respect.

- Fossa di Pomo. Ministerial Decree No 466 of 1 June 2017. In coordination with the Croatian administration, fishing is being regulated in this marine area, while subsequent decrees will provide for the introduction of special permits to fish in this zone.

- Fishing for long-finned tuna (*Thunnus alalunga*). Ministerial Decree of 16 February 2017 (Official Gazette No 53 of 4 March 2017). This decree introduced regulations governing commercial long-finned tuna fishing through the issuing of special permits only for vessels meeting specific requirements.

- Small pelagics. A ministerial decree amending the Decree of 25 January 2016 is currently being issued. The new decree will also introduce, for 2017 and 2018, a closed period specifically for sardines (*Sardina pilchardus*) and anchovies (*Engraulis encrasicolus*) in GSA 17 and GSA 18. The fishing zones and timing will be differentiated.

- Swordfish (*Xiphias gladius*). Swordfish fishing is managed through close and constant monitoring of the activity of authorised vessels included in the list set up through the Ministerial Decree of 29 February 2016, as envisaged by Commission Decision No C(2013)8635 of 6 December 2013.

In accordance with sustainable management criteria for the exploitation of fishery resources in coastal waters, as defined in Regulation (EU) No 1380/2013 and Regulation (EU) No 508/2014, the Italian administration intends to incentivise the creation of management consortia grouping fishing enterprises on a departmental basis.

With a view to achieving the objective of sustainable exploitation of living marine resources, in the framework of the objectives of the new Common Fisheries Policy, in a more effective manner, the Italian authorities feel that further studies should be encouraged with a view to adjusting and updating the National Management Plans (Regulation (EC) No 1967/2006).

To achieve the objective of sustainable exploitation of living marine resources, in the framework of the objectives of the new Common Fisheries Policy, in a more effective manner, the Italian authorities deemed it necessary to introduce studies to revise and update the National Management Plans (Regulation (EC) No 1967/2006).

Special attention will be devoted to studies regarding the increased selectivity of towed gear. In view of the high number of catches of young fish in the Mediterranean, this type of approach could be an important fishery management instrument. Along with other measures, it could help achieve, by 2020, the strategic FMSY target for all stock.

ANNEX B: Reference tables

Table B1 – Catches of bluefin tuna 2016, by fishing method

B1 – Catches of bluefin tuna 2016, by fishing method	N.	GT	KG
PURSE SEINING	12	3029	2 047 302.01
LONGLINERS	30	991	355 504.12
TRAP	3	//	232 806.62
By-catch catches			85 369.02
Angling/Recreational Fishing			12 842.90
TOTAL CATCHES	**2 733 824.67**		

Table B2 – Production 2016 by fishing method, in tons and €

Fishing Technique	TONS	€ (000)
Demersal trawlers (DTS+TBB)	61 383	463 488.91
Dredgers (DRB)	17 773	46 992.87
Pelagic trawlers (TM)	45 939	46 358.30
Purse seiners (PS)	26 288	73 649.46
SS	673	4 022.05
Vessel using hooks (HOK)	4 061	24 715.36
Vessel using polyvalent passive gears only (PGP)	31 903	244 566.60
OFR *	2 572	12 719.28
TOTAL	**190 592**	**916 512.83**

 * Other Fishing Regions

Table B3 – Production 2016 by GSA, in tons and €

GSA	TONS	€ (000)
09 – Ligurian and North Tyrrhenian Sea	17 451	112 618.96
10 – South and central Tyrrhenian Sea	20 187	125 383.18
11 – Sardinia	6 977	52 354.35
16 – Southern Sicily	20 363	154 114.46
17 – Northern Adriatic	88 661	268 217.61
18 – Southern Adriatic	21 967	103 122.16
19 – Western Ionian Sea	12 414	87 982.82
OFR*	2 572	12 719.28
total	**190 592**	**916 512.83**

