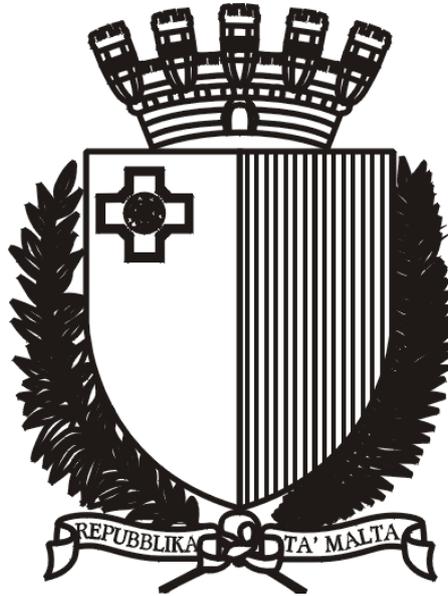


**MINISTRY FOR SUSTAINABLE DEVELOPMENT,
THE ENVIRONMENT AND CLIMATE CHANGE**



MALTA

**Annual Report on efforts to achieve a sustainable balance between fishing
capacity and fishing opportunities for the year 2016**

In accordance with
Article 22 of Regulation (EU) No 1380/2013 on the Common Fisheries Policy

Malta

**Department of Fisheries and Aquaculture,
Ghammieri, Ngiered Road,
Marsa, MRS 3303
Malta**

May 2017

Table of Contents

TABLE OF CONTENTS	I
LIST OF ACRONYMS	II
SUMMARY OF REPORT	III
STATEMENT OF MALTA’S OPINION ON BALANCE OF FLEET CAPACITY AND FISHING OPPORTUNITY	IV
A.1. DESCRIPTION OF THE FLEET.....	1
A.2. DEVELOPMENT IN FLEETS	3
A.3. FISHERIES COVERED BY MULTIANNUAL MANAGEMENT OR RECOVERY PLANS	4
A.4. STATEMENT OF EFFORT REDUCTION SCHEMES	5
A.5. IMPACT ON FISHING CAPACITY OF EFFORT REDUCTION SCHEMES.....	5
A.6. STATEMENT OF COMPLIANCE WITH ENTRY/EXIT SCHEME AND WITH LEVEL OF REFERENCE	5
A.7. SUMMARY OF WEAKNESSES & STRENGTHS OF FLEET MANAGEMENT SYSTEM	6
A.8. PLAN FOR IMPROVEMENTS IN FLEET MANAGEMENT SYSTEM.....	7
A.9. INFORMATION ON GENERAL LEVEL OF COMPLIANCE WITH FLEET POLICY INSTRUMENTS	7
A.10. INFORMATION ON CHANGES OF THE ADMINISTRATIVE PROCEDURES RELEVANT TO FLEET MANAGEMENT	8
A.11. VESSEL USE INDICATOR(S)	9
A.11.1. <i>Inactive Fleet Indicator</i>	9
A.11.2. <i>Vessel Utilisation Indicator</i>	10
A.12. BIOLOGICAL INDICATORS.....	12
A.12.3. <i>Sustainable Harvest Indicator</i>	12
A.12.4. <i>Stocks-at-risk Indicator</i>	14
A.13. ECONOMIC INDICATORS.....	15
A.13.5. <i>Return on Investment (ROI) vs Next Best Alternative</i>	15
A.13.6. <i>Current Revenue against Break-even Revenue Economic Indicator</i>	17
A.14. ACTION PLAN	19
A.14.1. <i>Background</i>	19
A.14.2. <i>Analysis of Trends</i>	19
A.14.3. <i>Fishing opportunities</i>	22
A.14.4. <i>Context</i>	22
A.14.5. <i>Link to previous actions and Rationale for a new action plan</i>	22
ANNEX I – TREND ANALYSIS	25
ANNEX II – ACTION PLAN	27

List of Acronyms

AWL	Automated Weighing and Labelling system
DFA	Department of Fisheries and Aquaculture
DFN	Fixed Netters
DTS	Demersal Trawlers
FPO	Pots and Traps
FT	Full-time fishers
HOK	Gears using Hooks
MGO	Other active gears
PGP	Polyvalent Passive Gears Only
PMP	Combined mobile and passive gears
PS	Purse Seiners
PT	Part-time fishers
TM	Pelagic Trawlers

Summary of Report

The Maltese fishery is a relatively small industry of a typically Mediterranean artisanal type, and is frequently described as a multi-species and multi-gear fishery, with the majority of the fishers switching from one gear to another several times throughout the year. The fleet in 2016 consisted of 1,014 professional (commercial) vessels with a total gross tonnage and (main engine) power of 6,962.70 GT and 72,700.87 kW respectively. Just over 93% of the professional vessels are less than 12 metres in length and these operate mainly in coastal waters. Larger vessels, those over 12 metres in length, amount to 65 vessels and mainly consist of trawlers, long-liners and netters which operate mainly in off-shore waters all year round. The lengths of the registered vessels range between 3.00 and 35.00 metres.

The main exploited species include swordfish, dolphinfish, bluefin tuna, demersal and small-pelagic species – particularly mackerel, and a number of additional species, some of which have a high commercial value, for example the red shrimp, despite being caught in smaller quantities. The total amount of fish landed in 2016 was about 2,290.7 tonnes. The commercial part of the Maltese Fishing Vessel Register did not open for additional registrations during 2016. No vessels left the fleet through effort reduction schemes.

It should be noted that the only stock for which the Maltese fleet has been allocated fishing opportunities for is bluefin tuna (*Thunnus thynnus*). The indicator results for fleet segments targeting other species should therefore be considered as indicative. Four balance indicators were applied: the inactive fleet and the vessel utilisation technical indicators (for reference year 2016), and the return on investment and break-even revenue economic indicators (for reference year 2015). The biological indicators were not applied since the percentage of stocks assessed was very low in the case of the sustainable harvest indicator, and the Maltese fleet does not target any stock at risk as applicable for the second biological indicator.

The vessel use indicators have both shown that there is the possibility that the professional (commercial) Maltese fleet might be operating in a technically inefficient manner. In most segments, the value of the observed theoretical effort was relatively high (compared to the actual effort of most vessels within the segment) due to the high numbers of fishing days carried out by one or two vessels within that segment. However, this can be explained since Maltese fishers regularly own more than one vessel, which are not used simultaneously; most of the times, the Maltese fisher and his crew are all on one vessel whilst the other vessel is in port, unused.

Even though biological indicator 1 could not be applied, the available stock assessments were used to give an indication of the impact of trawling on the exploited ecosystem. The results show that regionally the stock of hake is in overexploitation with relative intermediate biomass and deep water rose shrimp was found to be between intermediate and low overfishing status with relative low biomass. A management plan to address this issue was devised at GFCM level, including Malta, Sicily and Tunisia, which all exploit the same stock (Recommendation GFCM/40/2016/4). In 2016, the stock of red mullet in the Strait of Sicily was assessed in collaboration between GSA15 and GSA16 and found to be in low overexploitation with relative low biomass. Nevertheless, it should be noted that Malta's percentage catch for these stocks is less than 0.04% (and thus negligible) and that Malta already reduced its trawling fleet by approximately 30% since 2011.

Two economic indicators were calculated. The first indicator (Return on Investment [ROI]) was selected over the Return on Fixed Tangible Assets (ROFTA) since data on intangible assets and tangible assets are both available. For reference year 2015, the fleet segments Pots and Traps (FPO) VL0006, Gears Using Hooks (HOK) VL1218, Other Active Gears (MGO) VL1824, Purse Seiners (PS) VL1218 and VL2440 had a positive ROI and greater than the low risk long term interest rate. On the other hand the fleet segment Demersal Trawlers (DTS) VL1824 and Other Active Gears (MGO) VL1218 had a positive ROI but smaller than

the low risk interest rate which yields negative value for the indicator. It is important to note that these two gears had enough income to cover all the variable and non variable costs including the full capital costs (depreciation) and hence generated a positive net profit. However the latter shows that in the long-term it would be more beneficial for this segment to invest elsewhere. Nevertheless, it is important to note that the segments Gears Using Hooks (HOK) VL0612 and VL1824, Demersal Trawlers (DTS) VL2440 and Purse Seiners (PS) VL1824 had enough income to cover all the operating costs since they generated a gross profit but did not generate enough income to cover the non operating costs and hence they reported a net loss. The other fleet segments had a negative gross profit and net profit during the reference year in subject.

The Current Revenue against Break-Even Revenue Economic Indicator was calculated for the year 2014. For the year 2015, the fleet segments Pots and Traps (FPO) VL0006, Gears Using Hooks (HOK) VL1218 and VL1824, Other Active Gears (MGO) VL1218 and VL1824, Purse Seiners (PS) VL1218 and VL2440 had a ratio greater than 1. For reference year 2015, the fleet segments Demersal Trawlers (DTS) VL1824 and VL2440, Gears Using Hooks (HOK) VL0612, Other Active Gears (MGO) VL0612 and Purse Seiners (PS) VL1824 had a ratio less than 1. This means that these fleet segments (except for Demersal Trawlers (DTS) VL1824) generated insufficient income to cover variable, fixed and capital costs. Hence these fleet segments are unprofitable, with a potential of over-capitalisation. The other segments had a negative CR/BER result which means that variable costs alone exceed current revenue and hence they are unprofitable.

