Republic of Bulgaria
Executive Agency for Fisheries and Aquacultures

Bulgarian Annual Report on the efforts in 2018 to achieve a sustainable balance between fishing capacity and fishing opportunities

In accordance with Article 22 of the Regulation(EU) 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 of the Council and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC and following the *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 (COM/2014/545)*

Burgas, May 2019

Table of content:

Summary of the report

The Bulgarian fishing fleet operates exclusively in Black Sea and at 31st December 2018 consists of 1,857 fishing vessels featuring a total capacity of 6,087.76 GT and 54,522.88 kW. 1,762 of them are less than 12 meters, which is approximately 95% of all Bulgarian vessels. The most used fishing gear is gillnets (anchored). During the period 2007 – 2018, the Bulgarian fishing fleet has decreased in GT and kW as well in all segments, as it is shown in **Figures 5** and **6**. Each entry (or increase the tonnage or the engine power) in the fishing fleet register has been covered by the removal of at least same quantity from the fleet.

The economic status of the fishing fleet is under the influence of number of factors, the main of them are: the average age of the fleet is approximately 23 years; unbalance between the variable expenses and current earnings; low purchasing abilities of the population, annual migrations of part of the valuable species; variations of fuel prices; lack of a market regulator guaranteeing the same purchase price levels to set maximum and minimum values, the lack of sufficient number of fish markets and first sale centers near the ports and the lack of organizations of producers of fishery products.

By the end of 2018, a procedure for the recognition of organizations of producers of fishery and / or aquaculture products was launched.

In 2018, there is an increase in the number of active vessels in the segments TBB and TM, while other segments see a decline. Inactivity of fishing vessels is mainly due to repairs activities, upgrades or upcoming sales and transfers of ownership and, to a lesser extent, the supply of new fishing gear. Inactive fishing vessels in 2018 conditionally divided by total length are as follows: LOA 0006 - 249 pcs.; LOA 0612 – 400 pcs.; LOA 1218 – 9 pcs.; LOA 1824 – 1 pc; LOA over 24 m - nil. The measures described in the national legislation (art. 18в of Fisheries and Aquacultures Act-FAA) were applied for the inactive vessels in 2017, but due to the numerous complaints filed and the high public response, the procedure was postponed for a later stage. Steps have been taken to develop a new secondary legislation, regulating the management of the fishing fleet and the allocation of fishing capacity.

SECTION A

A.1. Description of the Bulgarian fishing fleet

Bulgaria has a coastline of 378 km, a continental shelf of 10,886 km² and an Exclusive Economic Zone in the Black Sea of about 25,699 km². Most of fishing activities are carried out within the territorial waters (up to 12 nautical miles area). At 31December, 2018 the Bulgarian fishing fleet consists of 1,857 vessels, operating only in Black Sea, with total capacity of 6,087.76 GT и 54,522.88 kW. The fishing vessels assigned to small-scale fishing with LOA of up to 12 meters, represent 95% or 1,762 vessels. The most of them are using as a preferred gear gillnets (anchored). The average age of the Bulgarian fishing fleet is 23 years. As it is shown in **Table 4** and **Figure 1**(presented below), the number of registered vessels is reduced by 27% from the date of accession of Bulgaria to the EU (01 January 2007). There is a slight decrease in the number of active vessels as compared to 2017, as well as a significant reduction in sea days compared to the 2017 reference values, reaching the level of 2015 (**Figure 1**).

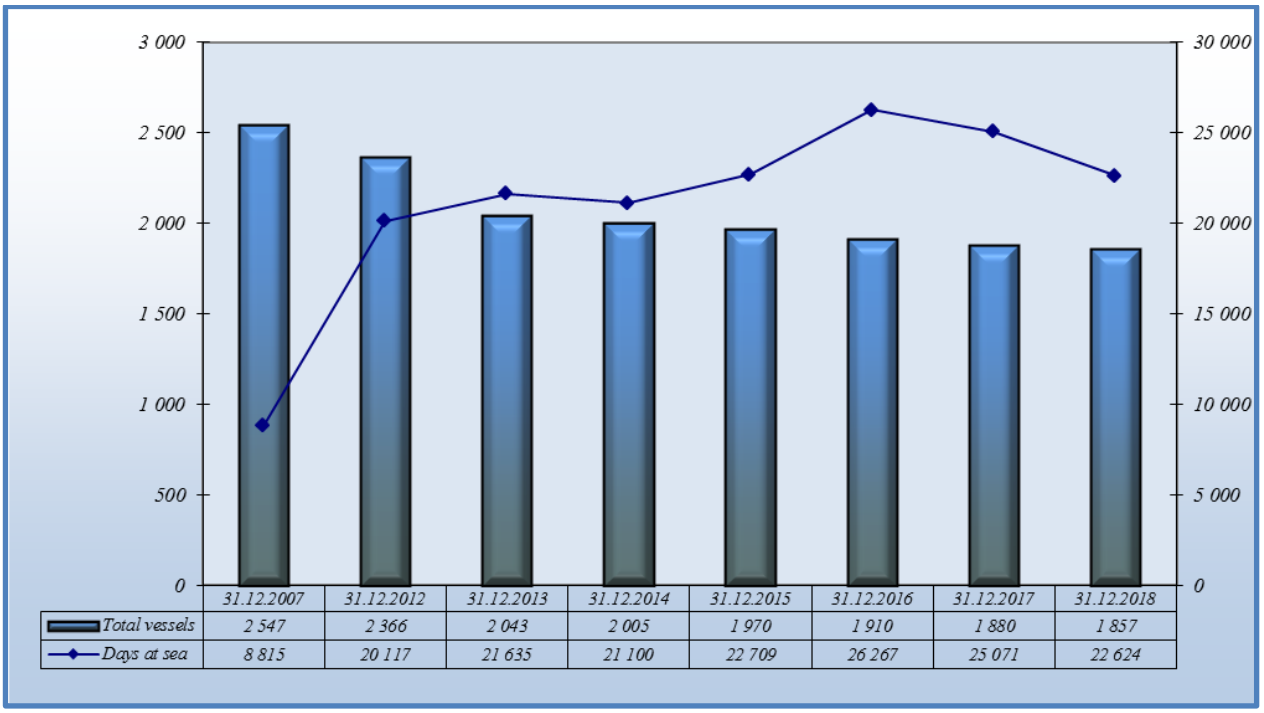


Figure 1. Number of vessels and days at sea for the period 2007-2018

The active fishing vessels in 2018 are 1,205 and the vast majority of them, a total of 1,121, are within the scope of a small-scale (mainly coastal) fishing. The percentage of active fishing vessels is 93.03% for vessels up to 12 m and at 6.97% for vessels of over 12 m. The fishing activity of the fleet in 2018, expressed in days at sea, is a total of 22,624 days, with 63.66% of fishing vessels with a total length of up to 12 meters.

Table 1: Fishing activity of the vessels during 2018

LOA	Number of vessels	GT	kW	Dyas at sea	Vessels ratio	Dyas at sea ratio
LOA 0012	1,121	1,775.25	23,037.66	14,402	93.03%	63.66%
LOA 1240	84	3,003.32	16,022.92	8,222	6.97%	36.34%
Total	**1,205**	**4,778.57**	**39,060.58**	**22,624**		

"Days at sea", Decision 2010/93/EU.

Segmentation of vessels, doing commercial fishing, by fishing gear in the Black Sea waters, shall be carried out in accordance with Decision 2010/93 / EU. The groups of similar fishing activities and fishing gear, typical for each group, are listed in **Table 2.**

Table 2: Groups similar fishing activities and gear

Fishing Technique	DFN - Drift and/or fixed nets		TM - Pelagic trawlers		HOK-using hooks			FPO- pots and/or traps		PS- Purse seiners		PGP- passive gears	PMP	
Fishing Gear	GNS Gillnets (set)	GND Gillnets (drift)	TBB beam trawlers	OTM pelagic trawlers	LLD Longlines drifting	LLS Longlines (set)	LHP Hand lines	FPO Pots	FPN stat. pound trap nets	PS Purse seine	SB Beach seine	Only passive gears	No prevailing gear	NO-no gear

Table 3: Days at sea by segments for 2015, 2016, 2017 and 2018.

	2015			2016			2017			2018	
Segment	LOA	Days at Sea	Segment	LOA	Days at Sea	Segment	LOA	Days at Sea	Segment	LOA	Days at Sea
DFN	VL0006	2869	DFN	VL0006	2924	DFN	VL0006	2102	DFN	VL0006	2351
	VL0612	4134		VL0612	4845		VL0612	3574		VL0612	3491
	VL1218	291		VL1218	309		VL1218	353		VL1218	200
	VL1824	11		VL1824	33		VL1824	280	Total:		6042
Total:		7305	Total:		8111	Total:		6309	PS	VL0006	202
PS	VL0006	303	PS	VL0006	251	PS	VL0006	154		VL0612	31
	VL0612	62		VL0612	51		VL0612	28	Total:		233
Total:		365	Total:		302		VL1218	77	FPO	VL0006	2
FPO	VL0006	47	FPO	VL0006	167	Total:		259		VL0612	533
	VL0612	526		VL0612	764	FPO	VL0006	14	Total:		535
Total:		573	Total:		931		VL0612	533	HOK	VL0006	42
HOK	VL0006	311	HOK	VL0006	196	Total:		547		VL0612	139
	VL0612	648		VL0612	765	HOK	VL0006	293	Total:		181
Total:		959		VL1218	26		VL0612	785	PGP	VL0006	68
PGP	VL0006	118	Total:		987		VL1218	28		VL0612	150
	VL0612	52	PGP	VL0006	28	Total:		1106		VL1218	34
Total:		170		VL0612	88	PGP	VL0006	80	Total:		252
PMP	VL0006	1314		VL1218	96		VL0612	158	PMP	VL0006	2427
	VL0612	3753	Total:		212	Total:		238		VL0612	4710
	VL1218	2189	PMP	VL0006	1895	PMP	VL0006	2584		VL1218	1517
	VL1824	511		VL0612	4852		VL0612	6868		VL1824	534
Total:		7767		VL1218	1367		VL1218	1978		VL2440	99
TBB	VL0612	350		VL1824	456		VL1824	360	Total:		9287
	VL1218	136	Total:		8570	Total:		11790	TBB	VL0612	177
	VL1824	277	TBB	VL0612	201	TBB	VL0612	182		VL1218	464
Total:		763		VL1218	301		VL1218	396		VL1824	199
TM	VL0612	238		VL1824	32		VL1824	27	Total:		840
	VL1218	1946	Total:		534	Total:		605	TM	VL0612	79
	VL1824	727	TM	VL0612	168	TM	VL0612	102		VL1218	2378
	VL2440	1896		VL1218	3319		VL1218	1597		VL1824	1084
Total:		4807		VL1824	1122		VL1824	900		VL2440	1713
Grand Total:		22709		VL2440	1615		VL2440	1618	Total:		5254
			Total:		6224	Total:		4217	Grand Total:		22624
			Grand Total:		25871	Grand Total:		25071			

Table 3 shows the fishing activity data for fishing vessels for 2015, 2016, 2017 and 2018, showing that the data from the reference 2017 is declined by 10%. The largest decrease was observed in HOK and PMP segments by 84% and 21%, respectively, while in the other segments there is an increase of the activity respectively in TBB - by 39%, TM-25%.