 * Other Fishing regions

Table B4 – Production 2016, first 20 species in tons

3A_CODE	Scientific Name	TONS	%
ANE	Engraulis encrasicolus	37 969	19.9%
PIL	Sardina pilchardus	28 790	15.1%
SVE	Chamelea gallina	16 283	8.5%
DPS	Parapenaeus longirostris	8 833	4.6%
HKE	Merluccius merluccius	8 258	4.3%
MUT	Mullus barbatus	5 961	3.1%
CTC	Sepia officinalis	5 876	3.1%
MTS	Squilla mantis	5 278	2.8%
SWO	Xiphias gladius	3 946	2.1%
EDT	Eledone moschata	2 669	1.4%
ARS	Aristaeomorpha foliacea	2 540	1.3%
BFT	Thunnus thynnus	2 488	1.3%
SOL	Solea solea	2 381	1.2%
OCC	Octopus vulgaris	2 364	1.2%
NSQ	Nassarius mutabilis	2 112	1.1%
SQM	Illex coindetii	2 068	1.1%
HOM	Trachurus trachurus	1 795	0.9%
MUR	Mullus surmuletus	1 790	0.9%
MGC	Liza ramada	1 752	0.9%
VMA	Scomber colias	1 717	0.9%

Table B4 – Production 2016, first 20 species in €

B4 – Production 2016, first 20 species in €	Scientific name	€	%
HKE	Merluccius merluccius	66 652.82	7.3%
ANE	Engraulis encrasicolus	65 830.74	7.2%
DPS	Parapenaeus longirostris	55 938.49	6.1%
CTC	Sepia officinalis	55 039.64	6.0%
ARS	Aristaeomorpha foliacea	54 550.78	6.0%
SVE	Chamelea gallina	38 273.37	4.2%
SWO	Xiphias gladius	36 579.47	SS
MTS	Squilla mantis	31 517.72	3.4%
MUT	Mullus barbatus	31 488.95	3.4%
NEP	Nephrops norvegicus	28 795.89	3.1%
SOL	Solea solea	28 404.63	3.1%
BFT	Thunnus thynnus	25 016.55	2.7%
PIL	Sardina pilchardus	22 280.69	2.4%
OCC	Octopus vulgaris	20 462.54	2.2%
TGS	Penaeus kerathurus	20 163.91	2.2%
MUR	Mullus surmuletus	18 648.57	2.0%
ARA	Aristeus antennatus	16 563.46	1.8%
SQR	Loligo vulgaris	16 367.12	1.8%
EDT	Eledone moschata	16 107.16	1.8%
EOI	Eledone cirrhosa	12 880.10	1.4%

Table B6 – Stock assessments carried out in the last three years in Italian GSAs. Stock status by year (2013-2015) is shown as the ratio of F current (Fcur) and F at maximum sustainable yield F (FMSY).

GSA	SPECIES	3A_CODE	F_{MSY}	F/F_{MSY} 2013	F/F_{MSY} 2014	F/F_{MSY} 2015
9	Anchovy	ANE	0 40	1 69	1 58	1 48
	Blue and red shrimp	ARA	0 32	2 09	1 03	0 84
	Blue whiting	WHB	0 33	1 16	1 16	1 16
	Deepwater pink shrimp	DPS	0 67	0 97	1 07	1 06
	Giant red shrimp	ARS	0 59	0 31	0 14	0 78
	Hake	HKE	0 24	4 21	4 63	3 75
	Norway lobster	NEP	0 19	2 74	2 21	1 79
	Red mullet	MUT	0 59	2 20	2 63	2 34
	Striped red mullet	MUR	0 44	1 27	1 34	1 11
10	Deepwater pink shrimp	DPS	0 92	1 35	1 35	1 35
	Giant red shrimp	ARS	0 65	0 62	1 40	1 40
	Hake	HKE	0 20	3 64	5 51	5 51
	Red mullet	MUT	0 50	0 95	0 95	0 95
11	Giant red shrimp	ARS	0 31	1 45	1 61	1 61
	Hake	HKE	0 17	10 82	9 47	9 47
	Norway lobster	NEP	0 19	1 95	1 58	2 05
16	Deepwater pink shrimp	DPS	0 83	1 76	1 19	1 46
	Hake	HKE	0 12	6 58	7 42	6 83
	Red mullet	MUT	0 45	1 04	0 98	1 71
	Sardine	PIL	0 17	0 70	0 55	0 55
17	Red mullet	MUT	0 30	2 03	1 27	0 60
	Solea	SOL	0 26	1 27	1 35	1 38
	Spottail mantis shrimp	MTS	0 48	1 14	1 31	1 31
18	Giant red shrimp	ARS	0 42	1 56	1 10	1 10
	Red mullet	MUT	0 42	0 83	0 74	0 45
	Spottail mantis shrimp	MTS	0 43	3 14	2 44	3 60
19	Deepwater pink shrimp	DPS	0 89	1 34	1 71	1 56
	Giant red shrimp	ARS	0 42	1 56	1 10	1 10
	Hake	HKE	0 18	4 44	4 83	4 83
	Red mullet	MUT	0 44	2 73	2 25	2 25
17-18	Anchovy	ANE	0 55	1 65	1 73	1 80
	Deepwater pink shrimp	DPS	0 90	3 17	2 54	1 81
	Hake	HKE	0 21	2 23	2 08	2 62
	Norway lobster	NEP	1 00	1 51	1 36	1 25
	Sardine	PIL	0 72	1 67	2 15	2 07
ALL	Blue fin tuna	BFT	0 42	1 10	1 10	1 10
	Swordfish	SWO	0 25	1 84	1 84	1 84