Although, the year 2015 resulted as being economically insufficient since the ratio for most of the fleet segments was less than one, there was still an improvement in the trend of this indicator. This can also be seen in the economic development trends and economic performance of most of the fleet segments. Only four segments out of twenty deteriorated in their economic performance. These were Fixed Netters (DFN) VL0612, Polyvalent Passive Gears Only (PGP) VL0612, Purse Seiners (PS) VL0612 and VL1824. Out of the remaining segments, 5 segments were balanced with an improving economic performance trend while the other 11 fleet segments had an imbalance economic indicator but yet an improving trend in their economic performance.

Statement of Malta's opinion on balance of fleet capacity and fishing opportunity

Table 1 Traffic light system; grey colour: non-applicable value, green colour: satisfactory value, yellow colour: somewhat unsatisfactory value, red colour: very unsatisfactory value as per STECF-11-17.

*** Indicator could not be calculated, although MS contribution to F is considerably below $F_{0.1}$ for the shared stocks that have been assessed.**

Indicator	Definition	2008	2009	2010	2011	2012	2013	2014	2015	2016
Vessel Use Indicator 1	Inactive Fleet Indicator									
Vessel Use Indicator 2	Vessel Utilisation Indicator									
Biological Indicator 1	Sustainable Harvest Indicator					*	*	*		
Biological Indicator 2	Stocks at Risk Indicator									
Economic Indicator 1	ROI vs Next Best Alternative									
Economic Indicator 2	CR vs BeR Indicator									

A.1. Description of the fleet

The Maltese fishery is a relatively small industry of a typically Mediterranean artisanal type. It is frequently described as a multi-species and multi-gear fishery, with the majority of the fishers switching from one gear to another several times throughout the year. The fleet throughout the year 2016 consisted of 1,014 professional vessels of which 405 (39.9%) were professional full-time and 609 (60.1%) were professional part-time vessels. Of these professional vessels, a total of 9 were registered as “non-operational” – i.e. vessels that are either being repaired, or have been rendered non-operational due to pending court cases. The fleet, as of 31 December 2016, consisted of 913 professional (commercial) vessels with a total gross tonnage and (main engine) power of 6,343.98 GT and 67,244.22 kW respectively. The recreational category, made up of 2,027 vessels, operated recreational fishing gear only and fish caught by vessels in this category are not commercialised. For the purpose of this report, analysis was carried out on the fleet data throughout the year 2016, i.e. the number of vessels present in the Fleet Vessel Registry at any instance during the year 2016.

The total gross tonnage and (main engine) power for the full-time professional vessels for 2016 were 5,875.82 GT and 43,548.49 kW respectively; while for the part-time professional vessels the values were 1,086.88 GT and 29,152.38 kW. In 2016, a total of 14 trawlers classified as operational were registered on a full-time basis, with a total power and tonnage of 5,668.04 kW and 2,260.25 GT respectively. These ranged between 19.3 to 35.0 m in overall length.

The absolute majority 93.5% of the professional vessels are less than 12 metres in length overall and more than half of them are of a traditional design, mainly ‘luzzu’ and ‘kajjik’, and these operate mainly in coastal waters. Larger vessels, those over 12 metres in length, amount to 65 vessels and mainly consist of trawlers, long-liners and netters which operate mainly in off-shore waters all year round. The lengths of the registered vessels range between 3.00 and 35.00 metres. Table 2, Table 3 and Table 4 show the fleet data by fleet segment throughout 2016. Table 5 shows the time series of LOA of Maltese fishing vessels for 2007-2016, whilst Table 6 shows a time series of fleet data by fleet segment for the years 2007-2016.

Table 2. Number of operational full-time (FT) and part-time (PT) vessels in the professional Maltese fleet divided by fleet segment throughout 2016.

	DFN	DTS	FPO	HOK	MGO	PGP	PMP	PS	INACTIVE
FT	2	10	0	58	21	152	96	6	52
PT	7	0	1	14	0	309	53	0	224
Total	9	10	1	72	21	461	149	6	276

Table 3. Total GT and kW for full-time (FT) and part-time (PT) operational vessels in each fleet segment throughout 2016.

GT									
	DFN	DTS	FPO	HOK	MGO	PGP	PMP	PS	INACTIVE
FT	4	1465	0	1715	295	275	449	345	1217
PT	6	0	1	35	0	475	142	0	436
kW									
	DFN	DTS	FPO	HOK	MGO	PGP	PMP	PS	INACTIVE
FT	101	3549	0	10870	4186	7972	8541	1897	6057
PT	166	0	13	1315	0	13457	3328	0	11000

Table 4. Number of operational full-time and part-time vessels in the Maltese fleet divided by fleet segment throughout 2016.

Full-time									
	DFN	DTS	FPO	HOK	MGO	PGP	PMP	PS	INACTIVE
VL0006	1	0	0	3	0	93	10	0	21
VL0612	1	0	0	27	14	59	83	0	20
VL1218	0	0	0	9	6	0	1	3	4
VL1824	0	6	0	19	1	0	2	1	3
VL2440	0	4	0	0	0	0	0	2	4
Total	2	10	0	58	21	152	96	6	52
Part-time									
	DFN	DTS	FPO	HOK	MGO	PGP	PMP	PS	INACTIVE
VL0006	7	0	1	5	0	228	15	0	131
VL0612	0	0	0	9	0	81	38	0	93
Total	7	0	1	14	0	309	53	0	224

Table 5. Time series of LOA of operational vessels in the Maltese fishing fleet for 2007-2016.

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
VL0006	723	549	546	546	538	516	521	510	503	515
VL0612	572	484	469	468	460	444	444	426	425	425
VL1218	60	53	50	48	38	33	26	23	21	23
VL1824	27	30	35	35	35	36	38	31	32	32
VL2440	10	9	11	12	13	12	11	9	8	10
VL >40	2	1	1	1	1	0	0	0	0	0
Total:	1394	1126	1112	1110	1085	1041	1040	999	989	1005

Table 6. Time series of number of vessels, GT and kW of the full-time and part-time operational fishing fleets from 2006-2016.

Year	Part-time			Full-time		
	No. of vessels	GT	kW	No. of vessels	GT	kW
2007	977	2,135.51	46,207.47	417	12,933.04	51,474.75
2008	718	1,525.92	35,728.25	408	9,251.83	49,145.81
2009	707	1,481.50	35,450.88	405	10,675.63	50,006.58
2010	706	1,484.12	35,205.25	404	10,811.68	50,049.19
2011	694	1,464.13	34,835.56	391	10,608.51	48,159.16
2012	637	1,329.11	31,064.99	404	6,649.93	45,470.65
2013	629	1,243.90	30,468.96	411	6,542.02	45,595.31
2014	617	1,144.98	29,771.68	399	5,924.94	42,985.87
2015	599	1,077.83	28,972.59	390	5,246.01	41,115.36
2016	608	1,094.61	29,277.86	397	5,764.5	43,172.11

A.2. Development in fleets

The professional part of the Maltese Fishing Vessel Register (FVR) did not open for new registrations during 2016, though registrations were accepted for recreational vessels. Table 7 and Table 8 show the replaced and new vessels respectively, with details on each vessel. Requests for replacements are submitted by the vessel owner for departmental approval. The plan may only be altered following an approval by the Department of Fisheries and Aquaculture (DFA). Replaced vessels take the registration number of the vessels they replaced, but the first integer of the registration number is changed to 7. It should also be noted that the deletion date for vessel MFA1004 is listed as 2014 following its wreckage. It was then replaced by MFA7005 in 2016.

Table 7 List of vessels replaced in 2016.

FVR Number	Vessel Name	Vessel Type	Retirement Date	Length	GT	kW	Construction Year
MFA1004	Uragano	Trawler	03/12/2014	37.7	196.76	396.27	1972
MFA0269	Kosi	Multipurpose Vessel	03/05/2016	8.4	6.14	149.2	2002
MFB0383	Maria S	Multipurpose Vessel	29/04/2016	7.9	3.87	86.54	191
MFB8281	Madalou	Multipurpose Vessel	14/03/2016	7.65	4.02	171.58	2002
MFB0120	St. Joseph	Kajjik	10/08/2016	4.06	0.73	13.43	1986
MFB1727	Not Named	Kajjik	10/08/2016	5.05	1.17	7.46	2002
MFB0730	San Pawl	Kajjik	05/04/2016	5.30	1.36	22.38	1991
MFB0910	St. Venera	Firilla	03/11/2016	7.65	1.84	23.13	1970
MFB0541	Duminku	Kajjik	15/07/2016	4.87	0.67	13.43	1973
MFA8832	Gipsy	Multipurpose Vessel	01/02/2016	6.48	1.97	46.25	1984
MFB0798	Carolina I	Multipurpose Vessel	19/05/2016	9.76	4.60	74.6	1982
MFA8191	Toni Ta' Stella	Luzzu	01/02/2016	7.45	2.11	40	1959
MFB0033	St. Mikiel	Luzzu	10/08/2016	7.87	3.91	48.49	1972
MFB1090	Sam	Multipurpose Vessel	07/07/2016	7.15	2.85	37.3	1989
MFA0012	Michelangelo	Multipurpose Vessel	07/10/2016	16	24.03	164.12	1968
MFB8048	Sant Andria	Luzzu	24/05/2016	7.92	2.72	55.2	1929
MFB8041	Josephine	Luzzu	07/04/2016	5.88	1.69	44.03	1984

Table 8 Details of new vessels which replaced vessels listed in Table 7.