Table 4: Activity of the fishing vessels by segments for 2018

Segment	LOA	Vessels	GT	kW	Days at Sea	Activity for the segment	Activity to the Fleet
DFN	VL0006	304	226.26	2,901.71	2,351	38.91%	10.39%
	VL0612	457	832.74	1,1560.7	3,491	57.78%	15.43%
	VL1218	7	93.74	866.2	200	3.31%	0.88%
Sum:		768	1,152.74	15,328.61	6,042		26.71%
PS	VL0006	12	7.88	38.93	202	86.70%	0.89%
	VL0612	4	4.42	13.61	31	13.30%	0.14%
Sum:		16	12.3	52.54	233		1.03%
FPO	VL0006	2	1.94	25.01	2	0%	0.01%
	VL0612	34	117.96	951.02	533	100%	2.36%
Sum:		36	119.9	976.03	535		2.36%
HOK	VL0006	12	8.21	120.64	42	23%	0.19%
	VL0612	26	50.45	848.6	139	77%	0.61%
Sum:		38	58.66	969.24	181		0.80%
PGP	VL0006	7	5.18	39.83	68	26.98%	0.30%
	VL0612	12	39.88	481.78	150	60%	0.66%
	VL1218	2	44.85	191.18	34	13.49%	0.15%
Sum:		21	89.91	712.79	252		1.11%
PMP	VL0006	80	61.84	647.42	2,427	26%	10.73%
	VL0612	164	361.5	5,033.33	4,710	50.72%	20.82%
	VL1218	16	272.81	2253.9	1,517	16.33%	6.71%
	VL1824	3	110.76	929.63	534	5.75%	2.36%
	VL2440	1	78.61	574	99	1.07%	0.44%
Sum:		264	885.52	9,438.28	9,287		41.05%
TBB	VL0612	3	35.27	147.08	177	21.07%	0.78%
	VL1218	6	132.85	1,051.38	464	55.24%	2.05%
	VL1824	2	90.7	544.52	199	23.69%	0.88%
Sum:		11	258.82	1742.98	840		3.71%
TM	VL0612	4	21.72	228	79	1.50%	0.35%
	VL1218	26	561.99	4,470.35	2,378	45.26%	10.51%
	VL1824	11	502.94	2,426.86	1,084	20.63%	4.79%
	VL2440	10	1,114.07	2714.9	1,713	32.60%	7.57%
Sum:		51	2,200.72	9,840.11	5,254		23.22%
Total:		1,205	4,778.57	39,060.58	22,624		100.00%

Table 4 shows the number of fishing vessels for each segment, as well as data on their activity against the segment and on the total activity for the year. For the year 2018, activity in PMP segments was 41.05% - the highest one observed, DFN – 26.71% and TM – 23.22%. The two

largest segments are DFN - 768 fishing vessels and PMP - 264 fishing vessels, as these two segments are representing 83% of the entire fleet.
Coastal fishing vessels segment with a total length of up to 12 meters (VL 0012) is most representative into the DFN and PMP segments, as the most active are PMP VL 0612 with 33% and DFN VL 0612 with 24% to the total small-scale fishing activity for 2018.

Table 5: Segment VL 0012 for 2018

Segment		LOA	Vessels	GT	kW	Days at Sea	%
LOA 0012	DFN	VL0012	304	226.26	2,901.71	2,351	16%
		VL0612	457	832.74	11,560.7	3,491	24%
	PS	VL0006	12	7.88	38.93	202	1%
		VL0612	4	4.42	13.61	31	0%
	FPO	VL0006	2	1.94	25.01	2	0%
		VL0612	34	117.96	951.02	533	4%
	HOK	VL0006	12	8.21	120.64	42	0%
		VL0612	26	50.45	848.6	139	1%
	PGP	VL0006	7	5.18	39.83	68	0%
		VL0612	12	39.88	481.78	150	1%
	PMP	VL0006	80	61.84	647.42	2,427	17%
		VL0612	164	361.5	5,033.33	4,710	33%
	TBB	VL0612	3	35.27	147.08	177	1%
	TM	VL0612	4	21.72	228	79	1%
		Total:	1,121	1,775.25	23,037.66	14,402	

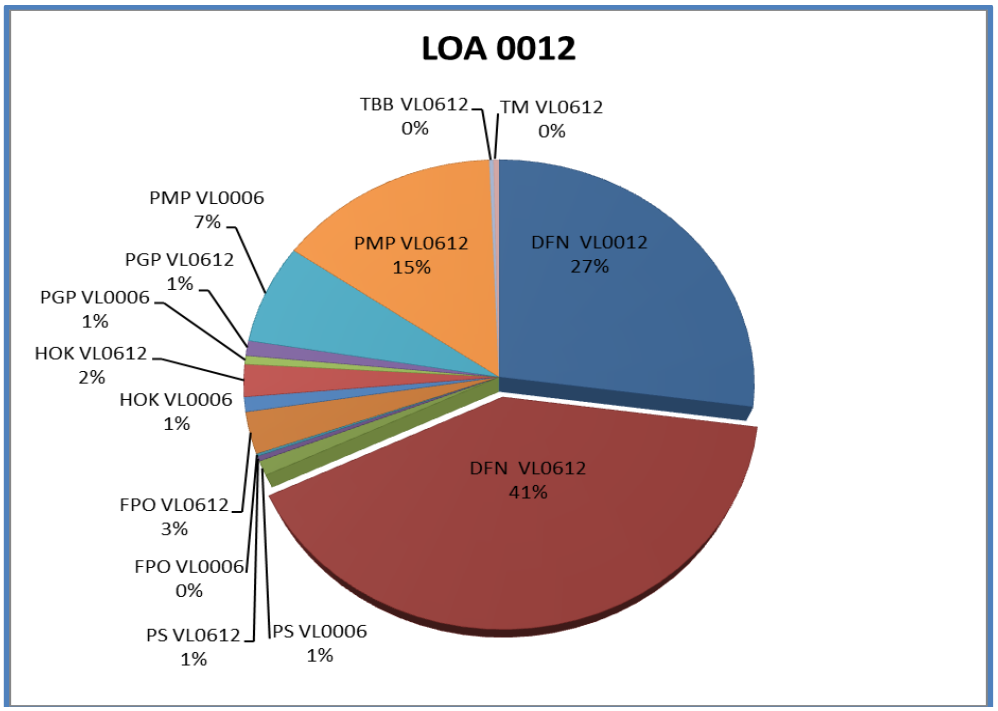


Figure 2: Percentage distribution of the fishing vessels VL 0012

Regarding the case of VL 1240 fishing vessels, the TM - 26 fishing vessels and PMP - 25 fishing vessels are the most numerous. The most active are PMP VL 1218 with 25.98 %, TM VL 2440 with 21.25 % and TM VL 12-18 with 20.97 % (**Table 6** and **Figure 3**)

Table 6: Fishing vessels having LOA VL 1240

Segment		LOA	Vessels	GT	kW	Days at Sea	
LOA 1224	DFN	VL1218	7	93.74	866.20	200.0	2%
	PGP	VL1218	2	44.85	191.18	34.0	0%
	PMP	VL1218	16	272.81	2,253.90	1,517.0	18%
		VL1824	3	110.76	929.63	534.0	6%
		VL2440	1	78.61	574.00	99.0	1%
	TBB	VL1218	6	132.85	1,051.38	464.0	6%
		VL1824	2	90.70	544.52	199.0	2%
	TM	VL1218	26	561.99	4,470.35	2,378.0	29%
		VL1824	11	502.94	2,426.86	1,084.0	13%
		VL2440	10	1,114.07	2,714.90	1,713.0	21%
			84	3,003.32	16,022.92	8,222.0	

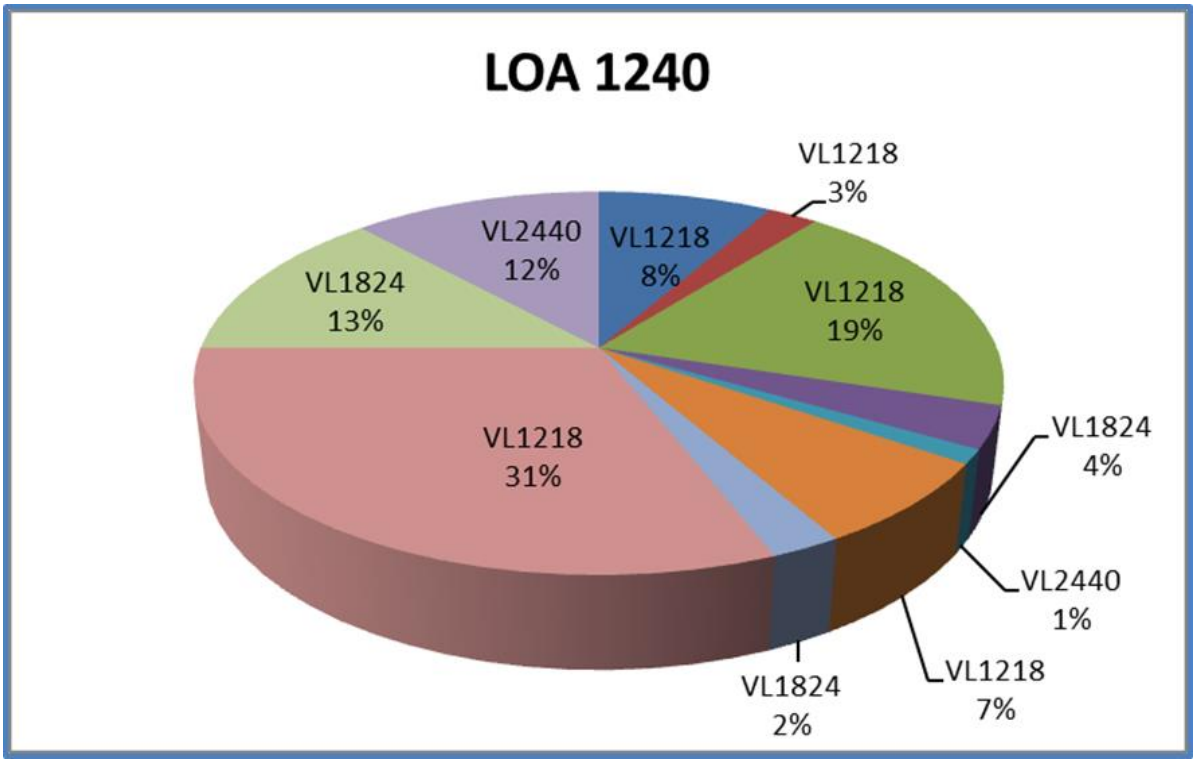


Figure 3: Percentage distribution of the fishing vessels VL 1240

A. 2. Relation to fisheries

It has to be taken into account the ecological characteristics of the Black Sea as a closed sea basin, other than other marine basins in terms of natural environment, with less salinity and over 90% of its deeper water volume, consisting of anoxic water affecting biodiversity in the Black Sea. The Black Sea is a relatively closed water basin, connected to the Medireranean Sea through the Turkish Straits. For this reason, and due to the presence of some of the great rivers in Europe, flowing into its waters, the salinity of the Black Sea is much lower than that of the World Ocean, which affects the distribution of a number of species that do not tolerate low salinity. It should also be borne in mind that, due to the high concentration of hydrogen sulphide at depths exceeding 200 meters, which in addition to biodiversity also has a significant impact on fishing activities, as in practice it severely restricts fishing fleets' hunting grounds.