Table B7 – RoFTA by fishing segments and GSA, 2013-2015

			Long-term interest rate (average 2008-2013) Source: BCE	RoFTA			RoFTA – Long-term interest rate		
GSA	Fishing method	Length class	Average 2011-2015	2013	2014	2015	2013	2014	2015
9	DRB	VL1218	3.97		-14.20	-4.01	7.44	-18.17	-7.98
9	DTS	VL0612	3.97	-10.23	68.89	21.88	-14.20	64.92	17.91
9	DTS	VL1218	3.97	20.59	33.74	60.88	16.62	29.77	56.91
9	DTS	VL1824	3.97	-14.15	1.55	21.94	-18.12	-2.42	17.97
9	DTS	VL2440	3.97	-10.98	-4.38	5.69	-14.95	-8.35	1.72
9	PGP	VL0006	3.97	158.70	64.69	121.89	154.73	60.72	117.92
9	PGP	VL0612	3.97	-4.06	12.49	32.95	-8.03	8.52	28.98
9	PGP	VL1218	3.97	28.59	50.43	55.18	24.62	46.46	51.21
9	PS	VL1218	3.97	54.01	53.30	40.64	50.04	49.33	36.67
9	PS	VL1824	3.97	15.58	22.92	35.02	11.61	18.95	31.05
9	PS	VL2440	3.97	55.23	3.85	17.87	51.26	-0.12	13.90
10	DRB	VL1218	3.97	0.85	-4.62	-4.12	-3.12	-8.59	-8.09
10	DTS	VL0612	3.97	-3.82	77.09	17.02	-7.79	73.12	13.05
10	DTS	VL1218	3.97	-14.92	7.35	3.30	-18.89	3.38	-0.67
10	DTS	VL1824	3.97	-1.97	1.75	-3.72	-5.94	-2.22	-7.69
10	HOK	VL1218	3.97	-23.02	-12.18	-5.44	-26.99	-16.15	-9.41
10	PGP	VL0006	3.97	35.47	62.10	47.71	31.50	58.13	43.74
10	PGP	VL0612	3.97	-23.28	16.53	18.79	-27.25	12.56	14.82
10	PGP	VL1218	3.97	14.80	-0.23	19.53	10.83	-4.20	15.56
10	PMP	VL0612	3.97	-18.49	81.80	97.76	-22.46	77.83	93.79
10	PMP	VL1218	3.97	8.92	61.53	86.83	4.95	57.56	82.86
10	PS	VL1218	3.97	-24.50	7.51	55.72	-28.47	3.54	51.75
10	PS	VL1824	3.97	-2.23	48.39	61.66	-6.20	44.42	57.69
10	PS	VL40XX	3.97	27.46	46.99	16.25	23.49	43.02	12.28
11	DTS	VL1218	3.97	-3.93	-0.26	56.65	-7.90	-4.23	52.68
11	DTS	VL1824	3.97	14.65	-0.59	-0.03	10.68	-4.56	-4.00
11	DTS	VL2440	3.97	-17.18	-10.98	-10.18	-21.15	-14.95	-14.15
11	PGP	VL0006	3.97	124.18	24.50	37.29	120.21	20.53	33.32
11	PGP	VL0612	3.97	-10.67	11.23	14.12	-14.64	7.26	10.15
11	PGP	VL1218	3.97	-4.33	2.71	25.83	-8.30	-1.26	21.86
16	DTS	VL0612	3.97	39.63	20.46	18.34	35.66	16.49	14.37
16	DTS	VL1218	3.97	6.25	10.87	26.81	2.28	6.90	22.84
16	DTS	VL1824	3.97	-1.30	-5.70	2.67	-5.27	-9.67	-1.30
16	DTS	VL2440	3.97	-10.97	-9.45	3.97	-14.94	-13.42	0.00
16	HOK	VL1218	3.97	11.43	58.40	66.65	7.46	54.43	62.68
16	HOK	VL1824	3.97	45.15	53.07	19.50	41.18	49.10	15.53