FVR Number	Vessel Name	Vessel Type	Registration Date	Length	GT	Power (kW)	Construction Year
MFA7005	Elissa	Trawler	05/10/2016	29.35	159	369	1972
MFA7269 ¹	Kosi 1	Multipurpose Vessel	29/04/2016	10.64	9.32	223.8	2015
MFA7281 ²	Ziffa I	Multipurpose Vessel	14/03/2016	6.05	2.01	82.06	2015
MFB7120	Annmar	Frejgatina	15/09/2016	4.12	0.69	13.43	2000

MFB7727	Not Named	Multipurpose Vessel	10/08/2016	3.92	0.48	7.46	2005
MFB7730	San Pawl	Frejgatina	05/04/2016	4.24	0.9	15.67	1994
MFB7910	St. Venera	Frejgatina	03/11/2016	5.01	1.82	23.13	2016
MFB7541	Dolores	Kajjik	15/07/2016	4.3	0.63	13.43	1996
MFA7832	Sea Rover	Multipurpose Vessel	01/02/2016	5.11	1.23	44.76	1997
MFB7798	Kezya	Multipurpose Vessel	19/05/2016	9.88	4.39	74	1972
MFA7193	Marija Grazzja I	Multipurpose Vessel	01/02/2016	7.2	2.1	40	1994
MFB7033	San Mark	Kajjik	10/08/2016	4.93	1.02	18.43	1976
MFB7092	Jam I	Multipurpose Vessel	07/07/2016	6.1	2.39	37.3	2011
MFA7012	Costabile	Multipurpose Vessel	06/10/2016	17.25	14	161.7	1951
MFB7048	Kataleya III	Multipurpose Vessel	24/05/2016	6.04	2.11	55.2	2015
MFA8483 ³	Angelo Padre	Multipurpose Vessel	07/04/2016	9	5.97	115	2016

¹ Replacement of MFA0269 and MFB0383

² First replacement of MFB8281

³ Replacement of MFB8041 and MFB0483

A.3. Fisheries covered by multiannual management or recovery plans

Currently there are three management plans in place within the 25nM FMZ. These were developed in line with Article 19 of Council Regulation 1967/2006 and include: lampara purse seine fishery, bottom otter trawler fishery and lampuki FAD fisheries. The main objectives of management plans are to ensure the sustainability of stocks through better monitoring and to ensure financial stability for fishers.

Lampara fishery targets mainly small pelagic species, including chub mackerel (*Scomber japonicus*) and round sardinella (*Sardinella aurita*). The stocks targeted by the Maltese lampara fishery are stocks shared with Sicily. The objectives of the lampara fishery management plan are to ensure that stocks are fished at sustainable levels, ensuring financial stability for fishers and safeguarding artisanal fishing activity. Following this management plan, the lampara vessel activities are monitored by a tracking system and catch logbooks and the fishing capacity in terms of GT and dimensions of the gear is frozen. In addition, the lampara management plan indicates a 20% reduction (in line with the precautionary approach) of the assessed lampara capacity in terms of number of vessels by the end of 2015.

The bottom otter trawl fishery main targets are shared stocks including red shrimps (*Aristaeomorpha foliacea*), red mullet (*Mullus spp.*) and deep water rose shrimp (*Parapenaeus longirostris*). The status of the latter stock together with that of European hake (*Merluccius merluccius*) is monitored annually at a regional level. The statuses of both stocks are in overexploitation. This management plan serves to aid in the recovery of the stocks whilst ensuring financial stability of fishers. The plan indicates that a 20% capacity reduction was to be concluded by end of 2016, together with a temporal reduction of 10% which had to be implemented as from 2014 for the next three years.

The lampuki fish aggregating device (FAD) fishery targets juvenile species of *Coryphaena hippurus*. Lampuki is a highly migratory species and stocks are shared between diverse Mediterranean countries. The management plan for this fishery affects Maltese fishing fleet licensed to fish for the lampuki using FADs inside and outside the 25nM FMZ. As per Article 27(2) of Council Regulation (EC) No 1967/2006, the number of fishing vessels authorised to fish in the FAD fishery are frozen (130 vessels). Following this management plan, the activities of these vessels are monitored by means of tracking system and catch logbook. Moreover, the management plan stated that the Department of Fisheries and Aquaculture will continue to enhance data collection and research on the stock.

A.4. Statement of effort reduction schemes

There were no exits from the fleet by effort reduction schemes during 2016.

A.5. Impact on fishing capacity of effort reduction schemes

Not applicable since there were no exits from the fleet by effort reduction schemes during 2016.

A.6. Statement of compliance with entry/exit scheme and with level of reference

Malta's ceiling for fishing capacity is 14,545 GT and 93,121 kW. The total capacity of the fleet expressed in terms of either tonnage or power cannot, and for 2016 did not exceed the reference levels. The levels for 2016 were 6,962.70 GT and 72,700.87 kW respectively. Reference levels are adjusted, in fact reduced, to take into account the effect of public aid.

Malta bases its entry/exit mechanism on Commission Regulation (EC) 26/2004 on the Community fishing fleet register. In fact, it strictly ensures that the fishing capacity is kept within the limits as set by the European Union. Malta has complied with Commission Regulation (EC) 26/2004 and has successfully uploaded fleet register data into the FIDES – FRONT system every quarter in line with the same Regulation. As illustrated in the Fleet Register on the NeT website, the GT and power of the Maltese Fishing Fleet in 2016 have been kept below the respective ceilings. Correction of data in tonnage and power is an ongoing exercise which has intensified as from the last quarter of 2012. The correction process is being given even more importance as from the beginning of year 2017. Most importantly, the Maltese authorities are screening each registered vessel to ensure that the reported capacity data is in fact authentic. Following this, random control checks shall continue to ensure the correctness and integrity of the reported data.

A.7. Summary of weaknesses & strengths of fleet management system

Strengths:

- Fishing vessel licences are issued on an annual basis from the Fishing Vessel Register Office which maintains an electronic database including also electronic data on all registered vessels. Therefore licences are updated on an annual basis;
- Snapshots of the fleet register submitted to the European Commission every quarter are generated from the said database in an automatic manner. In addition, prior to issuing an operative licence, registration in the national Maritime Register (applicable to vessels of 6 metres and over) is ensured;
- Fishing vessel owners are obliged to request the approval of the DFA prior to making any structural changes to the vessel in order to control the GT and power levels within the Maltese fishing fleet register;
- Monitoring of the landings of individual vessels is conducted in order to ensure that the catch value thresholds specified for each category and length class as detailed in the Fishing Vessels Regulations (Subsidiary Legislation 425.07) are followed. These regulations aim to maximise utilisation of fishing capacity. As the greater part of the fishing fleet are below the length required to have a logbook (i.e. below the 10 meter in length), the DFA has installed an automated weighing and labelling (AWL) system in the majority of homeports. Apart from meeting the statutory traceability requirements that all catches placed on the market are to be labelled, the system automatically generates the necessary landing and takeover declarations. Consequently, through this system, the DFA is now receiving the data of catches that are landed, thus providing a clearer picture for the eventual evaluation of the sustainability of the fleet.

Weaknesses:

- Entries into the professional part of the fleet are restricted as openings of the Maltese Register are uncommon;
- Data on the activities of the Maltese fleet has only been recorded since 2005, while detailed records are available in electronic format as from 2013 onwards;
- Historical data on the Maltese fishing fleet only exists as hard copies as only the most recent registry data is stored on the digital vessel registry and no copies of the historical data are kept. This is to be amended in future as the Fisheries Information System (see below) should display copies of the historical data. On the contrary, now with the launching of the AWL the DFA is not only getting a more reliable data of the catches but it is also getting real time electronic data of such landings;
- The existing FIS database does not perform automatic cross-validation of data. Presently this is still being tackled manually but it is planned to be developed in the forthcoming short term.

A.8. Plan for improvements in fleet management system

The Fisheries Information System (FIS) has been implemented according to the specifications originally drawn up, with all the modules being fully operational.

As automated data entry validations were included but in a somewhat limited way, presently enhancements are being planned on the e-logbook both to automate the catchment of data where possible, to carry out data validation where manual entry has to occur, and also introduce automated cross validation of data (e.g. fishing authorisation vis-à-vis catch declared regarding specimen and weight, and catch weight vis-à-vis weight sold) and to provide reports on a “management by exception” basis. These enhancements will be part of the e-logbook update to meet the requirements spelt out in the EU Regulation 1962/2016.

A.9. Information on general level of compliance with fleet policy instruments

The DFA ensures that the fleet policy is complied with. In view of this, the vessel marking requirements and vessel engine specifications falling under the remit of Council Regulation (EC) 1224/2009 are complied with, as well as the standards for the Vessel Registry established by:

- Commission Regulation (EC) No 1799/2006 of 6 December 2006 amending Regulation (EC) No 26/2004 on the Community fishing fleet register
- Commission Regulation (EC) No 26/2004 of 30 December 2003 on the Community fishing fleet register
- Commission Regulation (EC) No 839/2002 of 21 May 2002 amending Regulation (EC) No 2090/98 concerning the fishing vessel register of the Community
- Commission Regulation (EC) No 2090/98 of 30 September 1998 concerning the fishing vessel register of the Community
- Commission Regulation (EC) No 2091/98 of 30 September 1998 concerning the segmentation of the Community fishing fleet and fishing effort in relation to the multiannual guidance programmes.

The fleet register provides information on all vessels along with the description of changes that have occurred in their lifetimes since the creation of the Fleet Register. All this information is kept even after the vessel stops fishing.