The most targeted species in Black Sea are:

- Pelagic species: European sprat (*Sprattus sprattus sulinus*), Mediterranean Horse Mackerel (*Trachurus mediterraneus ponticus*), Flathead Grey Mullet (*Mugil cephalus*), Bonito (*Sarda sarda*), Bluefish (*Pomatomus saltatrix*);
- Demersal species: Red Mullet (*Mullus barbatus*), Piked Dogfish (*Squalus acanthias*), Thornback ray (*Raja clavata*), Turbot (*Scophthalmus maximus*), Gobies (*Gobiidae*).
- Molluscs: Rapa wealk (*Rapana venosa*) and White sand clam (*Mya arenaria*).

For 2018 the total amount of landings in Black Sea from Bulgarian fishing fleet is 8,547 tons.
Most of the vessels of less than 12 meters in length are mainly engaged in small-scale fisheries deploying gill-nets (anchored). Vessels of over 12 m in length use mainly pelagic trawls to fish as a preferred gear.
From all species in the Black Sea, for our country there are introduced quotas only for turbot and sprat, applicable since 2007. For 2018 the fishing opportunities for Black Sea were laid down in Council Regulation 2017/0306 (05 Dec, 2017), as follows:

- For turbot – 57.0 tons;
- For sprat – 8,032.5 tons.
- For Picked Dogfish (DGS) - there is no total allowable catch or quota for catches of the Picked Dogfish((*Squalus acanthias)* in Black Sea. In 2015, when defining the fishing opportunities for certain fish stocks in the Black Sea for 2016, the Republic of Bulgaria has made a political commitment for 2016 not to exceed the landings of Picked Dogfish, discharged in 2015, up to 133 tons ceiling. This commitment is taken as a precautionary measure aimed at protecting the Picked Dogfish in Black Sea and is renewed annually when determining the annual fishing opportunities for certain fish stocks in the Black Sea waters. Since then, the catch of the Black Sea Picked Dogfish has fallen more than tenfold.

For 2018, the catches of turbot are 55.45 tons, sprat – 3,187.8 tons, picked dogfish – 10.4 tons.

Detailed information on the catches of the main species of fish and other aquatic organisms in the Black Sea is presented in the tables below.

Table 7: Catches of the main species of fish in Black Sea in kilos 2007 – 2018

Main targeted species	FAO code	Landings 2007	Landings 2013	Landings 2014	Landings 2015	Landings 2016	Landings 2017	Landings 2018
European sprat	SPR	2 984 585.00	3 784 192.10	2 279 108.40	3 296 994.30	2 295 494.20	3 188 949.81	3 187 791.45
Med. horse mackerel	HMM	115 885.70	271 376.90	113 073.70	87 178.20	166 190.35	153 481.65	196 686.50
Atlantic bonito	BON	895.00	6 131.00	5 511.30	7 731.80	68 223.30	13 038.30	22 906.40
Bluefish	BLU	8 218.90	49 024.30	304 738.20	138 447.30	712 157.35	71 014.87	260 650.40
Flathead grey mullet	MUF	5 844.90	9 029.70	16 316.40	10 216.10	8 651.50	3 068.41	4 403.70
Red mullet	MUT	12 595.00	256 775.00	328 815.80	632 568.60	877 449.10	374 620.80	595 211.90
Picked dogfish	DGS	23 978.00	30 947.70	34 009.70	133 041.70	83 478.90	50 451.40	10 082.00
[1]*Turbot*	TUR	66 885.00	39 577.00	39 449.70	43 005.70	42 432.34	41 770.90	55 445.00
Rapana snail	RPN	4 309 989.00	4 819 061.50	4 732 410.80	4 100 585.20	3 436 285.06	3 653 148.70	3 515 392.00
Gobies nei	GPA	73 894.70	74 001.00	63 698.10	47 946.10	64 226.50	39 667.02	25 137.60
Thornback ray	RJC	3 562.00	56 114.70	70 321.80	43 236.60	35 718.09	48 876.35	13 121.60
Silversides nei	SIL	9 437.00	9 795.40	57 603.30	9 166.90	50 452.40	10 017.10	15 734.40
Anchovy	ANE	60 440.0	9 932.2	369 646.1	12 465.60	54 472.40	3 583.10	4 757.30
Soft-shelled slam	CLS	0.00	10 296.00	61 040.30	124 339.30	583 401.20	818 927.80	600 509.84

[1]The landings of turbot do not include IUU-fishing(Illegal, unreported and unregulated), which is 620.03 kilos for 2018.

As can be seen from **Table 7** content, there is a significant increase in the catch of red mullet, med. horse mackerel and bluefish, while catches of picked dogfish and thornback ray are declining compared to 2017 levels. The following segments have the largest percentage of the landings in 2018 - TM 2440 - 23%, PMP 0612 - 17% and TM 1218 - 16%.

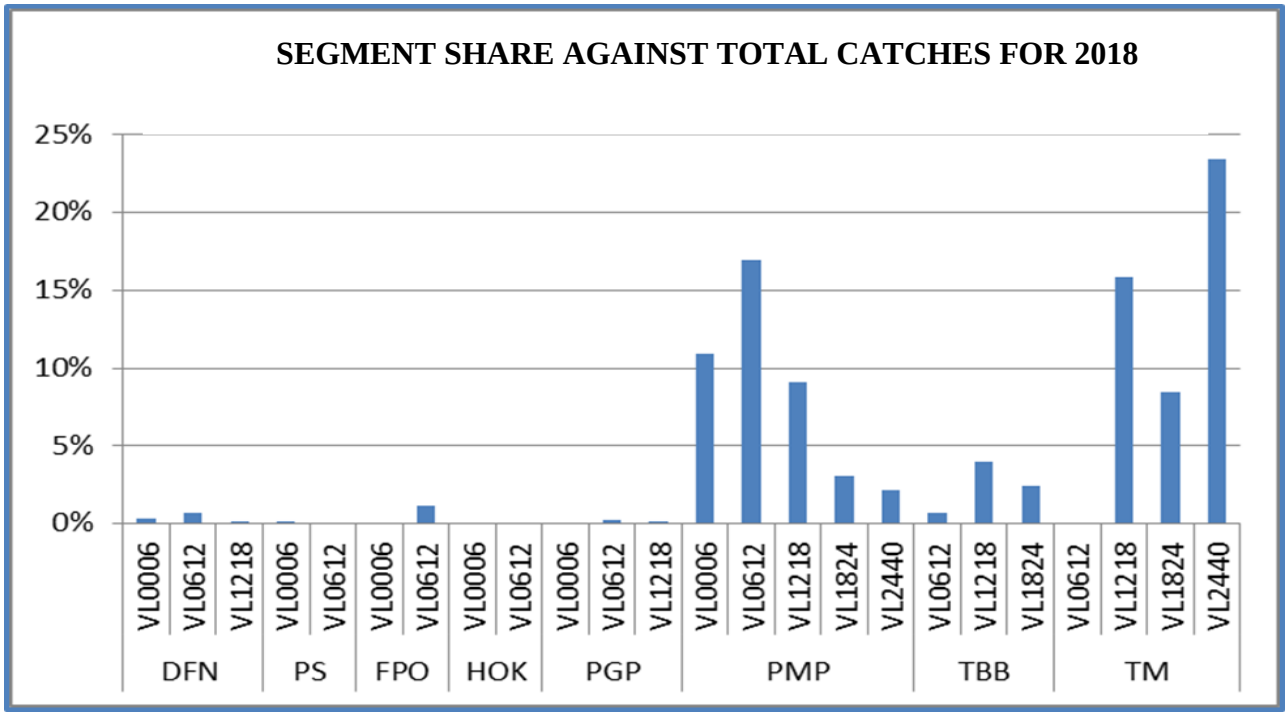


Figure 4: Percentage ratio of catches by the fleet segments to total catches for 2018.

Table 8: The value of the landings of the top of the species for each of the segments-2018**.**

Segment	Species	Code	Landings(kilos)	Value (BGN)
DFN 0006	Anchovy	ANE	150.5	171.57
	Picked dogfish	DGS	101	279.77
	Med. horse mackerel	HMM	1,887.4	4,227.78
	Red mullet	MUT	211.5	226.305
	Rapana	RPN	785	455.3
	SPR	SPR	188	112.8
	Turbot	TUR	480.9	3,020.05
	Whiting	WHG	20	20.6
DFN 0612	Anchovy	ANE	44	50.16
	Picked dogfish	DGS	579	1,603.83
	Med. horse mackerel	HMM	2,530.3	5,667.87
	Red mullet	MUT	1,643	1,758.01
	Rapana	RPN	2,424	1,405.92
	SPR	SPR	1,601	960.6
	Turbot	TUR	7,424.33	46,624.77
	Whiting	WHG	37	38.11
DFN 1218	Picked dogfish	DGS	105	290.85
	Med. horse mackerel	HMM	174	389.76
	Red mullet	MUT	1,346	1,440.22
	Rapana	RPN	9,465	5,489.7
	Turbot	TUR	2,495.2	15,669.86
FPO 0006	SPR	SPR	40	24
FPO 0612	Anchovy	ANE	2,064	2,352.96
	Med. horse mackerel	HMM	21,646.5	48,488.16
	Red mullet	MUT	581	621.67
	SPR	SPR	72,345	43407
	Whiting	WHG	5	5.15
HOK 0006	Picked dogfish	DGS	155	429.35
	Med. horse mackerel	HMM	31	69.44
HOK 0612	Picked dogfish	DGS	832	2,304.64
	Med. horse mackerel	HMM	153	342.72
	Turbot	TUR	253.61	1,592.67
PGP 0006	Med. horse mackerel	HMM	20.5	45.92
	Rapana	RPN	500	290