16	PGP	VL0006	3.97	-9.52	65.41	81.31	-13.49	61.44	77.34
16	PGP	VL0612	3.97	-20.32	17.31	23.84	-24.29	13.34	19.87
16	PGP	VL1218	3.97	9.24	48.18	22.58	5.27	44.21	18.61
16	PS	VL1218	3.97			47.89			43.92
16	PS	VL1824	3.97	40.14	20.06	-4.18	36.17	16.09	-8.15
16	TM	VL1824	3.97	18.54	-10.97	12.11	14.57	-14.94	8.14
17	DRB	VL1218	3.97	23.05	16.80	5.85	19.08	12.83	1.88
17	DTS	VL0612	3.97	-3.62	4.66	20.60	-7.59	0.69	16.63
17	DTS	VL1218	3.97	14.44	50.36	48.86	10.47	46.39	44.89
17	DTS	VL1824	3.97	19.00	0.96	3.49	15.03	-3.01	-0.48
17	DTS	VL2440	3.97	-18.32	-9.92	-6.52	-22.29	-13.89	-10.49
17	PGP	VL0006	3.97	20.54	59.78	47.31	16.57	55.81	43.34
17	PGP	VL0612	3.97	15.01	25.76	34.24	11.04	21.79	30.27
17	PGP	VL1218	3.97		-20.13	20.36		-24.10	16.39
17	PS	VL1218	3.97	56.54	143.55	80.95	52.57	139.58	76.98
17	PS	VL2440	3.97	3.96	-3.26	-7.75	-0.01	-7.23	-11.72
17	TBB	VL1218	3.97	97.45	10.59	124.85	93.48	6.62	120.88
17	TBB	VL1824	3.97	-11.36	-6.71	9.29	-15.33	-10.68	5.32
17	TBB	VL2440	3.97	28.49	-8.72	-16.28	24.52	-12.69	-20.25
17	TM	VL1218	3.97	78.84	187.73	313.37	74.87	183.76	309.40
17	TM	VL1824	3.97	-8.14	12.58	26.52	-12.11	8.61	22.55
17	TM	VL2440	3.97	-4.46	-4.25	-5.29	-8.43	-8.22	-9.26
18	DRB	VL1218	3.97	-30.35	-19.95	34.53	-34.32	-23.92	30.56
18	DTS	VL0612	3.97	305.37	13.40	130.24	301.40	9.43	126.27
18	DTS	VL1218	3.97	162.61	38.02	113.00	158.64	34.05	109.03
18	DTS	VL1824	3.97	21.21	7.74	1.94	17.24	3.77	-2.03
18	DTS	VL2440	3.97	-7.76	-17.86	-0.18	-11.73	-21.83	-4.15
18	HOK	VL1218	3.97	42.66	137.76	153.14	38.69	133.79	149.17
18	PGP	VL0006	3.97	284.68	229.91	185.91	280.71	225.94	181.94
18	PGP	VL0612	3.97	-0.18	10.55	-1.20	-4.15	6.58	-5.17
18	PS	VL2440	3.97	0.03	-2.63	2.29	-3.94	-6.60	-1.68
18	TM	VL2440	3.97	-1.12	-6.57	30.10	-5.09	-10.54	26.13
19	DTS	VL1218	3.97	33.95	42.58	21.68	29.98	38.61	17.71
19	DTS	VL1824	3.97	-24.65	-10.14	-7.24	-28.62	-14.11	-11.21
19	HOK	VL1218	3.97	19.61	12.21	8.77	15.64	8.24	4.80
19	HOK	VL1824	3.97	-23.50	-17.34	-8.21	-27.47	-21.31	-12.18
19	PGP	VL0006	3.97	47.59	126.02	97.51	43.62	122.05	93.54
19	PGP	VL0612	3.97	-7.54	25.06	18.75	-11.51	21.09	14.78
19	PGP	VL1218	3.97	-5.72	12.17	0.72	-9.69	8.20	-3.25
19	PS	VL1218	3.97	-30.24	2.24	11.36	-34.21	-1.73	7.39