In view of this, the data contained in the Fleet Register consists of:

- Administrative identifications: name, port, external marking, International Radio Call Signs (IRCS), etc.
- Technical characteristics: length, tonnage, power, fishing gear, etc.
- Historical events: entry into and exit from the fleet, modifications of characteristics.
- Information about the owner: agent and owner’s name and address.

A.10. Information on changes of the administrative procedures relevant to fleet management

In the last five years the Maltese authorities have embarked on a very important plan involving the development of an Electronic and Reporting System. The main aim has been to improve on the existing components that were operating in isolation, by creating a single integrated structure that caters for all the fisheries control operations. Essentially, the system as being projected signifies greatly to fleet management as it has been custom built around the rules of the Common Fisheries Policy. In fact, it will include data validation systems, including systems of cross-checks of vessel monitoring systems, catch, effort and market data, crew data and data related to the Community fishing fleet register as well as the accurate issuing of licences and fishing authorisations. Other than this it has also permitted the expansion on certain fleet management items which could not be built in the previous limited system. These include a new format of the fishing licence which now includes more details on the vessel and the fishing gears that can be used. Of comparable importance is the generation and issuing of special authorisations which was not possible under the previous system. Furthermore, the present system can be easily expanded or modified by the developer on request of the authority, in order to take into account new needs and requirements. In fact, now that the system has been set up, users are identifying improvements and additions, so that the system incorporates the entire business process.

A.11. Vessel use indicator(s)

The vessel use indicators were calculated based on the guidelines supplied by the European Commission (Guidelines for analysis of the balance between fishing capacity and fishing opportunities of 2nd September 2014).

A.11.1. Inactive Fleet Indicator

The inactive fleet indicator is a measurement of the proportion of vessels that did not show any activity in 2016. Table 9, Table 10 and Table 11 show the proportion of inactive vessels with respect to number of vessels, GT and kW respectively, for the Maltese fleet calculated on the basis of segment vessel length-classes for 2016.

Table 9 Inactive fleet indicator by number of vessels in 2016. Indicators above the threshold indicated in the EC's guidelines are highlighted in grey.

Length class	Active No. of vessels	Inactive No. of vessels	Inactive indicator (%) No. of vessels
VL0006	363	152	29.5
VL0612	312	113	26.6
VL1218	19	4	17.4
VL1824	29	3	9.4
VL2440	6	4	40

Table 10 Inactive fleet indicator by GT in 2016. Indicators above the threshold indicated in the EC's guidelines are highlighted in grey.

Length class	Active GT	Inactive GT	Inactive indicator (%) GT
VL0006	377.13	156.29	29.3
VL0612	1295.51	389.02	23.1
VL1218	397.23	77.2	16.3
VL1824	2210.17	308.6	12.3
VL2440	925.96	722	43.8

Table 11 Inactive fleet indicator by kW in 2016. Indicators above the threshold indicated in the EC's guidelines are highlighted in grey.

Length class	Active kW	Inactive kW	Inactive indicator (%) kW
VL0006	10210.34	3662.28	26.4
VL0612	30150.45	9386.09	23.7
VL1218	3238.17	693.78	17.6
VL1824	8851.73	1006.51	10.2
VL2440	2942.68	2307.94	44

The inactive fleet indicator of both the smallest and largest Maltese length-class (0-6 m and 24-40 m fleet segment respectively) suggests technical inefficiency since the indicators exceeds the 20% threshold stipulated in the guidelines. The results can however be explained by the fact that the absolute majority of the inactive vessels (96%) are below 12 m in length. Maltese fishers frequently own more than a single vessel, and in several cases one boat may be used during a given year whilst the other is kept inactive.

A.11.2. Vessel Utilisation Indicator

Table 12 shows the summary for the technical indicator for the Maltese fleet for 2014-2016, whilst Table 13 summarises the technical indicator for 2005-2013.

Table 12. Summary of the observed technical indicator for the Maltese fishing fleet for 2014-2016. Indicators below the threshold indicated in the EC's guidelines are highlighted in grey.

Profession	GearType	Fishing Technique	Length Class	Year		
				2014	2015	2016
FT	Active Gears (kW*Days)	DTS	VL1824	0.4	0.5	0.6
			VL2440	0.7	0.7	0.6
		MGO	VL0612	0.5	0.4	0.3
			VL1218	0.7	0.8	0.7
			VL1824	1.0	0.6	1.0
		PS	VL0612	-	1.0	-
			VL1218	1.0	0.9	0.4
			VL1824	1.0	1.0	1.0
			VL2440	0.7	0.6	0.6
		TM	VL2440	1.0	-	-
	Passive Gears (GT*Days)	DFN	VL0006	0.6	1.0	1.0
			VL0612	1.0	1.0	1.0
		FPO	VL0006	1.0	1.0	-
			VL0612	1.0	-	-
		HOK	VL0006	0.6	0.6	0.5
			VL0612	0.3	0.3	0.4
			VL1218	0.8	0.6	0.6
			VL1824	0.4	0.6	0.5
		PGP	VL0006	0.2	0.2	0.1
			VL0612	0.3	0.2	0.1
		PMP	VL0006	0.4	0.4	0.2
			VL0612	0.3	0.2	0.1
			VL1824	-	-	1.0
PT	DFN	VL0006	0.2	0.3	0.2	
		VL0612	0.5	-	-	
	FPO	VL0006	1.0	-	1.0	
		VL0612	1.0	-	-	
	HOK	VL0006	0.4	0.4	0.3	
		VL0612	0.3	0.4	0.3	
	PGP	VL0006	0.2	0.0	0.0	
		VL0612	0.1	0.0	0.1	
	PMP	VL0006	0.2	0.2	0.2	
		VL0612	0.3	0.1	0.1	

Table 13. Summary of the technical indicator for the full-time and part-time vessels for the years 2005-2013.

Profession	Year	2005	2006	2007	2008	2009	2010	2011	2012	2013
		Capacity utilisation (days)								
FT	Active	0.6	0.5	0.4	0.2	0.2	0.2	0.3	0.3	0.3
FT	Passive	0.2	0.2	0.2	0.3	0.3	0.2	0.3	0.1	0.4
PT	Passive	0.2	0.3	0.2	0.2	0.2	0.5	0.3	0.2	0.7
		Capacity utilisation (kW*days)								
FT	Active	0.5	0.4	0.3	0.2	0.2	0.2	0.3	0.8	0.3
FT	Passive	0.2	0.3	0.2	0.3	0.4	0.3	0.7	0.6	0.4
PT	Passive	0.2	0.3	0.3	0.2	0.2	0.5	0.4	0.8	0.7
		Capacity utilisation (GT*days)								
FT	Active	0.4	0.4	0.3	0.2	0.2	0.3	0.3	0.9	0.3
FT	Passive	0.3	0.4	0.3	0.4	0.4	0.3	0.4	0.6	0.5
PT	Passive	0.2	0.3	0.3	0.2	0.2	0.5	0.4	0.9	0.7

Prior to 2014, an aggregation based on the license type (full-time and part-time vessels) was used to estimate these indicators, rather than aggregating by fleet segment (Table 13). From 2014 onwards, technical indicators were calculated for each license type for each fleet segment (Table 12). The unit GT*days at sea was used for vessels using passive gears, while the unit kW*days at sea was used for vessels using active/towed gears.

Results show that there is a possibility that the professional Maltese fleet might be operating in a technically inefficient manner. An indicator value of 1 results when there is only one vessel within the fleet segment. The indicator for several fleet segments showed a result that was below 0.7, which under normal circumstances indicates potential inefficiency. This can be explained however that for most segments, the value of the observed theoretical effort was relatively high (compared to the actual effort of most vessels within the segment) due to the high numbers of fishing days carried out by one or two vessels within that segment. Moreover, vessels within the same segments show a large degree of variety in, construction material and age – vessels on the smaller end of a segment are less capable of dealing with inclement weather than vessels on the larger end of the same segment. Furthermore, Maltese fishers regularly own more than a single vessel, which are not used simultaneously. Most of the times, the Maltese fisher and his crew are all on one vessel whilst the other vessel is in port, unused.

A.12. Biological indicators

A.12.3. Sustainable Harvest Indicator

The sustainable harvest indicator was deemed to be unavailable for Malta. Malta referred to stock assessments carried out by ICCAT, STECF and GFCM (General Fisheries Commission for the Mediterranean) based on data from 2012-2015 for the calculation of percentage of catches for which stock assessments are available. For each fleet segment, for every year, more than 60% of the value of each catch was made up of stocks for which values of F and F_{MSY} or $F_{0.1}$ were unavailable (vide Table 14 below).

Table 14. Percentage (%) of the fleet segment catch for which stock assessments were unavailable.

Fishing Technique	Length Class	Percentage (%) of the catch for which stock assessments were unavailable			
		2012	2013	2014	2015
DFN	VL0006	99.2	-	-	~100
	VL0612	95.4	84.5	-	99.8
DTS	VL1824	40	80.7	76.1	86.1
	VL2440	48.4	89.6	86	68.7
HOK	VL0006	-	-	93.4	~100
	VL0612	98.6	47.7	99.9	99.9
	VL1218	99.9	44.3	99.4	99.7
	VL1824	99.8	30.3	99.5	99.5
MGO	VL0612	99.9	78.9	99.9	99.9
	VL1218	99.9	97.2	99.9	0
PGP	VL0006	93.1	96.6	99	97.6
PMP	VL0612	94.1	82.5	99.6	99.7
	VL0006	97.8	99.4	-	~100
	VL0612	97.2	73.6	99.5	99.3
	VL1218	-	58.1	-	-
	VL1824	-	84.1	-	-
PS	VL2440	-	85.4	-	-
TM	VL2440	-	99.8	-	-

In 2016 the joint stock assessments for European hake (*Merluccius merluccius*), deep-water pink shrimp (*Parapenaeus longirostris*) in GSAs 12-16, and red mullet (*Mullus barbatus*) in GSAs 15-16 were updated by Maltese, Tunisian and Sicilian scientists, combining data collected by these countries.