PGP 0612	Anchovy	ANE	10	11.4
	Picked dogfish	DGS	59	163.43
	Med. horse mackerel	HMM	180	403.2
	Red mullet	MUT	1,291	1,381.37
	Rapana	RPN	12,570	7,290.6
	Turbot	TUR	1,122.27	7,047.85
PGP 1218	Picked dogfish	DGS	130	360.1
	Rapana	RPN	8,936	5,182.88
	Turbot	TUR	521.8	3,276.9
PMP 0006	Anchovy	ANE	20	22.8
	Med. horse mackerel	HMM	1215	2,721.6
	Red mullet	MUT	186	199.02
	Rapana	RPN	70,9032	411,238.6
	SPR	SPR	310	186
	Turbot	TUR	245	1538.6
PMP 0612	Anchovy	ANE	154	175.56
	Picked dogfish	DGS	7	19.39
	Med. horse mackerel	HMM	1,658	3,713.92
	Red mullet	MUT	843	902.01
	Rapana	RPN	1,041,849	604,272.4
	SPR	SPR	9,061	5,436.6
	Turbot	TUR	1,365.34	8,574.34
PMP 1218	Picked dogfish	DGS	3,577.7	9,910.23
	Med. horse mackerel	HMM	7,624.8	17,079.55
	Red mullet	MUT	102,910.4	110,114.1
	Rapana	RPN	630,162	36,5494
	SPR	SPR	600	360
	Turbot	TUR	8,707.7	54,684.36
	Whiting	WHG	107	110.21
PMP 1824	Picked dogfish	DGS	2,582	7,152.14
	Med. horse mackerel	HMM	5,613	12,573.12
	Red mullet	MUT	24,591	26,312.37
	Rapana	RPN	157,850	91,553
	SPR	SPR	48,552	29,131.2
	Turbot	TUR	3,057.1	19,198.59
	Whiting	WHG	602	620.06
PMP 2440	Med. horse mackerel	HMM	2,512	5,626.88

	Red mullet	MUT	230	246.1
	Rapana	RPN	92,040	53,383.2
	SPR	SPR	86,706.4	52,023.84
	Turbot	TUR	1,760.6	11,056.57
PS 0006	Anchovy	ANE	304.8	347.47
	Med. horse mackerel	HMM	922	2,065.28
	Red mullet	MUT	95	101.65
	SPR	SPR	1,943	1,165.8
PS 0612	Med. horse mackerel	HMM	190	425.6
	Red mullet	MUT	195	208.65
TBB 0612	Rapana	RPN	55,679	32,293.82
	Turbot	TUR	622.65	3,910.24
TBB 1218	Picked dogfish	DGS	108	299.16
	Med. horse mackerel	HMM	1,644	3,682.56
	Red mullet	MUT	7,124	7,622.68
	Rapana	RPN	323,668	187,727.4
	Turbot	TUR	4,219.3	26,497.2
TBB 1824	Med. horse mackerel	HMM	9,736	2,1808.64
	Red mullet	MUT	805	861.35
	Rapana	RPN	194,595	112,865.1
	Turbot	TUR	2,886.9	18,129.73
TM 0612	Picked dogfish	DGS	25	69.25
	Med. horse mackerel	HMM	6	13.44
	Red mullet	MUT	296	316.72
	SPR	SPR	2,163	1,297.8
	Turbot	TUR	546.97	3,434.97
	Whiting	WHG	10	10.3
TM 1218	Picked dogfish	DGS	1,765.5	4,890.44
	Med. horse mackerel	HMM	31,026	69,498.24
	Red mullet	MUT	271,649	290,664.4
	Rapana	RPN	158,045	91,666.1
	SPR	SPR	806,066	483,639.6
	Turbot	TUR	12,764.46	80,160.81
	Whiting	WHG	180	185.4
TM 1824	Anchovy	ANE	30	34.2
	Picked dogfish	DGS	56	155.12
	Med. horse mackerel	HMM	58,999	132,157.8

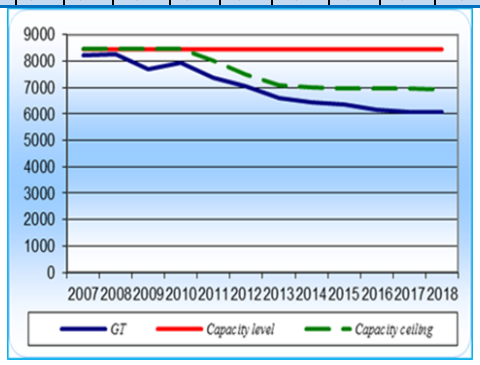
	Red mullet	MUT	118,583	126,883.8
	Rapana	RPN	74,892	43,437.36
	SPR	SPR	429,826	257,895.6
	Turbot	TUR	4,750.7	29,834.4
	Whiting	WHG	1,100	1,133
TM 2440	Anchovy	ANE	1,980	2,257.2
	Med. horse mackerel	HMM	48,914	109,567.4
	Red mullet	MUT	62,614	66,996.98
	Rapana	RPN	42,900	24,882
	SPR	SPR	1,728,387.05	1,037,032
	Turbot	TUR	2,221.1	13,948.51
	Whiting	WHG	200	206

A.3. Development of the fleet

The development of the Bulgarian fishing fleet from 1 January 2007 to 31 December 2018 is presented in **Table 9**, **Fig. 5** and **Fig. 6**. As evidenced, the number of registered vessels has decreased by 27% according to data from the end of 2018 compared to the data of 31 Dec, 2007. Overall, the Bulgarian fishing fleet has decreased both in terms of tonnage and power, as a substantial decrease is recorded in the segment of 18 - 24 meters (both for vessels and tonnage). A significant drop is also seen in the segments of 6 to 12 meters, as well as 0 to 6 meters.

Table 9. Development of the Bulgarian Fishing Fleet.

Year	31.12.2007			31.12.2014			31.12.2015			31.12.2016			31.12.2017			31.12.2018			Decrease to 2007		
Vessels	Vls	GT	kW	Vls	GT	kW	Vls	GT	kW	Vls	GT	kW	Vls	GT	kW	Vls	GT	kW	Vls	GT	kW
up to 6 m.	845	601	6,594	688	508	6,085	691	509	6,098	655	488	6,020	660	495	6,131	663	495.60	6,085.92	-22%	-18%	-8%
6 - 12 m	1,595	3,464	42,173	1,225	2,601	33,420	1,184	2,500	32,168	1,160	2,466	32,107	1,128	2,408	31,057	1,099	2,316.99	30,484.04	-31%	-33%	-28%
12 - 18 m	66	1,273	8,625	61	1,183	9,373	64	1,230	9,871	67	1,291	10,377	64	1,241	9,900	66	1,269.61	10,129.01	0%	0%	17%
18 - 24 m	29	1,309	4,819	19	817	4,005	19	817	4,005	17	738	3,839	17	744	4,149	18	812.90	4,535.01	-38%	-38%	-6%
24 - 40 m	12	1,586	3,304	12	1,310	3,510	12	1,310	3,510	11	1,193	3,289	11	1,193	3,289	11	1,192.68	3,288.90	-8%	-25%	0%
Total	2,547	8,233	65,515	2,005	6,420	56,393	1,970	6,367	55,651	1,910	6,176	55,632	1,880	6,081	54,525	1,857	6,087.78	54,522.88	-27%	-26%	-17%



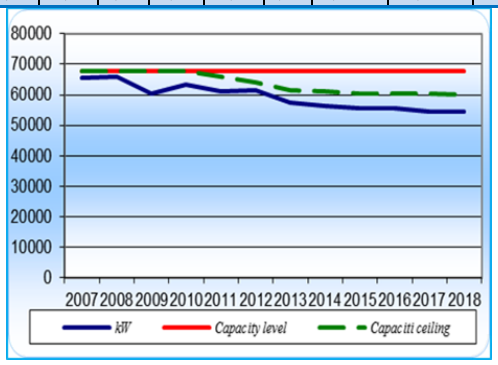


Figure 5. Gross Tonnage capacity for 2007-2018 **Figure 6.** Capacity in kW for 2007-2018

SECTION B.

B.1. Report on effort reduction schemes

In compliance with the Operational Program "Fisheries sector development" for Programming period 2007-2013, Priority axis 1 "Measures for adaptation of the fishing fleet", Measure 1.1. "Public aid for permanent cessation of fishing activities", the decrease of the capacity will be achieved, based on the national plans for adjustment of the fishing effort in direction of restructuring of the fishing fleet and conservation of its sustainable management, in compliance with the principles of the Common Fisheries Policy.

From the applied table for the implementation of the scheme for withdrawing from exploitation of vessels from the Bulgarian fishing fleet, it's obvious, that Bulgaria makes the greatest effort for withdrawing from exploitation of vessels in the segments LOA 12-18, LOA 18-24, LOA 24-40, as well as in the segment LOA 6-12. The implementation of the fishing effort adjustment plan is resumed in **Table 10.**

Table 10: Implementation of the fishing fleet efforts adjustment plan (FEAP) until 31 Dec, 2018.

Bulgarian fishing fleet by 31 Dec, 209								Implementation by 31 Dec, 2018				
Fleet segment	Vessels	kW	GT	kW	GT	kW %	GT %	Vessels	kW	GT	kW %	GT %
LOA <6	708	5,462.35	507.20	4,369.88	405.76	-20%	-20%	14	70.22	10.50	-1.29%	-2.07%
LOA 6<12	1,392	37,160	2,985.48	26,012	2,089.84	-30%	-30%	55	2,858.93	345.22	-7.69%	-11.56%
LOA 12<18	65	9,106.23	1,290	6,374.36	903.00	-30%	-30%	23	2,390.1	407.13	-26.25%	-31.56%
LOA 18<24	28	4,773.66	1,253.4	2,864.2	752.04	-40%	-40%	9	1,201.92	400.56	-25.18%	-31.96%
LOA >24	13	3,877.5	1,665	2,326.5	999.00	-40%	-40%	2	1,029.65	431.36	-26.55%	-25.91%
Total	**2,206**	**60,379.7**	**7,701.08**	**41,946.9**	**5,149.64**			**103**	**70.22**	**1594.77**	**-12.51%**	**-20.71%**

On 21 April 2017, the admission of projects under Priority 1 of the Union "Promotion of environmentally sustainable, innovative, competitive and knowledge-based, resource-efficient fisheries" was opened, Measure 1.3 "Permanent cessation of fishing activities", with a call for proposals through project selection BG14MFOP001-1.003 "Permanent cessation of fishing activities".

The implementation of the measure will contribute to achieving a specific objective of "Balancing fishing capacity and available fishing opportunities".

With the measure of permanent cessation of fishing activities, the fishing effort of the Bulgarian fishing fleet will be adjusted in accordance with available and accessible resources and according to the capacity of the fishing fleet at segment level, by scrapping part of the old and inefficient vessels in the unbalanced in terms of fishing opportunities segments, i.e. those of up to 24 m. This will reduce the harmful impact of the fleet as a whole on the marine environment and contribute to the balancing of the fleet to the fishing opportunities.