Table B8 – Current revenue/break-even revenue and GSA, 2013-2015

GSA	Fishing method	Length class	CR/BER		
			2013	2014	2015
9	DRB	VL1218	1.37	0.53	0.88
9	DTS	VL0612	0.74	2.71	1.69
9	DTS	VL1218	1.70	2.19	2.99
9	DTS	VL1824	0.48	1.11	1.77
9	DTS	VL2440	0.53	0.91	1.21
9	PGP	VL0006	4.07	1.42	3.95
9	PGP	VL0612	0.88	1.22	1.94
9	PGP	VL1218	2.00	2.69	2.87
9	PS	VL1218	2.78	2.52	2.17
9	PS	VL1824	1.56	1.67	2.03
9	PS	VL2440	3.08	1.14	1.58
10	DRB	VL1218	1.03	0.83	0.86
10	DTS	VL0612	0.87	4.06	1.55
10	DTS	VL1218	0.49	1.37	1.11
10	DTS	VL1824	0.92	1.14	0.86
10	HOK	VL1218	0.21	0.53	0.82
10	PGP	VL0006	2.01	2.38	2.03
10	PGP	VL0612	0.27	1.48	1.59
10	PGP	VL1218	1.57	0.91	1.67
10	PMP	VL0612	-0.81	4.62	5.31
10	PMP	VL1218	1.33	2.69	3.89
10	PS	VL1218	0.05	1.24	2.79
10	PS	VL1824	0.92	2.50	2.97
10	PS	VL40XX	2.03	2.92	1.68
11	DTS	VL1218	0.86	1.14	2.85
11	DTS	VL1824	1.61	1.01	1.00
11	DTS	VL2440	0.21	0.56	0.56
11	PGP	VL0006	4.15	1.63	1.86
11	PGP	VL0612	0.68	1.20	1.44
11	PGP	VL1218	0.84	1.08	1.88
16	DTS	VL0612	2.24	1.66	1.51
16	DTS	VL1218	1.19	1.50	1.82
16	DTS	VL1824	0.95	0.98	1.09
16	DTS	VL2440	0.58	0.63	1.15
16	HOK	VL1218	1.38	2.42	2.91
16	HOK	VL1824	2.36	1.55	1.66
16	PGP	VL0006	0.77	2.39	2.32
16	PGP	VL0612	0.37	1.47	1.62
16	PGP	VL1218	1.35	1.58	1.75
16	PS	VL1218			2.60
16	PS	VL1824	2.15	1.68	0.87

16	TM	VL1824	1.60	0.90	1.36
17	DRB	VL1218	1.76	1.50	1.18
17	DTS	VL0612	0.89	1.13	1.49
17	DTS	VL1218	1.48	2.45	2.33
17	DTS	VL1824	1.78	1.10	1.12
17	DTS	VL2440	0.24	0.63	0.76
17	PGP	VL0006	1.52	2.15	2.11
17	PGP	VL0612	1.46	1.63	1.93
17	PGP	VL1218		0.17	1.76
17	PS	VL1218	2.68	5.24	3.31
17	PS	VL2440	1.16	0.87	0.73
17	TBB	VL1218	3.91	1.18	3.36
17	TBB	VL1824	0.56	0.91	1.27
17	TBB	VL2440	2.11	0.72	0.45
17	TM	VL1218	3.04	5.41	5.20
17	TM	VL1824	0.68	1.54	1.96
17	TM	VL2440	0.82	0.88	0.80
18	DRB	VL1218	-0.12	0.31	2.35
18	DTS	VL0612	9.85	1.51	5.34
18	DTS	VL1218	6.77	2.73	5.31
18	DTS	VL1824	1.86	1.46	1.08
18	DTS	VL2440	0.70	0.48	0.99
18	HOK	VL1218	2.06	4.69	4.15
18	PGP	VL0006	5.89	5.18	4.65
18	PGP	VL0612	0.99	1.48	0.96
18	PS	VL2440	1.00	1.07	1.09
18	TM	VL2440	0.96	0.92	2.11
19	DTS	VL1218	2.20	2.55	1.63
19	DTS	VL1824	-0.05	0.68	0.72
19	HOK	VL1218	1.68	1.41	1.30
19	HOK	VL1824	0.21	0.36	0.69
19	PGP	VL0006	2.17	3.75	3.67
19	PGP	VL0612	0.76	1.70	1.65
19	PGP	VL1218	0.78	1.45	1.03
19	PS	VL1218	-0.09	1.06	1.41