Table 15) The stock assessments were conducted under the auspices of the MedSudMed project, and finalised at the 2016 GFCM demersal working group. The biological reference points used were $F_{current}/F_{0.1}$.

Table 15. The overfishing index ($F_{curr}/F_{0.1}$) of hake and deep water rose shrimp in the Strait of Sicily, including data from Malta, Sicily and Tunisia.

Species	Area	2011	2012	2013	2014	2015
Hake	12-16	Overfishing (3.6)	Overfishing (5.8)	Overfishing (4.5)	Overfishing (4.9)	Overfishing (1.66)
Deep- water rose shrimp	12-16	Overfishing (1.3)	Overfishing (1.8)	Overfishing (1.3)	Overfishing (1.3)	Overfishing (1.44)
Red mullet	15-16	N/A	N/A	N/A	N/A	Overfishing

The assessments showed that hake was in overexploitation with relative intermediate biomass, and that current fishing mortality has to be reduced by 70-80% to reach F_{MSY} . Deep water rose shrimp was also considered to be in overexploitation, with relative high biomass, and current fishing mortality has to be reduced by 20-30% to reach F_{MSY} . Red mullet was considered to be in overexploitation, with relative low biomass and current fishing mortality has to be reduced by 18% to reach F_{MSY} .

Management Strategy Evaluation (MSE) was performed taking into consideration hake and deep water rose shrimp, using the same data used for the assessments. Firstly, this showed that when fisheries were managed using F_{MSY} for shrimps as the target (implying a reduction of 30% of the fishing mortality in relation to current fishing mortality), then the biomass of rose shrimp will increase by 2020 while the hake biomass recovers under the Extended Survivor Analysis (XSA) model (11% increase), but continue to decrease (around 30%) for the single species GADGET (Globally Applicable Area Disaggregated General Ecosystem Toolbox) model. When on the other hand, fisheries were managed using F_{MSY} for hake as the target (implying a reduction of 80% of the fishing mortality in relation to current fishing mortality) both the hake and shrimps showed a strong increase in SSB, but the overall catches of the trawl fishery showed a large reduction.

The GFCM SAC therefore recommended an initial 20 percent reduction of the current fishing mortality, focusing on the reduction of mortality for juvenile hake, through a combination of effort reduction and spatial protection measures. Areas closed for trawling designated with regards to the protection of nursery and spawning areas of hake were set for a testing period of two years. The effort reduction must also take into consideration the contributions of the different fleets to the total catch.

The contribution of the different operational units to the total catches are as follows:

P. longirostris: 66.2% Italy; 33.6% Tunisia; 0.3% Malta

M. merluccius: 34.1% Italy; 65.4% Tunisia; 0.4% Malta

It is important to note that Malta's contributions to the catches of these stocks is insignificant and even if trawling by the Maltese fleet had to be banned, this would be to no benefit to the stock.

Furthermore, the Maltese fleet in terms of number of vessels has been reduced since 2011 as indicated in Table 16.

Table 16 The reduction in capacity of the Maltese bottom otter trawling fleet from 2011 to 2016.

	No. of vessels	Power (kW)	GT
Fleet at 2011	23	9501	3351
Permanent reduction	7	2518	779
Temporary reduction	2	779	292
Fleet at 2016	14	6203	2281
Reduction from 2011	39%	35%	32%

Since a reduction of 20% in fishing mortality to approach F_{MSY} for shrimps, when the overfishing index was 1.3 in 2014, the same reduction would have been suggested with regards to earlier years (eg. 2011 and 2013), since the overfishing index remained constant. This reduction applied earlier, would not have only the same effects, but should have better results as it would have been applied during earlier years. Thus, Malta's reduction in fleet capacity since 2014 should be taken into consideration.

A.12.4. Stocks-at-risk Indicator

The Maltese fleet, in the period 2012-2014, did not exploit any stocks at high biological risk as defined by the guidelines for the analysis of the balance between fishing capacity and fishing opportunities. This is because:

- For the limited number of assessed stocks harvested by the Maltese fleet, B_{lim} is not available;
- No stocks harvested by the Maltese fleet are subject to an advice to close the fishery, to prohibit directed fisheries, to reduce the fishery to the lowest possible level, or similar advice from an international advisory body, even where such advice is given on a data-limited basis;
- No stock is subject to fishing opportunities regulation which stipulates that the fish should be returned to the sea unharmed or that landings are prohibited; and
- The Maltese fleet does not harvest stocks which are on the IUCN “red list” or is listed by ICES.

A.13. Economic indicators

A.13.5. Return on Investment (ROI) vs Next Best Alternative

For the purpose of evaluating whether the fleet segments are economically sustainable in the long term and in the short term, two indicators are evaluated (for the reference year 2015). To calculate these two indicators, the fleet was segmented by fishing technique. This is due to the fact that the same data which was made available for the EU Data Collection Programme (Commission Regulation (EC) 1639/2001, Commission Regulation (EC) 1581/2004 and Commission Decision (EU) 93/2010) was reused for the purpose of this exercise.

The first indicator (Return on Investment [ROI]) was selected over the Return on Fixed Tangible Assets (ROFTA) since data on intangible assets and tangible assets are both available (Table 17). Data on direct income subsidies was excluded in order to be in line with the latest guidelines. ROI was compared to the low risk long term investment. For the purpose of the calculation of this indicator, net profit is considered to be equal to the income from landings and other income less crew costs, unpaid labour, energy costs, repair and maintenance costs, other variable costs, non variable costs and depreciation. Capital asset value is equal to vessel replacement value and estimated value of fishing rights which was obtained using the Perpetual Inventory Method (PIM). Digressive depreciation was used for the purpose of the calculation of this indicator in order to be in line with the recent advice from PGECON (16-19 April 2012, Salerno, Italy). The ROI for the previous years was also calculated in line with the latest guidelines.

Table 17 Return on Investment (ROI) vs next best alternative. Indicators worked for reference year 2015 below the threshold indicated in the EC's guidelines are highlighted in grey.

Low risk long term interest rate of 4.57% was used for the year 2008

Low risk long term interest rate of 4.62% was used for the year 2009

Low risk long term interest rate of 4.59% was used for the year 2010

Low risk long term interest rate of 4.52% was used for the year 2011

Low risk long term interest rate of 4.55% was used for the year 2012

Low risk long term interest rate of 4.43% was used for the year 2013

Low risk long term interest rate of 4.14% was used for the year 2014

Low risk long term interest rate of 3.76% was used for the year 2016

Fishing Technique	Vessel Length	2008	2009	2010	2011	2012	2013	2014	2015
DFN	VL0006	-23.85%	-66.72%	-43.04%	-	-103.38%	-21.26%	-65.37%	-42.55%
DFN	VL0612	-8.26%	-33.23%	-5.25%	-	-40.18%	8.28%	-24.56%	-23.51%
DFN	VL1218	-	-	-	-23.31%	-16.93%	-	-	-
DTS	VL1824	-16.28%	-9.21%	-17.58%	-1.48%	-6.40%	-6.59%	-3.90%	-2.76%
DTS	VL2440	-23.94%	-9.00%	-12.92%	-10.68%	-11.53%	-16.23%	-15.00%	-9.69%
FPO	VL0006	-	-132.34%	-	-86.86%	-	-10.72%	-71.28%	60.02%
FPO	VL0612	-16.80%	-71.15%	-	-	-	-28.26%	-47.55%	-
HOK	VL0006	-49.76%	-90.82%	-51.57%	-56.92%	-423.19%	-4.92%	-24.89%	-13.66%
HOK	VL0612	-25.58%	-42.89%	-29.11%	-33.83%	3.65%	9.14%	-30.34%	-4.13%
HOK	VL1218	-2.55%	-8.17%	-14.80%	-17.85%	-0.57%	8.01%	4.35%	4.87%
HOK	VL1824	-8.79%	-21.36%	-13.84%	-15.05%	-2.20%	-4.58%	2.51%	-4.19%
HOK	VL2440	-8.27%	-4.29%	-38.39%	-23.12%	-10.13%	-	-	-
MGO	VL0006	-	-67.61%	-	-64.89%	-	-	-	-
MGO	VL0612	-4.44%	-42.89%	-30.80%	-34.17%	-9.07%	-2.24%	-18.50%	-12.77%

Fishing Technique	Vessel Length	2008	2009	2010	2011	2012	2013	2014	2015
MGO	VL1218	-8.39%	-1.95%	-9.30%	-14.44%	-1.05%	10.54%	-19.54%	-1.07%
MGO	VL1824	-	-	10.99%	17.57%	-51.79%	-	-22.10%	3.01%
PGP	VL0006	-44.38%	-103.47%	-57.15%	-18.65%	-11.32%	-5.14%	-31.67%	-13.27%
PGP	VL0612	-34.77%	-53.84%	-29.51%	-30.74%	-12.00%	10.46%	-13.19%	-17.11%
PMP	VL0006	610.18%	1128.84%	-32.47%	-	-55.42%	-1.07%	-54.76%	-19.28%
PMP	VL0612	39.28%	-35.62%	-31.26%	-61.00%	-10.87%	-10.02%	-43.31%	-19.72%
PMP	VL1218	-11.83%	-	-	-22.12%	-	31.68%	-	-
PMP	VL1824	-10.85%	-8.70%	-	-	-	8.04%	-	-
PMP	VL2440	-	-	-	-	-	-	-	-
PS	VL0612	-	-47.06%	-	-	-	-	-	-118.19%
PS	VL1218	-	-9.28%	12.05%	16.17%	-	31.08%	17.67%	6.15%
PS	VL1824	-	-	-	-	0.66%	-	-5.20%	-5.40%
PS	VL2440	-162.02%	-57.79%	-	-	11.11%	46.84%	10.79%	122.66%
TM	VL2440	-	-	-	-	-	-23.93%	-	-

For reference year 2015, the fleet segments Pots and Traps (FPO) VL0006, Gears Using Hooks (HOK) VL1218, Other Active Gears (MGO) VL1824, Purse Seiners (PS) VL1218 and VL2440 had a positive ROI and greater than the low risk long term interest rate. This indicator is showing that for these five fleet segments, extraordinary profits are being generated and there could also be the possibility of under-capitalisation.