The total amount of the grant is BGN1,681,036 under the procedure. The minimum and maximum amount of the grant under the measure is not defined.

In December 2017, eight contracts were signed under Measure 1.3 "Permanent cessation of fishing activities". The final effect of the implementation of the measure is shown on **Table 10.1** below.

Table 10.1. Scrapped vessels during 2018, DCF segmentation

Scrapped vessels during 2018			
DCF Segmentation	**Брой кораби**	**GT**	**kW**
DFN 6-12	6	40	349.37
PMP 6-12	2	9.72	71.98
Total	**8**	**49.72**	**421.35**

B.2. Impact of effort reduction schemes on fishing capacity

During 2018, as a result of the implementation of FEAP, 8 fishing vessels were scrapped, as all of them fall within LOA 6-12 segment (6 in DFN 6-12 and 2 in PMP 6-12, accoprding to the DCF segmentation), as the total vessels number incteases to 103 vessels, with total fishing capacity of 1,594.77 GT and 7,550.82 kW.

In conclusion from the data presented, it can be considered that after the adoption of the FEAP, the Republic of Bulgaria has made the necessary efforts to reduce the pressure on fish stocks and the restructuring of its fishing fleet. The result of the permanent cessation of fishing activities of vessels has reduced the pressure on stocks, which is a key factor in improving the condition of the entire population and in achieving a balance between fishing capacity and fishing opportunities.

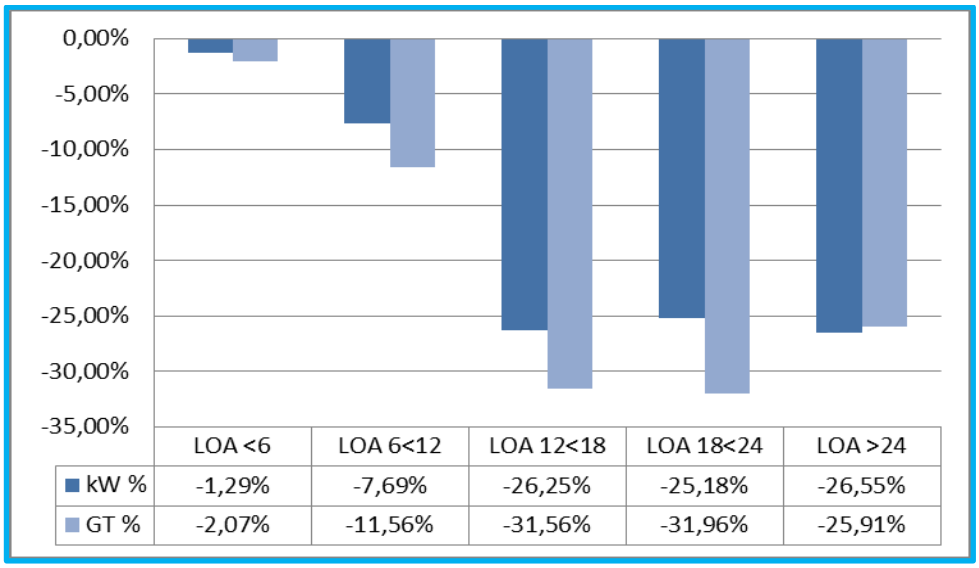


Figure 7. Reduction of Bulgarian fishing fleet in kW and GT

SECTION C

C.1. Statement on the compliance with the entry/exit scheme and the referent level

The capacity of the Bulgarian fishing fleet on 1 January, 2007 is as follows: GT_{07} = 8,448 GT and kW_{07} = 67,607 kW.

Table 11: Calculation of the baseline: (GT_{07} and kW_{07}) at 01 January, 2007

GT_{FR}	GT_1	GT_2	GT_3	GT_4	GT_{07}
8,147	301	0	0	0	8,448

kW_{FR}	kW_1	kW_2	kW_3	kW_4	kW_{07}
64,924	2,683	0	0	0	67,607

Each entry (or increase in tonnage or engine power) in the fleet register has been accompanied by the at least the same quantity withdrawal from the fleet. So Bulgaria can guarantee that the national fleet capacity in tonnage (GT) and (kW) is equal or less than the referent level at the date of the accession in EU, in line with article 8 of Regulation 1013/2010 and article 23 of Regulation 1380/2013

Table 12: Information on the vessel capacity, entered or withdrawn from the fleet register in the period 2007-2018.

Entry/Exit regime		GT												kW											
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
ENTRY	Vessels entered the FR after withdrawal	3	3	86	328	217	338	583	159	77	208	44	202	55	50	420	3 894	1 412	3 099	6 284	3 564	787	2 720	766	2 160
	Vessels entered the FR after the accession date, based on adm.	86	44	171	-	-	-	-	-	-	-	-	-	700	401	1 582	-	-	-	-	-	-	-	-	-
	Total	**89**	**48**	**257**	**328**	**217**	**338**	**583**	**159**	**77**	**208**	**44**	**202**	**756**	**451**	**2 002**	**3 894**	**1 412**	**3 099**	**6 284**	**3 564**	**787**	**2 720**	**766**	**2 160**
EXIT	Financed with public aid	-	-	-	-	442	537	419	124	24	-	-	50	-	-	-	-	1 514	2 176	2 413	778	249	-	-	421
	Financed without public aid	2	5	830	97	344	116	640	207	109	403	148	146	164	85	7 449	883	1 932	868	7 843	1 504	1 365	3 006	2 049	1 741
	Total	**2**	**5**	**830**	**97**	**785**	**653**	**1 059**	**331**	**133**	**403**	**148**	**196**	**164**	**85**	**7 449**	**883**	**3 446**	**3 044**	**10 256**	**2 282**	**1 614**	**3 006**	**2 049**	**2 162**

Table 13: Management of the entry/exit regime on 31 December, 2018.

	Item	GT		kW	
1	Capacity of the Fleet on 01 Jan, 2007	**GT_{FR}**	8 147	**kW_{FR}**	64 924
2	Capacity level fo the application of the entry/exit regime	**GT_{07}**	8 448	**kW_{07}**	67 607
3	Entries of vessels of more than 100 GT financed with public aid	**GT_{100}**	0	**kW_{100}**	0
4	Other entries or capacity increases (not included in 3 & 5)		2 591		26 915
5	Increases in the tonnage (GT) for safety reasons	**GT_S**	0		0
6	**Total entries (3+4+5)**		2 591		26 915
7	Exits before 1 January, 2007, financed with public aid	**GT_{a1}**	0	**kW_a**	0
8	Exits after 1 January, 2007, financed with public aid	**GT_{a2}**	1 595		7 551
9	Other exits (not included in items 7 and 8)		3 055		29 765
10	**Total exits (7+8+9)**		4 650		37 316
11	Power of the engines, replaced using public aid, subject to power reduction.		0	**kW_r**	0
12	**Fleet capacity on 31 Dec, 2018 (1+6-10)**	**GT_t**	6 088	**kW_t**	54 523
13	**Fleet ceiling on 31 Dec, 2018**		6 917		60 056

Clarifications:

-Lines 1, 3, 5, 7, 8, 9, 11 and 12 present figures, registered in the Community Fleet Register on 31 Dec, 2018;
-Line 4 is calculated as follows: 4 = (12 - 1) + 10 - (3 + 5);
-Line 13: Ceiling GT = 2 - 35% 3 – 98.5% 7 - 96% 8 and kW = 2 -35% 3 - 7 - 8 - 20% 11

SECTION D SWOT

D.1. Summary of the strengths and weaknesses of the fleet management system

Under the national law, all fishing vessels used for commercial fishing, must be registered first in the register of vessels, kept by the Executive Agency Maritime Administration (the Bulgarian institution responsible for the technical characteristics and condition of the vessels), as well as in the register of the fishing vessels, kept by the Executive Agency for Fisheries and Aquaculture (the Bulgarian institution responsible for fisheries control).
In the management of the Bulgarian fleet, the basic principle is that the fishing capacity, representing an aggregate of the gross tonnage and the power of the vessel, can never be increased without firstly at least the same or greater fishing capacity to be withdrawn from the Bulgarian fishing fleet.
In 2012, amendments to the national legislation, which allow the suspension of the license of vessels, which have been inactive during two consecutive years, were adopted. The released capacity of these vessels can be allocated to fishing vessels that intend to carry out commercial fisheries.
In 2018, work began on drafting a new regulation on the management of the fishing fleet. It is expected that the regulation will be adopted and enacted in 2019.
Regarding the management of the fishing effort regime, Bulgaria shall apply the provisions of Recommendation GFCM/41/2017/4 according to which fishing vessels hunting for turbot shall not exceed 180 days at sea per year.

D.1.1. Weaknesses

- Lack of conditions for direct sale between owners of fishing vessels and „end user” (customer), due to insufficiency of fish auctions;
- High percentage of depreciation of fishing vessels obstructing the good economic efficiency;
- Low degree of investment in the replacement of fishing gears with more selective ones, and also in the safety conditions of the fishing vessels and ensuring better working conditions;
- High age of the fishing fleet;
- High average age of the employees in the sector;
- Dependence of fisheries on the seasonal catches of some valuable species;
- Restricted navigation area of significant part of the fleet. As it was mentioned above, Bulgarian fishing fleet consists mainly of small boats, larger part of them are permitted to navigate within the area of 2 miles from the coast;
- The existence of provision in the Fisheries and Aquaculture Act, which does not allow the fishing capacity of inactive fishing vessels to be withdrawn, if they have applied for repair. This requireement does not oblige the demonstration of repairs and does not specify a period within which they can be carried out, which allows the "retaining" of fishing capacity indefinitely;
- Insufficient number of patrol boats equipped with modern controls.

D.1.2. Strengths

- Existence of Informational-Statistical system, where data from fishing fleet and catch reporting are recorded;
- Permanent presence of EAFA officials in most important ports and landing places, that, except power for efficient control, grants possibility for provision of important information, related to management of the fisheries, to the parties concerned;
- Raising the awareness of the persons concerned in the branch, through informational campaigns, regular meetings and publishing of information of EAFA's website;
- Permanent monitoring of fishing vessels targeting turbot. According to the rules established at national level, each vessel that intends to target turbot, shall be equipped with device, allowing monitoring its track, linked to the Fisheries Monitoring Center (VMS or GPRS depending on the length of vessel);
- Cooperation with other national authorities regarding the technical parameters of fishing vessels (with Executive Agency Maritime Administration) and fight against IUU (Border Police, Bulgarian Food Safety Agency);
- Enhanced cooperative inspection of EAFA and EAMA in terms of controls and measurement of the engine power of fishing vessels;
- Training of EAFA staff;
- Increased monitoring and control activities, that improves the due management of fisheries through improved communication and coordination between regional offices and HQs;
- Optimized informational system and database;
- Improved legislative framework through adapting Fisheries and Aquacultures Act in order to undertake effective measures against inactive fishing vessels and non-submission of economic statistics form. These measures allow collecting of more reliable information of the state of fishing fleet of Bulgaria;
- The presence of administrative measures against IUU fisheries, through the implementation point system for serious infringements, allowing a withdrawal of fishing license;
- Measures being adopted to improve the national legal framework in its management of the fleet

D.2. Plan for improving the fleet management system

The dedicated fish markets, specialized in the recent years in the newly built fishing ports, do not work with its full capacity. Meetings with representatives of the fish industry and interested parties are planned in order to promote their use.