Table B9 – Trend of vessel utilisation indicator by LOA class, 2012-2015

	BATTELLI				
CLASSE di LUNGHEZZA	2012	2013	2014	2015	Tendenza
VL0006	13,7%	13,7%	13,5%	13,4%	
VL0612	9,5%	9,7%	9,5%	9,6%	
VL1218	4,6%	6,9%	4,7%	4,6%	
VL1824	3,8%	3,8%	3,5%	3,6%	
VL2440	2,8%	4,3%	4,5%	3,2%	
VL40XX	0,0%	28,6%	28,6%	7,7%	
Totale	8,8%	9,4%	8,9%	8,8%	

	GT				
CLASSE di LUNGHEZZA	2012	2013	2014	2015	Tendenza
VL0006	13,7%	13,7%	13,5%	13,5%	
VL0612	9,0%	9,5%	9,0%	9,2%	
VL1218	4,8%	6,3%	4,8%	4,5%	
VL1824	3,9%	3,8%	3,5%	3,5%	
VL2440	3,6%	5,4%	5,5%	3,7%	
VL40XX	0,0%	23,1%	23,2%	8,2%	
Totale	4,6%	6,0%	5,5%	4,6%	

	KW				
CLASSE di LUNGHEZZA	2012	2013	2014	2015	Tendenza
VL0006	13,2%	13,2%	13,0%	13,0%	
VL0612	9,3%	9,7%	9,4%	9,5%	
VL1218	5,0%	6,9%	5,0%	4,8%	
VL1824	3,8%	3,7%	3,5%	3,6%	
VL2440	2,9%	4,8%	4,9%	3,2%	
VL40XX	0,0%	20,4%	20,4%	7,3%	
Totale	5,6%	6,8%	6,1%	5,6%	

[key: classe di lunghezza = length class
tendenza = trend
totale = total]

Table B10 – Vessel utilisation ratio by GSA, fishing method, LOA 2102–2015.