On the other hand the fleet segment Demersal Trawlers (DTS) VL1824 and Other Active Gears (MGO) VL1218 had a positive ROI but smaller than the low risk interest rate which yields negative value for the indicator. It is important to note that these two gears had enough income to cover all the variable and non variable costs including the full capital costs (depreciation) and hence generated a positive net profit. However, MGO shows that in the long-term it would be more beneficial for these two segments to invest elsewhere.

The other segments had a negative ROI which indicate an economic over-capitalisation. Nonetheless, it is important to note that the segments Gears Using Hooks (HOK) VL0612 and VL1824, Demersal Trawlers (DTS) VL2440 and Purse Seiners (PS) VL1824 had enough income to cover all the operating costs since they generated a gross profit but did not generate enough income to cover the non operating costs and hence they reported a net loss. The other fleet segments had a negative gross profit and net profit during the reference year in subject.

During 2015, the best performing fleet segments were vessels classified as Purse Seiners (PS) VL2440 and Pots and Traps (FPO) VL0006, following by vessels using Purse Seiners (PS) VL1218, Gears Using Hooks (HOK) VL1218 and Other Active Gears (MGO) VL1824 while the worst performing segment was vessels classified as Purse Seiners (PS) VL0612.

In 2015, the ROI trend for most of the fleet segments has improved when compared to 2014. Nonetheless, the 2015 ROI trend of the fleet segments Demersal Trawlers (DTS) VL1824; Gears Using Hooks (HOK) VL1824, Polyvalent Passive Gears Only (PGP) VL0612, Purse Seiners (PS) VL0612 and VL1824 have deteriorated from 2014.

A.13.6. Current Revenue against Break-even Revenue Economic Indicator

The Current Revenue against Break-Even Revenue was used as a second economic indicator. This indicator was calculated for the years 2008-2015 (Table 18). For the purpose of this calculation, the 'fixed costs' variable is considered to be equal to the sum of depreciation, non variable costs and opportunity cost of capital, while current revenue is equal to the sum of the income from landings, income from the lease of fishing right and other income. Direct income subsidies were excluded from this calculation. Variable costs included crew wages, unpaid labour, energy costs, repair and maintenance costs, expenditure from the leasing of fishing rights and other variable costs. The calculation of the ratio that indicates the long term view of financial viability was selected over the calculation that gives the short term view of financial viability. The reason being that all data for this calculation is available under the Data Collection Framework while the opportunity cost is calculated in the previous indicator. Income and expenditure from lease of fishing rights, are included in the calculation as stated above.

Table 18 Current Revenue against Break-even Revenue Economic Indicator for 2008-2015. Indicators worked for reference year 2015 below the threshold indicated in the EC's guidelines are highlighted in grey.

Fishing Technique	Vessel Length	2008	2009	2010	2011	2012	2013	2014	2015
DFN	VL0006	-0.6	-4.1	-2.0	-	-9.0	-0.9	-3.4	-1.8
DFN	VL0612	0.3	-1.7	0.6	-	-2.0	1.4	-1.2	-1.7
DFN	VL1218	-	-	-	-1.4	-0.3	-	-	-
DTS	VL1824	-0.5	0.3	-0.6	0.9	0.4	0.4	0.6	0.7
DTS	VL2440	-1.7	0.1	-0.1	0.1	-0.1	-0.7	-0.4	0.1
FPO	VL0006	-	-10.1	-	-7.0	-	0.0	-5.5	8.3
FPO	VL0612	-0.5	-5.0	-	-	-	-1.4	-3.4	-
HOK	VL0006	-2.9	-6.6	-3.5	-3.8	-74.5	0.6	-1.3	-1.4
HOK	VL0612	-1.2	-2.8	-1.6	-2.2	-0.6	1.8	-1.8	0.9
HOK	VL1218	0.8	0.2	-0.6	-0.7	0.9	1.9	1.6	2.3
HOK	VL1824	0.2	-0.9	-0.3	-0.4	0.7	0.9	1.5	1.0
HOK	VL2440	0.1	0.6	-2.2	-1.3	0.1	-	-	-
MGO	VL0006	-	-5.0	-	-6.2	-	-	-	-
MGO	VL0612	0.7	-2.6	-1.8	-2.1	0.2	1.0	-0.8	0.2
MGO	VL1218	0.2	0.9	0.2	-0.5	0.9	2.5	-0.8	2.2
MGO	VL1824	-	-	2.1	3.0	-4.3	-	-1.8	1.7
PGP	VL0006	-2.7	-8.1	-3.9	-0.6	0.1	0.6	-1.8	-0.1
PGP	VL0612	-2.0	-3.8	-1.5	-1.7	0.0	2.0	-0.1	-0.5
PMP	VL0006	54.6	94.7	-1.7	-	-3.8	1.0	-4.2	-0.6
PMP	VL0612	4.6	-2.1	-1.7	-4.1	0.1	0.1	-2.8	-0.6
PMP	VL1218	0.0	-	-	-1.3	-	4.1	-	-
PMP	VL1824	0.2	0.3	-	-	-	1.7	-	-
PMP	VL2440	-	-	-	1.9	-	-	-	-
PS	VL0612	-	-4.0	-	-	-	-	-	-12.5
PS	VL1218	-	0.2	2.7	2.5	-	5.3	3.8	2.3
PS	VL1824	-	-	-	-	1.2	-	0.6	0.6
PS	VL2440	-2.9	-3.0	-	-	2.0	5.3	0.4	1.6
TM	VL2440	-	-	-	-	-	-1.5	-	-

For the year 2015, the fleet segments Pots and Traps (FPO) VL0006, Gears Using Hooks (HOK) VL1218 and VL1824, Other Active Gears (MGO) VL1218 and VL1824, Purse Seiners (PS) VL1218 and VL2440 had a ratio greater than 1. This result shows that these fleet segments generated enough income to cover the variable, fixed and capital costs and hence these fleet segments are profitable, with a potential undercapitalization.

For reference year 2015, the fleet segments Demersal Trawlers (DTS) VL1824 and VL2440, Gears Using Hooks (HOK) VL0612, Other Active Gears (MGO) VL0612 and Purse Seiners (PS) VL1824 had a ratio less than 1. This means that these fleet segments (except for Demersal Trawlers (DTS) VL1824) generated insufficient income to cover variable, fixed and capital costs. Hence these fleet segments are unprofitable, with a potential of over-capitalisation. The other segments had a negative CR/BER result which means that variable costs alone exceed current revenue and hence they are unprofitable.

For the year 2015, the best performing fleet segment was Pots and Traps (FPO) VL0006, amounting to 8.3. The worst performing fleet segment for 2015 is vessels classified as Purse Seiners (PS) VL0612 amounting to -12.50.

The least economically sustainable year was 2012 with the annual average of the ratio between current revenue and break-even revenue amounting to -4.6. The years 2008, 2009 and 2013 proved to be economically sustainable with annual averages of the indicator amounting to 2.50, 1.70 and 1.20 respectively. The annual average of the ratio for the year 2014 and 2015 were -1.00 and 0.90, respectively.

Although, the year 2015 resulted as being economically insufficient since the ratio for most of the fleet segments was less than one, there was still an improvement in the trend of this indicator.

A.14. Action Plan

A.14.1. Background

The Maltese authorities have made an analysis of the biological, technical and economical parameters for 2015 using data collected through a census of the entire fleet and information collected through landing declarations and sales notes. The results lead the Maltese authorities to the conclusion that the only meaningful indicator for the Maltese fleet is that for the Return on Investment (ROI) and Current Revenue vs Break Even Revenue (BER) given the absence of reliable information on the biological situations of stocks. In the current report the only segment which shows a negative trend and is considered as imbalanced is the PGP segment.

Based on this report, the Maltese authorities acknowledge that the segments which show a trend of being imbalanced over time may benefit from the application of an Action Plan as explained below.

Malta acknowledges that no vessel in the imbalanced fleet segments is eligible for replacement or modernization of main or ancillary engines with support from the EMFF.