The Fisheries and Aquaculture Act provides a legal opportunity to withdraw fishing vessels that have not engaged in fishing activities for two consecutive years. The released capacity will be allocated to fishing vessels whose entering in the register will ensure renewal and modernization of the fleet as well as a more efficient use of fishing capacity.

Not a small part of the valuable fish species and other aquatic organisms are migratory and their catches in the annual aspect are influenced by the number of passages, passing along the Bulgarian coast. The Fleet Management System through commercial fishing licenses is not aimed at issuing a license for a target species (except for the turbot) and thus enables fishermen to catch all allowable species, which would compensate for annual fluctuations in catches of migratory fish and other aquatic organisms.

The system for certification and engine power inspection system allows monitoring and control of the actual power of the propulsion engine and not exceeding the recorded power in the fishing

license. The Executive Agency for Fisheries and Aquaculture and the Executive Agency Maritime Administration will continue their joint actions on the implementation of the Sample Plan for the Measurement of Engine Power of Fishing Vessels, approved in 2014 and revised in 2016.
During the next 3 years Bulgaria will continue to apply at national level a ban for using of trawling gears within 3 nautical miles from the coast, with the exception of some fishing vessels using derogation in the area between 1 and 3 nautical miles. That allows to the small fishing vessels, which have restricted navigation area, to deploy their fishing gears in the closer coastal area and this way to avoid point of contact with the bigger fishing vessels using active fishing gears.

D.3. Information about the general level of respecting the fleet policy tools

The fleet is managed through a system of commercial fishing licenses and authorizations, as it is laid down in the Fisheries and Aquacultures Act. The order and conditions for issuance of the commercial fishing licenses and authorizations are determined in line with the legislation of the European Union, according to the provision of article 17, paragraph 7 of the Fisheries and Aquacultures Act.
In 2018, the performing of physical checks of engine power on fishing vessels continued, in accordance with the requirements of Council Regulation 1224/2009, in accordance with a validated 2014 and revised 2016 Sample Plan for the measurement of the engine power of fishing vessels, for which there is a risk of declaring lower than the actual power of the propulsion engine
The approach of implementation of the point system for serious infringements is applied into the national legislation through Ordinance 3 from 19 February 2013 for the implementation of point system for serious infringements according to Regulation (EC) 1005/2008 of the Council dated 29 Sept 2008 for creation of Community system for preventing, deterring and eliminating of the illegal, undeclared and unregulated fishing, for amendment of regulations (EIC) 2847/93, (EC) 1936/2001 and (EC) 601/2004 and for repealing of regulations (EC) 1093/94 and (EC) 1447/1999.
In 2018 the work on improvement of ERS continued.

SECTION E

E.1. Information about the changes in the administrative procedures for the fleet management

In 2017-2018, changes to the national legislation relating to fleet management have been initiated. At this stage, the changes are presented in a draft of an entirely new Fleet Management Ordinance.

SECTION F. Indicators

Referring to the Guidelines for Improved Analysis of the Balance of Fishing Capacity and Fishing Opportunities, Bulgaria calculates the technical and economic indicators for 2014, 2015, 2016, 2017 and 2018, as shown below. For the calculation of the indicators, the data collected under the Data Collection Framework (DCF) for 2014, 2015, 2016, 2017 and 2018, and the EAFA information and statistical system were used.

F.1. Technical Indicator

The technical indicator assessment was made according to the Guidelines and it is relevant for all active vessels during 2014, 2015, 2016, 2017 and 2018. The vessels are considered as active ones if they have fishing licenses and also have reported at least one day at sea during the reference year. Inactive vessels are with or without fishing licenses, have not reported at least one day at sea and landings during the reference year (due to ship repairs, sale, etc.)

Table 14: Proportion of inactive vessels in the whole fleet for 2014, 2015, 2016, 2017 and 2018**.**

LOA	< 6					6 - 12 m					12 - 18 m					18 - 24 m					24 - 40 m				
Representative year	2014	2015	2016	2017	2018	2013	2014	2015	2016	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Inactive vessels	307	278	241	226	249	583	487	463	349	400	9	7	6	9	9	2	3	2	1	2	0	0	0	0	0
Total number	688	691	655	660	662	1 225	1 184	1 160	1 128	1 100	61	64	67	64	66	19	19	17	17	18	12	12	12	11	11

Figure 8. Chart of the inactive vessels throughout the years.

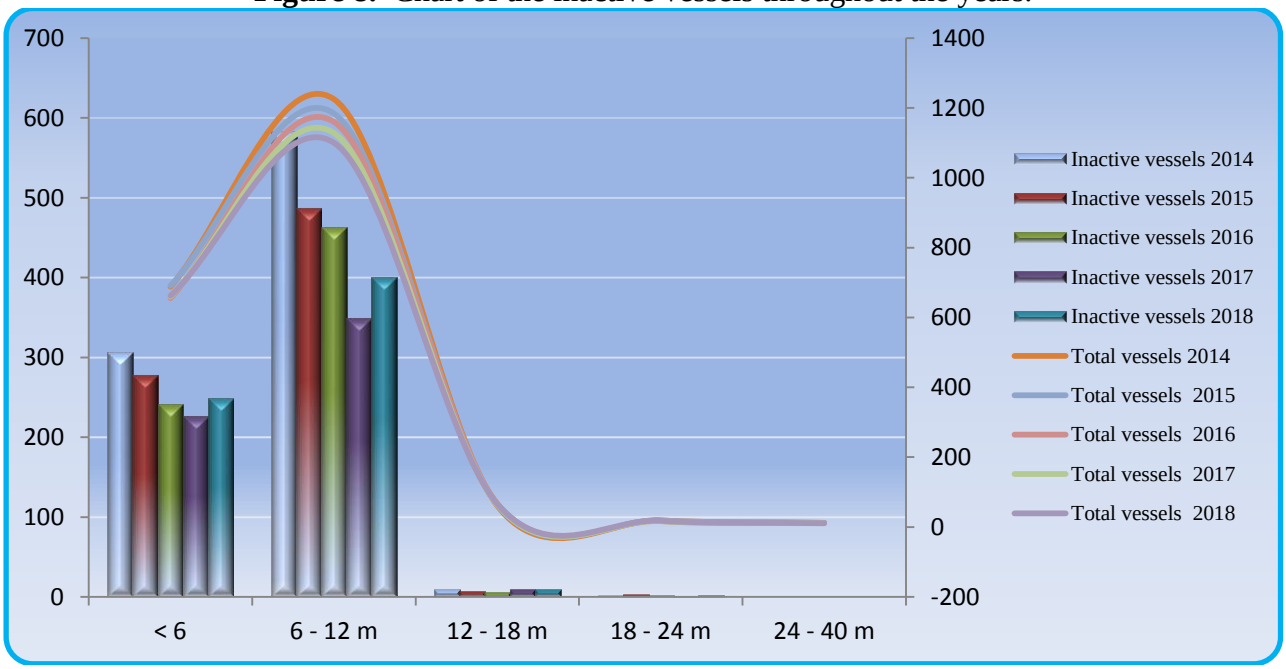


Figure 8 shows the ratio between inactive fishing vessels and total number of fishing vessels in each fishing segment (LOA). As it is visible from the above shown chart, the percentage of inactive vessels, which represents the unused capacity, in the segments under 12 m (95.0 % from the Bulgarian fishing fleet), in 2018, is still high. The main reasons for this figures are seasonable nature of fisheries, low return on funds, repair activities etc.

Table 15 summarizes the technical indicator information for the 2014-2018 periods, calculated as the ratio of the current effort to the observed maximum effort. The observed maximum effort is calculated on the basis of the maximum days spent by a ship in the relevant segment. This calculation option is preferred over the use of the theoretical number of days at sea, due to the

fact, that no fixed areas exist in the Black Sea, where a total number of days at sea is fixed that a particular vessel may be present in, using a define gear or targeting a stock. For this reason, we believe that, in the absence of such restrictions, fishing vessels with similar characteristics may spend the same number of days at sea. Another reason for choosing the maximum number of days at sea is the possibility of comparability of data from previous years.

Considering biodiversity as target species related to the economic activity in all segments of the Bulgarian fishing fleet, it should be taken into account that this also reflects on the variations of the fishing gear used for the catches. This gives its reflection in the smaller number of vessels in the segmentation so represented. There is also a policy to promote the use of gentle passive fishing gear, with imposed restrictions on the mesh size of the nets, as well as the setting of minimum size ranges, for the purpose of conservation the fish stocks and biodiversity. This, in turn, should be taken into account for the segments, in which imbalance is observed.

A large number of the fishing vessels during the summer season are directed to the performing of tourist services.

Table 15. Technical indicator.