GSA	Fishing method	LOA class	Vessel Utilisation Ratio			
			2012	**2013**	**2014**	**2015**
9	DRB	VL1218	0.44	0.88	0.84	0.78
9	DTS	VL0612	0.48	0.58	0.80	0.52
9	DTS	VL1218	0.74	0.79	0.77	0.79
9	DTS	VL1824	0.82	0.87	0.88	0.89
9	DTS	VL2440	0.85	1.00	0.94	0.85
9	PGP	VL0006	0.32	0.62	0.37	0.44
9	PGP	VL0612	0.49	0.48	0.41	0.46
9	PGP	VL1218	0.49	0.59	0.42	0.48
9	PS	VL0612	0.86	0.89		
9	PS	VL1218	0.64	0.83	0.46	0.52
9	PS	VL1824	0.89	0.93	0.89	0.98
9	PS	VL2440	0.90	0.89	0.94	0.91
10	DRB	VL1218	0.92	0.36	0.79	0.77
10	DTS	VL0612	0.89	0.79	0.74	0.55
10	DTS	VL1218	0.80	0.85	0.69	0.66
10	DTS	VL1824	0.71	0.80	0.77	0.62
10	HOK	VL1218	0.62	0.95	0.77	0.75
10	PGP	VL0006	0.56	0.44	0.46	0.55
10	PGP	VL0612	0.58	0.56	0.50	0.54
10	PGP	VL1218	0.38	0.52	0.40	0.65
10	PMP	VL0612	0.75	0.61	0.46	0.77
10	PMP	VL1218	0.90	0.57	0.54	0.61
10	PS	VL1218	0.68	0.44	0.59	0.64
10	PS	VL1824	0.71	0.77	0.48	0.63
10	PS	VL2440				1.00
10	PS	VL40XX	0.93	0.95	1.00	1.00
11	DTS	VL0612	0.33			
11	DTS	VL1218	0.54	0.63	0.64	0.76
11	DTS	VL1824	0.73	0.80	0.72	0.68
11	DTS	VL2440	0.81	0.50	0.72	0.81
11	PGP	VL0006	0.38	0.52	0.62	0.62
11	PGP	VL0612	0.63	0.59	0.60	0.56
11	PGP	VL1218	0.58	0.53	0.66	0.52
16	DTS	VL0612	0.56	0.68	0.81	0.73
16	DTS	VL1218	0.75	0.68	0.64	0.65
16	DTS	VL1824	0.74	0.69	0.80	0.63
16	DTS	VL2440	0.76	0.81	0.73	0.82
16	HOK	VL1218	0.76	0.73	0.54	0.73
16	HOK	VL1824	0.73	0.97	0.76	0.83
16	PGP	VL0006	0.57	0.71	0.47	0.68
16	PGP	VL0612	0.60	0.51	0.42	0.62
16	PGP	VL1218	0.68	0.69	0.72	0.84
16	PS	VL0612	0.71	0.90	0.84	
16	PS	VL1218				0.82
16	PS	VL1824	0.73	0.82	0.88	0.82
16	PS	VL2440	0.76	0.93		
16	PS	VL40XX	1.00	1.00	1.00	1.00
16	TM	VL1824	0.86	0.85	0.99	0.78
17	DRB	VL1218	0.01	0.43	0.55	0.63
17	DTS	VL0612	0.38	0.54	0.35	0.40

17	DTS	VL1218	0.64	0.64	0.67	0.54
17	DTS	VL1824	0.75	0.75	0.84	0.81
17	DTS	VL2440	0.54	0.66	0.90	0.81
17	PGP	VL0006	0.40	0.41	0.38	0.38
17	PGP	VL0612	0.58	0.41	0.34	0.42
17	PGP	VL1218	0.09		0.33	0.49
17	PS	VL0612	1.00	1.00		
17	PS	VL1218	0.84	0.83	0.80	0.86
17	PS	VL2440	0.54	0.74	0.55	0.73
17	PS	VL40XX				0.73
17	TBB	VL1218	0.75	0.92	0.65	0.95
17	TBB	VL1824	0.82	0.89	0.87	0.90
17	TBB	VL2440	0.70	0.53	0.95	0.94
17	TM	VL1218	0.68	0.79	0.77	0.79
17	TM	VL1824	0.98	0.85	0.95	0.87
17	TM	VL2440	0.86	0.84	0.93	0.93
18	DRB	VL1218	0.67	0.38	0.45	0.56
18	DTS	VL0612	0.95	0.98	0.68	0.95
18	DTS	VL1218	0.73	0.81	0.62	0.66
18	DTS	VL1824	0.71	0.80	0.69	0.91
18	DTS	VL2440	0.96	0.78	0.70	0.91
18	HOK	VL1218	0.93	0.88	0.86	0.73
18	PGP	VL0006	0.81	0.95	0.67	0.54
18	PGP	VL0612	0.64	0.83	0.75	0.66
18	PS	VL2440	0.86	0.92	0.94	0.74
18	TM	VL2440	0.88	0.89	0.94	0.90
19	DTS	VL0612	0.66	1.00		
19	DTS	VL1218	0.79	0.76	0.82	0.85
19	DTS	VL1824	0.91	0.84	0.75	0.71
19	HOK	VL1218	0.69	0.80	0.70	0.72
19	HOK	VL1824	0.80	0.97	0.72	0.62
19	PGP	VL0006	0.45	0.80	0.58	0.64
19	PGP	VL0612	0.62	0.77	0.63	0.69
19	PGP	VL1218	0.72	0.74	0.68	0.76
19	PS	VL1218	0.87	0.84	0.86	0.61
19	PS	VL2440	0.93	0.90	1.00	1.00
19	PS	VL40XX	0.93	0.85	1.00	