A.14.2. Analysis of Trends

Since Article 22 of the Common Fisheries Policy refers to balance (and imbalance) over time, it is appropriate to consider several years rather than a single year (Guidelines for analysis of the balance between fishing capacity and fishing opportunities of 2 September 2014). It should be noted that in previous years the same report did not include such an in depth analysis of trends and, therefore, may have not been portraying the actual situation of the fisheries involved. Thus, an analysis of trends in economic indicators is being presented in this report to have a meaningful picture of the fleet.

Although, the above economic indicators show that, with reference to the year 2015, most of the fleet segments are showing a negative economic indicator, the obtained values are still showing an improvement in the trend of these two indicators when compared to previous years (2008-2015; Annex I Figures 1 and 2). These trends are summarised in table 19 below. Such improvements are also reflected in the economic development trends of most of the fleet segments. Only the economic performance of four segments out of twenty have deteriorated during the years analyzed. These deteriorations were recorded for Fixed Netters (DFN) VL0612, Polyvalent Passive Gears Only (PGP) VL0612, Purse Seiners (PS) VL0612 and VL1824. Out of the remaining segments, five segments were balanced with an improving economic performance trend while the other 11 fleet segments showed an improving trend in their economic performance.

The 2016 Annual Economic Report on the EU Fishing Fleet (STECF 16-11) also shows an overall improved economic performance in the Maltese fishing fleet.

The same analysis indicated above could not be followed for the technical indicator. The technical vessel utilization indicator is not available by fleet segment for a time series long enough to enable trend analysis over a significant number of years. Furthermore, the technical indicators are not directly applicable to Malta since most fishers have more than one vessel, all operated by one crew.

Table 19: Analysis of trends for all segments. A traffic light approach; green for balanced and improving fleet segments, yellow for fleet segments showing an improving trend and red for fleet segments which showed an overall deteriorating trend.

Fleet Segment	Vessel Length	Population following fleet segmentation	No of licenses according to the FVR as at 31.12.2016	Economic development trend (2008-2015)	ROI trend analysis- R	BER trend analysis- R	Conclusions
FPO	VL0006	1	542	Improving	Balanced indicator	Balanced indicator	Balanced
HOK	VL1218	12	67	Improving	Balanced indicator	Balanced indicator	Balanced
MGO	VL1824	2	10	Improving	Balanced indicator	Balanced indicator	Balanced
PS	VL1218	2	6	Improving	Balanced indicator	Balanced indicator	Balanced
PS	VL2440	2	3	Improving	Balanced indicator	Balanced indicator	Balanced
DFN	VL0006	7	877	Improving	Improving	Improving	Improving in economic development, ROI and BER indicators
DTS	VL1824	8	9	Improving	Improving	Improving	Improving in economic development, ROI and BER indicators
DTS	VL2440	3	5	Improving	Improving	Improving	Improving in economic development, ROI and BER indicators
HOK	VL0006	10	1908	Improving	Improving	Slight deterioration	Improving economic development and ROI trends and a slight deterioration in BER trend
HOK	VL0612	43	1786	Improving	Improving	Improving	Improving in economic development, ROI and BER indicators

Fleet Segment	Vessel Length	Population following fleet segmentation	No of licenses according to the FVR as at 31.12.2016	Economic development trend (2008-2015)	ROI trend analysis- R	BER trend analysis- R	Conclusions
HOK	VL1824	18	74	Improving	Deteriorated	Balanced indicator	Improving in economic development and balanced BER. ROI deteriorated
MGO	VL0612	9	213	Improving	Improving	Improving	Improving in economic development, ROI and BER indicators
MGO	VL1218	3	17	Improving	Improving	Balanced indicator	Improving in economic development, ROI and BER indicators
PGP	VL0006	348	n/a	Improving	Improving	Improving	Improving in economic development, ROI and BER indicators
PMP	VL0006	20	n/a	Improving	Improving	Improving	Improving in economic development, ROI and BER indicators
PMP	VL0612	134	n/a	Improving	Improving	Improving	Improving in economic development, ROI and BER indicators
DFN	VL0612	1	841	Deteriorated	Weak improvement	Deteriorated	Weak improvement in ROI and deterioration in economic development and BER
PGP	VL0612	160	n/a	Improving	Deteriorated	Deteriorated	Improved economic development but ROI and BER indicators have deteriorated
PS	VL0612	1	2	No result	Deteriorated	Deteriorated	Deterioration in economic development, ROI, BER indicators
PS	VL1824	1	4	Deteriorated	Deteriorated	Improving	Improving in BER indicator but deterioration in economic development and ROI

A.14.3. Fishing opportunities

It is pertinent to note that the only fishing opportunities allocated to Malta during the year 2015 was for Bluefin Tuna. These fishing opportunities are fixed through a Council Regulation issued every year in line with the Treaty on the Functioning of the European Union.

A.14.4. Context

In summary, depreciation costs are deemed “normal” whilst the replacement value, even for old hulls, is high. To overcome these values a higher income value needs to be inputted in the formula in order to obtain positive values for the ROI.

A negative ROI vs next best alternative indicator infers that the investment being made in the fishing enterprise would have been more profitable if invested elsewhere. This could be due to low activity of the vessel especially in the case of license holders who work in the fishing sector on a part-time basis and therefore do not depend wholly on their fishing activities to sustain them. Another possibility linked to a negative value is that the marine biological resources available are not able to sustain the fleet. This could either be due to the necessary biomass not being harvested at sustainable levels or that the market is not providing adequate returns requiring some type of intervention. With regard to the available biomass this could be addressed through closed areas and/or closed seasons which would have a positive impact on the stocks exploited especially if targeted to improve their spawning potential. Interventions on the market to improve the returns of the sector could include promotion of the fishery products or to incentivize the better organization of the sector to access more profitable markets.

Management measures under the Mediterranean Regulation, General Fisheries Commission for the Mediterranean (GFCM) and International Commission for the Conservation of Atlantic Tuna (ICCAT) also contribute to achieving sustainable exploitation of stocks. The bluefin tuna fleet in particular is already in balance with the fishing opportunities allocated to it and the fleets targeting swordfish fall within the segments having a positive ROI.

A.14.5. Link to previous actions and Rationale for a new action plan

The new action plan was compiled by taking into consideration the trend analysis of the economic performance of the Maltese fishing fleet and the trend analysis of the two economic indicators for the years 2008-2015 (Table 20). This consideration is suggested in the Guidelines for the analysis of the balance between fishing capacity and fishing opportunities whereby it states that the Common Fisheries Policy refers to balance (and imbalance) *over time* rather than one single year. Hence Malta considered several years rather than a single year when compiled the action plan in Annex II of this report.

Table 20: Summary table illustrating the difference between the status obtained for fleet segments with regard to reference years 2014 and 2015 as well as well the overall historical trend, based on the two economic indicators. ✓ indicates balance, ✗ indicates imbalance, ↑ shows an improving trend, while ↓ indicates a deteriorating trend. Rows shaded in grey indicate fleet segments showing imbalance during both 2014 and 2015 as well as a deteriorating historical trend.

Fleet Segment	Vessel Length	2014	2015	Historical trend	Requirement for further actions
DFN	VL0006	✗	✗	↑	
DFN	VL0612	✗	✗	↓	<p>This fleet segment only consisted of 1 vessel, while there were 841 vessels registered to use the gear in the FVR. The Maltese Authorities do not deem the economic indicators to be representative of the fleet and thus not suitable to indicate the status of the fleet and relevant stocks. In view of the above, this fleet segment will not be subjected to structural actions.</p> <p>This fleet segment was tackled in the 2016 Action plan:</p> <ul style="list-style-type: none"> • <u>Conservation actions:</u> Prohibition of fishing in bays and creeks from 15 February to 30 August with all types of nets. • <u>Structural actions:</u> Freeze in capacity (number of vessels) to reference year 2016
DTS	VL1824	✗	✗	↑	
DTS	VL2440	✗	✗	↑	
FPO	VL0006	✗	✓	↑	
FPO	VL0612	✗	n/a	↑	
HOK	VL0006	✗	✗	↑	
HOK	VL0612	✗	✗	↑	
HOK	VL1218	✓	✓	↑	
HOK	VL1824	✓	✗	↑	
MGO	VL0612	✗	✗	↑	
MGO	VL1218	✗	✗	↑	
MGO	VL1824	✗	✓	↑	
PGP	VL0006	✗	✗	↑	
PGP	VL0612	✗	✗	↓	<p>This fleet segment is composed of 160 vessels using pots, traps, hooks and seines.</p> <p>Since this is a mixed gear segments, it was meant to be indirectly addressed in the 2016 Action Plan through the measures for the other segments, ie.</p> <ul style="list-style-type: none"> • DFN, FPO - Freeze in capacity (number of vessels) to reference year 2015 • DFN - Prohibition of fishing in bays and creeks from 15 February to 30 August with all types of nets. • FPO - Closed season for the months of April and May
PMP	VL0006	✗	✗	↑	
PMP	VL0612	✗	✗	↑	

Fleet Segment	Vessel Length	2014	2015	Historical trend	Requirement for further actions
PS	VL0612	n/a	*	↓	<p>This fleet segment only consisted of 1 vessel out of the 2 registered to use the gear in the FVR. The Maltese Authorities do not deem the economic indicators to be representative of the fleet and thus, not suitable to indicate the status of the fleet and relevant stocks. In view of the above, this fleet segment will not be considered for an Action Plan.</p> <p>Furthermore, the economic indicators worked for other length segments of the PS segment (VL1218, and VL2440) showed very good results, which compensate for this length segment.</p>
PS	VL1218	✓	✓	↑	
PS	VL1824	*	*	↓	<p>This fleet segment only consisted of 1 vessel out of 4 registered to use the gear in the FVR. The Maltese Authorities do not deem the economic indicators to be representative of the fleet and thus, not suitable to indicate the status of the fleet and relevant stocks. In view of the above, this fleet segment will not be considered for an Action Plan.</p> <p>Furthermore, the economic indicators worked for other length segments of the PS segment (VL1218, and VL2440) showed very good results, which compensate for this segment.</p>
PS	VL2440	✓	✓	↑	

Figure 1: Trend analysis for the economic indicator Return on Investment (ROI) vs next best alternative.