Métier	Vessel length	No of vessels 2014	No of vessels 2015	No of vessels 2016	No of vessels 2017	No of vessels 2018	Technical indicator 1 – Current/Maximum effort ratio									
							GT/Days 2014	GT/Days 2015	GT/Days 2016	GT/Days 2017	GT/Days 2018	kW/Days 2014	kW/Days 2015	kW/Days 2016	kW/Days 2017	kW/Days 2018
DFN	VL0006	276	297	304	260	304	0.10	0.11	0.10	0.08	**0.10**	0.08	0.09	0.08	0.07	**0.10**
PS	VL0006	19	18	19	12	12	0.25	0.19	0.20	0.31	**0.29**	0.06	0.05	0.01	0.14	**0.15**
PMP	VL0006	39	51	53	82	80	0.26	0.21	0.24	0.27	**0.21**	0.21	0.14	0.09	0.22	**0.16**
FPO	VL0006	7	7	6	4	2	0.36	0.31	0.41	*	*	0.25	0.13	0.05	*	*
HOK	VL0006	31	33	26	50	12	0.31	0.22	0.38	0.24	**0.50**	0.31	0.20	0.33	0.23	**0.40**
PGP	VL0006	12	8	7	26	7	0.29	0.34	0.29	0.19	**0.20**	0.20	0.24	0.27	0.17	**0.06**
Total number		**384**	**414**	**415**	**434**	**417**	**0.26**	**0.23**	**0.27**	**0.22**	**0.26**	**0.19**	**0.14**	**0.14**	**0.16**	**0.17**
DFN	VL0612	396	442	430	400	457	0.10	0.10	0.07	0.08	**0.07**	0.09	0.10	0.07	0.08	**0.07**
PS	VL0612	8	10	6	3	4	0.37	0.18	0.39	*	*	0.22	0.14	0.05	*	*
FPO	VL0612	34	39	42	38	34	0.21	0.20	0.28	0.19	**0.25**	0.21	0.19	0.35	0.18	**0.22**
HOK	VL0612	58	57	49	97	26	0.14	0.13	0.08	0.09	**0.36**	0.14	0.13	0.08	0.09	**0.36**
PGP	VL0612	13	11	13	38	12	0.37	0.30	0.34	0.21	**0.23**	0.37	0.30	0.32	0.21	**0.23**
PMP	VL0612	130	135	154	195	164	0.18	0.15	0.24	0.20	**0.21**	0.18	0.15	0.23	0.19	**0.21**
TM	VL0612	5	5	6	6	4	*	*	0.74	0.55	*	*	*	0.74	0.55	*
TBB	VL0612	1	6	3	2	3	*	0.53	*	*	*	*	0.53	*	*	*
Total number		**645**	**705**	**703**	**779**	**704**	**0.23**	**0.23**	**0.29**	**0.22**	**0.22**	**0.20**	**0.22**	**0.20**	**0.22**	**0.22**
DFN	VL1218	10	10	7	10	7	0.23	0.35	0.49	0.41	**0.34**	0.23	0.35	0.49	0.41	**0.34**
PGP	VL1218	3	-	2	-	2	*	-	*	-	*	*	-	*	-	*
PMP	VL1218	28	22	14	21	16	0.56	0.60	0.76	0.62	**0.61**	0.56	0.60	0.76	0.62	**0.61**
TBB	VL1218	-	3	4	6	6	-	*	*	0.67	**0.70**	-	*	*	0.67	**0.70**
HOK	VL1218	-	-	1	1	-	-	-	*	*	-	-	-	*	*	-
TM	VL1218	11	22	33	17	26	0.36	0.40	0.57	0.62	**0.44**	0.36	0.40	0.57	0.62	**0.44**
Total number		**52**	**57**	**61**	**55**	**57**	**0.38**	**0.45**	**0.61**	**0.58**	**0.52**	**0.38**	**0.45**	**0.61**	**0.58**	**0.52**
DFN	VL1824	3	2	1	2	-	*	*	*	*	-	*	*	*	*	-
PS	VL1824	-	-	-	1	-	-	-	-	*	-	-	-	-	*	-
PMP	VL1824	10	5	4	4	3	0.77	*	*	*	*	0.77	*	*	*	*
TBB	VL1824	-	2	1	1	2	-	*	*	*	*	-	*	*	*	*
TM	VL1824	4	7	9	8	11	*	0.65	0.63	0.62	**0.54**	*	0.65	0.63	0.62	**0.54**
Total number		**17**	**16**	**15**	**16**	**16**	**0.77**	**0.65**	**0.63**	**0.62**	**0.54**	**0.77**	**0.65**	**0.63**	**0.62**	**0.54**
TM	VL2440	11	12	12	11	10	0.72	0.71	0.68	0.72	**0.74**	0.72	0.71	0.68	0.72	**0.74**
PMP	VL2440	1	-	-	-	1	*	-	-	-	*	*	-	-	-	*
Total number		**12**	**12**	**12**	**11**	**11**	**0.72**	**0.71**	**0.68**	**0.72**	**0.74**	**0.72**	**0.71**	**0.68**	**0.72**	**0.74**

* The segments with * are with less than 5 vessels and their data are not included due to the unrepresentativeness of the sample

F.2. Economic indicators

The data used for the calculation of economic indicators is from questionnaires for economic statistics in 2017 and 2018 collected for the National Programme for the collection, management and use of fisheries data under the Data Collection Framework (DCF) pursuant to Art. 18f. (9) of the Fisheries and Aquaculture Act. Economic variables were calculated for each segment.

F.2.1. Return on investment (ROI)

ROI is an indicator, which shows the return rate of the investments, made during the year. In 2017, the highest values of the indicator were in PMP 0612, DFN 1218 and PMP 1218 segments, but there was a significant decrease in the segments PGP 0006 and DFN 1218. Values of ROI for

2018 show that the most profitable was the PMP 0006 segment, followed by segment PMP 0612 and TM 2440.

Table 16. Return on investment (ROI)

Fleet segment	Income from landings + other income	Crew costs + unpaid labour costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs	Net profit	Fleet capital asset value (vessel replacement value + estimated value of fishing rights)	ROI	ROI- risk free long term interest rate[1]
Values for 2017 (€'000)						
DFN 0006	58.61	96.20	-74.80	678.49	-11.03%	-14.60%
PS 0006	5.13	3.79	-1.92	15.52	-12.35%	-15.92%
FPO 0006*	0.00	0.00	0.00	0.00		
HOK 0006	4.95	12.43	-15.69	126.67	-12.39%	-15.96%
PGP 0006	9.33	3.56	1.53	59.06	2.60%	-0.97%
PMP 0006	436.37	430.01	-12.38	222.42	-5.57%	-9.14%
DFN 0612	234.51	286.07	-142.38	2099.43	-6.78%	-10.35%
PS 0612*	0.00	0.00	0.00	0.00		
FPO 0612	66.87	76.79	-20.74	274.86	-7.55%	-11.12%
HOK 0612	17.20	45.60	-42.45	394.82	-10.75%	-14.32%
PGP 0612	4.81	6.17	-4.36	134.74	-3.23%	-6.80%
PMP 0612	1121.07	506.32	550.75	1256.34	43.84%	40.27%
TBB 0612*	0.00	0.00	0.00	0.00		
TM 0612	39.47	35.17	-3.97	215.04	-1.85%	-5.42%
DFN 1218	154.54	111.27	39.47	594.10	6.64%	3.07%
HOK 1218*	0.00	0.00	0.00	0.00		
PMP 1218	579.07	432.36	110.01	1777.46	6.19%	2.62%
TBB 1218	116.42	74.12	8.65	327.52	2.64%	-0.93%
TM 1218	449.38	344.58	52.18	1484.20	3.52%	-0.05%
PS 1824*	0.00	0.00	0.00	0.00		
DFN 1824*	0.00	0.00	0.00	0.00		
PMP 1824*	0.00	0.00	0.00	0.00		
TBB 1824*	0.00	0.00	0.00	0.00		
TM 1824	363.08	280.04	43.35	987.38	4.39%	0.82%
TM 2440	828.67	636.45	127.65	2278.35	5.60%	2.03%
Fleet segment	**Income from landings + other income**	**Crew costs + unpaid labour costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs**	**Net profit**	**Fleet capital asset value (vessel replacement value + estimated value of fishing rights)**	**ROI**	**ROI- risk free long term interest rate[2]**

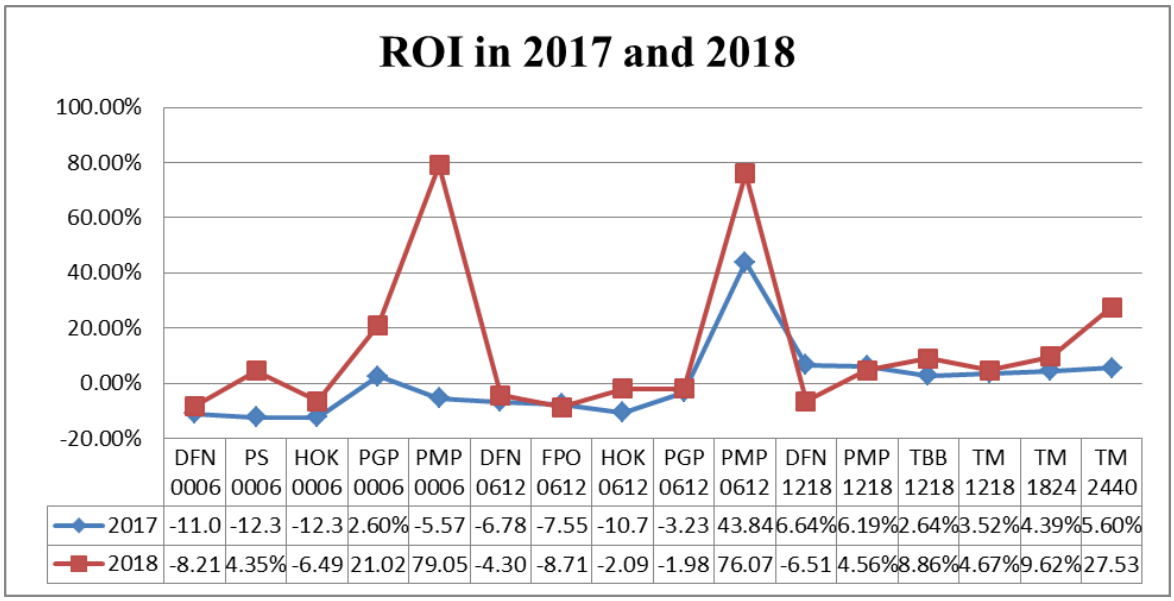
Values for 2018 (€'000)							
DFN 0006	55.87	99.88	-55.81	679.81	-8.21%	-11.16%
PS 0006	4.14	3.16	0.54	12.46	4.35%	1.40%
FPO 0006*	0.00	0.00	0.00	0.00		
HOK 0006	1.34	2.96	-1.94	29.94	-6.49%	-9.44%
PGP 0006	7.32	2.07	4.95	23.56	21.02%	18.07%
PMP 0006	380.05	185.26	182.98	231.48	79.05%	76.10%
DFN 0612	212.31	270.63	-96.96	2256.38	-4.30%	-7.25%
PS 0612*	0.00	0.00	0.00	0.00		
FPO 0612	61.24	86.59	-27.18	312.26	-8.71%	-11.66%
HOK 0612	4.33	6.93	-3.36	160.62	-2.09%	-5.04%
PGP 0612	13.93	16.27	-2.42	122.03	-1.98%	-4.93%
PMP 0612	914.33	303.79	602.95	792.64	76.07%	73.12%
TBB 0612*	0.00	0.00	0.00	0.00		
TM 0612*	0.00	0.00	0.00	0.00		
DFN 1218	22.44	49.70	-28.33	434.94	-6.51%	-9.46%
PGP 1218*	0.00	0.00	0.00	0.00		
PMP 1218	421.08	357.72	38.39	842.38	4.56%	1.61%
TBB 1218	172.52	114.60	50.77	572.94	8.86%	5.91%
TM 1218	736.45	592.48	90.72	1941.90	4.67%	1.72%
PMP 1824*	0.00	0.00	0.00	0.00		
TBB 1824*	0.00	0.00	0.00	0.00		
TM 1824	503.50	351.08	132.65	1379.24	9.62%	6.67%
PMP 2440*	0.00	0.00	0.00	0.00		
TM 2440	1158.50	646.88	484.32	1759.34	27.53%	24.58%

* Segments with * are equal or less than 5 vessels and the data is excluded because of confidentiality.