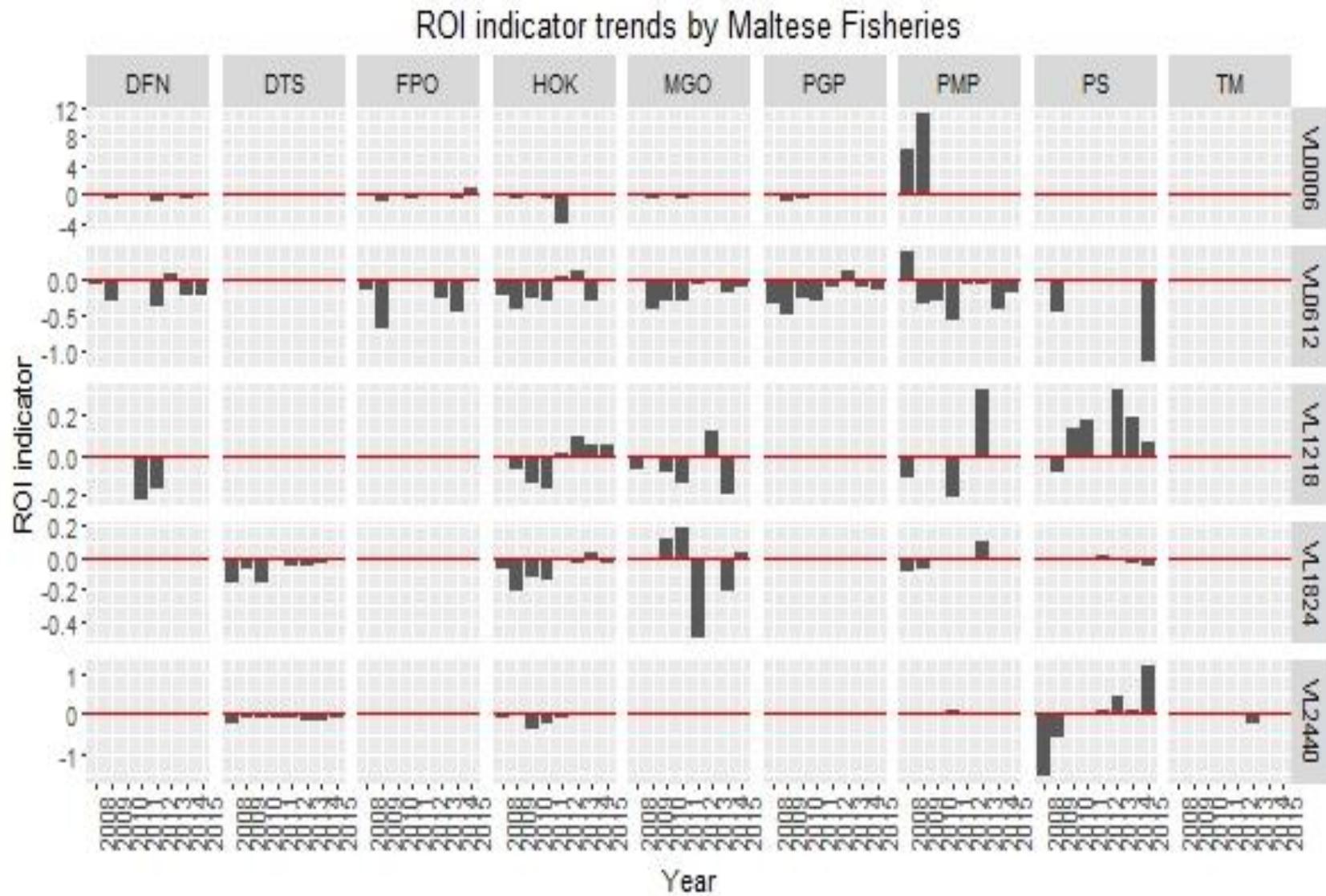
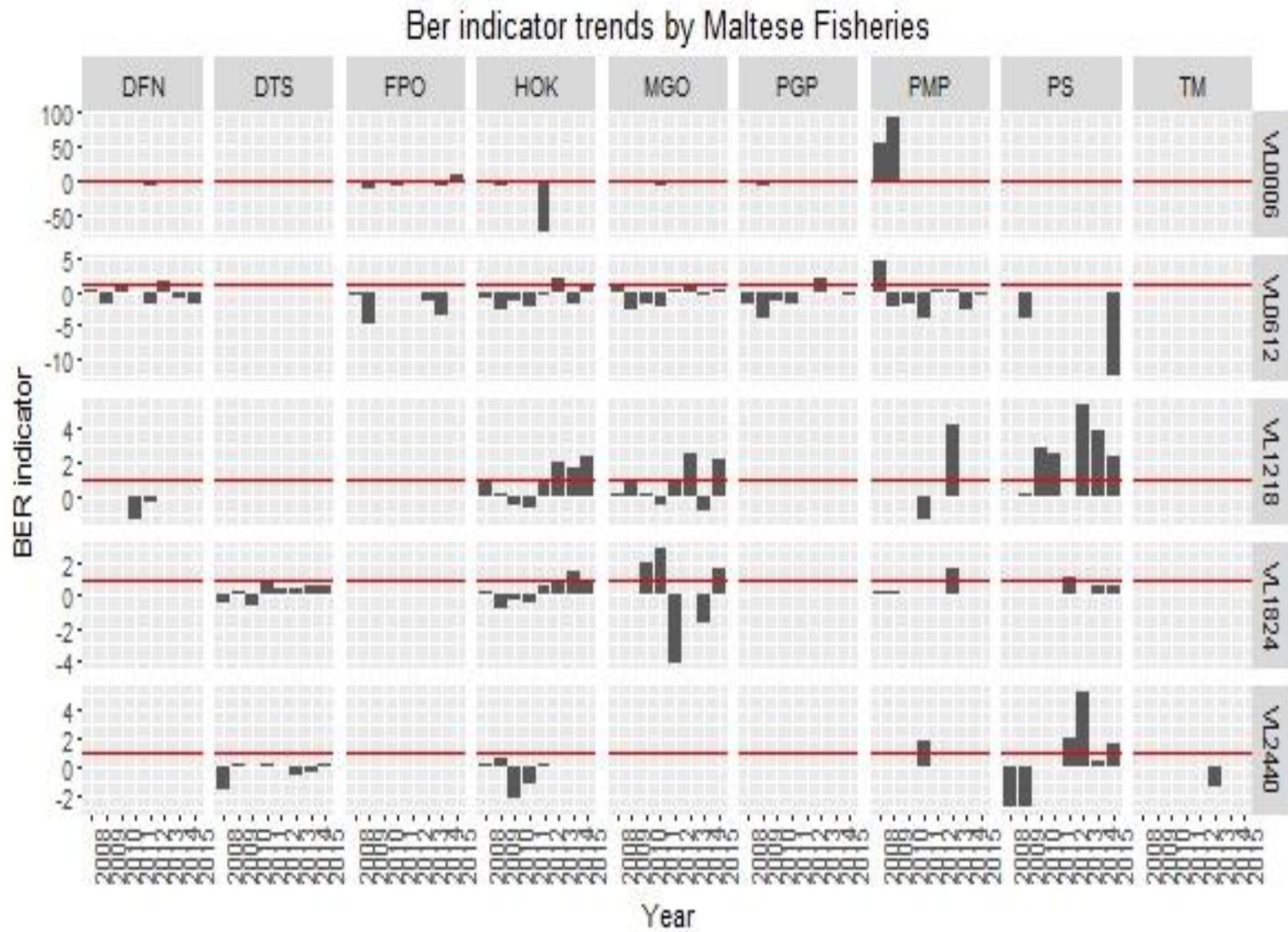


Figure 2: Trend analysis for the economic indicator Current Revenue against Break-even Revenue.



Annex II – Action plan

Timeframe	Segments addressed	Measure	Action	Indicator
2017-2020	All vessels <12m	Monitoring of landings	Weighing of fishery products on the Automatic weighing and Labeling machines	All catches recorded
	All vessels <10m	Monitoring of activity	Sampling plan	All landings of vessels <10m monitored through sampling and sales notes
	DFN	Conservation	Prohibition of fishing in bays and creeks from 15 February to 30 August with all types of nets.	Increase in biomass by 2020
	FPO	Conservation	Closed season for the months of April and May	Increase in biomass by 2020
Ongoing	Entire fleet	Analysis of the market to identify any structural deficiencies or market forces resulting in a low average price at first sale for fishery products	This analysis will be assisted by the implementation of an innovative traceability system being implemented at national level and co-funded by the EU covering primary production up to the first sale as it is expected to yield better information on the fishery products caught and marketed for the first time	Identification of measures to achieve better prices at first sale to help generate more income for the fishermen