Data on direct subsidies are excluded from the calculation.

[1] average risk-free long-term interest rate for Bulgaria for the period 2011-2016 (source: European Central Bank) – 3.57% is used for the calculation of the indicator for 2017.

[2] average risk-free long-term interest rate for Bulgaria for the period 2012-2017 (source: European Central Bank) – 2.95% is used for the calculation of the indicator for 2018.



	DFN 0006	PS 0006	HOK 0006	PGP 0006	PMP 0006	DFN 0612	FPO 0612	HOK 0612	PGP 0612	PMP 0612	DFN 1218	PMP 1218	TBB 1218	TM 1218	TM 1824	TM 2440
2017	-11.0	-12.3	-12.3	2.60%	-5.57	-6.78	-7.55	-10.7	-3.23	43.84	6.64%	6.19%	2.64%	3.52%	4.39%	5.60%
2018	-8.21	4.35%	-6.49	21.02	79.05	-4.30	-8.71	-2.09	-1.98	76.07	-6.51	4.56%	8.86%	4.67%	9.62%	27.53

Figure 9. Return on investment (ROI) for 2017 and 2018.

Figure 9 shows the ROI values for 2017 and 2018. All the values are calculated in accordance with the 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 (COM (2014) 545 final). Data on subsidies were excluded from the calculation.

There is significant increase of the ROI indicator for the segments PMP 0006, PMP 0612 and TM 2440.

In both segments with the largest number of fishing vessels (DFN 0006 and DFN 0612), the rate of return on investment increased a bit, but remains negative value. The ROI values for the other segments show overcapitalisation, which in the long run also makes them economically ineffective.

F.2.2. Ratio between current revenue and break-even revenue (CR/BER).

For 2017-2018 the indicator CR/BER is calculated in the short and long term (**Table 17**). In the short term, in 2017 the value of the indicator in 8 of the segments representing 23% of the active fleet of the Republic of Bulgaria has a indicator value greater than 1. In these segments, sufficient income is generated to cover variable, fixed and capital costs and are considered profitable, with potential undercapitalisation. For 3 segments (PS 0006, PMP 0006 and TM 0612), this ratio is positive but below 1. In these segments, insufficient income is generated to cover all costs and categorized as non-profitable with a potential overcapitalisation. In view of the long-term profitability of the segments, the calculation also includes the potential loss of benefits - calculated as a product of the value of the capital assets and the average interest rate on long-term low risk investments for Bulgaria for the period 2011-2016. They are added to the fixed costs. The lowest value of the CR/BER ratio in 2017 is the HOK 0612 segment, followed by DFN 0006. These results show that investing in these segments is with high risk in the long-term.

The 2018 results show that 9 of the segments are profitable and able to cover their costs. The value of the CR/BER indicator for these segments is higher than 1. The highest indicator value is

observed for segment PMP 0612. Calculations are also made for the CR/BER ratio for 2018, with loss of benefits included which is calculated as a product of the value of the capital assets and the average interest rate on long-term low risk investments for Bulgaria for the period 2012-2017. In long-term, the indicator has a positive value of over 1 in 9 of the segments, including 27% (332 vessels) of the fleet and with a negative value for the other 7 segments, which are unprofitable in short-term and in long-term.

Table 17. Ratio between current revenue and break-even revenue 2017 and 2018 (€'000)

Fleet segment	**Current revenue (CR)** = Income from landings + other income	**Fixed costs** = Non variable costs + depreciation	**Fixed costs**[1] = Non variable costs + depreciation + opportunity cost of capital	**Variable costs** = Crew costs + Unpaid labour costs + Energy costs + Repair & maintenance costs + Other variable costs	**BER** = (Fixed Costs) / (1-[Variable costs / Current Revenue])	**CR / BER**	**CR / BER**[1]
DFN 0006	58.61	37.22	61.44	96.20	-95.80	-1.01	-0.61
PS 0006	5.13	3.26	3.81	3.79	14.58	0.41	0.35
FPO 0006 *	0.00	0.00	0.00	0.00	0.00		
HOK 0006	4.95	8.21	12.74	12.43	-8.44	-0.91	-0.59
PGP 0006	9.33	4.24	6.35	3.56	10.26	1.36	0.91
PMP 0006	436.37	18.74	26.68	430.01	1831.74	0.34	0.24
DFN 0612	234.51	90.83	165.78	286.07	-754.06	-0.57	-0.31
PS 0612 *	0.00	0.00	0.00	0.00	0.00		
FPO 0612	66.87	10.81	20.62	76.79	-138.91	-0.92	-0.48
HOK 0612	17.20	14.05	28.15	45.60	-17.05	-2.02	-1.01
PGP 0612	4.81	3.00	7.81	6.17	-27.67	-0.45	-0.17
PMP 0612	1121.07	64.00	108.85	506.32	198.51	9.61	5.65
TBB 0612*	0.00	0.00	0.00	0.00	0.00		
TM 0612	39.47	8.27	15.94	35.17	146.51	0.52	0.27
DFN 1218	154.54	3.81	25.02	111.27	89.34	11.36	1.73
HOK 1218*	0.00	0.00	0.00	0.00	0.00		
PMP 1218	579.07	36.70	100.15	432.36	395.31	4.00	1.46
TBB 1218	116.42	33.65	45.34	74.12	124.79	1.26	0.93
TM 1218	449.38	52.62	105.60	344.58	452.85	1.99	0.99
PS 18-24*	0.00	0.00	0.00	0.00	0.00		
DFN 1824*	0.00	0.00	0.00	0.00	0.00		
PMP 1824*	0.00	0.00	0.00	0.00	0.00		
TBB 1824*	0.00	0.00	0.00	0.00	0.00		
TM 1824	363.08	39.69	74.94	280.04	327.65	2.09	1.11
TM 2440	828.67	64.57	145.91	636.45	629.02	2.98	1.32

Fleet segment	**Current revenue (CR)** = Income from landings + other income	**Fixed costs** = Non variable costs + depreciation	**Fixed costs**[1] = Non variable costs + depreciation + opportunity cost of capital	**Variable costs** = Crew costs + Unpaid labour costs + Energy costs + Repair & maintenance costs + Other variable costs	**BER** = (Fixed Costs) / (1-[Variable costs / Current Revenue])	**CR / BER**	**CR / BER**[1]
DFN 0006	55.87	32.04	52.09	79.63	-75.30	-0.74	-0.46
PS 0006	4.14	0.85	1.22	2.75	2.53	1.64	1.14
FPO 0006*	0.00	0.00	0.00	0.00	0.00		
HOK 0006	1.34	1.35	2.24	1.94	-3.08	-0.44	0.00
PGP 0006	7.32	0.76	1.45	1.61	0.97	7.56	3.94
PMP 0006	380.05	24.62	31.45	172.45	45.08	8.43	6.60
DFN 0612	212.31	88.07	154.63	221.20	-2103.54	-0.10	-0.06
PS 0612*	0.00	0.00	0.00	0.00	0.00		
FPO 0612	61.24	11.49	20.70	76.94	-44.84	-1.37	0.00
HOK 0612	4.33	2.66	7.40	5.03	-16.39	-0.26	-0.09
PGP 0612	13.93	1.44	5.04	14.91	-20.38	-0.68	-0.20
PMP 0612	914.33	27.47	50.85	283.91	39.84	22.95	12.40
TBB 0612*	0.00	0.00	0.00	0.00	0.00		
TM 0612*	0.00	0.00	0.00	0.00	0.00		
DFN 1218	22.44	8.58	21.41	42.19	-9.75	-2.30	-0.92
PGP 1218*	0.00	0.00	0.00	0.00	0.00		
PMP 1218	421.08	31.01	55.86	351.69	188.14	2.24	1.24
TBB 1218	172.52	7.51	24.41	114.24	22.23	7.76	2.39
TM 1218	736.45	69.46	126.75	576.27	319.37	2.31	1.26
PMP 1824*	0.00	0.00	0.00	0.00	0.00		
TBB 1824*	0.00	0.00	0.00	0.00	0.00		
TM 1824	503.50	33.23	73.92	337.62	100.87	4.99	2.24
PMP 2440*	0.00	0.00	0.00	0.00	0.00		
TM 2440	1158.50	33.77	85.67	640.42	75.51	15.34	6.05

Data on direct subsidies are excluded from the calculation.

[1] adding opportunity costs to fixed costs.

* Segments with * are equal or less than 5 vessels and the data is excluded because of confidentiality.

Indicator values for CR / BER for the period 2017-2018 are presented in **Table 18.**

Table 18. Ratio between current revenue and break-even revenue (CR/BER) for 2017 – 2018

Ratio between current revenue and break-even revenue (CR/BER) for 2017																
	DFN 0006	PS 0006	HOK 0006	PGP 0006	PMP 0006	DFN 0612	FPO 0612	HOK 0612	PGP 0612	PMP 0612	DFN 1218	PMP 1218	TBB 1218	TM 1218	TM 1824	TM 2440
CR/BER	-1.01	0.41	-0.91	1.36	0.34	-0.57	-0.92	-2.02	-0.45	9.61	11.36	4.00	1.26	1.99	2.09	2.98
CR/BER[1]	-0.61	0.35	-0.59	0.91	0.24	-0.31	-0.48	-1.01	-0.17	5.65	1.73	1.46	0.93	0.99	1.11	1.32
Ratio between current revenue and break-even revenue (CR/BER) for 2018																
	DFN 0006	PS 0006	HOK 0006	PGP 0006	PMP 0006	DFN 0612	FPO 0612	HOK 0612	PGP 0612	PMP 0612	DFN 1218	PMP 1218	TBB 1218	TM 1218	TM 1824	TM 2440
CR/BER	-0.74	1.64	-0.44	7.56	8.43	-0.10	-1.37	-0.26	-0.68	22.95	-2.30	2.24	7.76	2.31	4.99	15.34
CR/BER[1]	-0.46	1.14	0.00	3.94	6.60	-0.06	0.00	-0.09	-0.20	12.40	-0.92	1.24	2.39	1.26	2.24	6.05

Table 19. Direct subsidies for 2014, 2015, 2016, 2017 and 2018 (€'000)

Direct subsidies for 2014, 2015, 2016, 2017 and 2018 (€'000).					
Fleet segment	**2014**	**2015**	**2016**	**2017**	**2018**
DFN 0006	0,1	0	0	0	0
PGP 0006	0,26	0	0	0	0
DFN 0612	0	0	0	0	18,28
PMP 0612	0,26	0	0	0	0
PGP 1218	13	0	0	0	0

F.3. Biological indicators

F.3.1. Sustainable harvest indicator

The Bulgarian marine fisheries are performed in the Black Sea. From the catches of fish, only the turbot (*Psetta maxima*) and sprat (*Sprattus sprattus*) are species under quotas and are included in the National Programme for the collection, management and use of fisheries data under the Data Collection Framework (DCF).

Four research surveys were conducted in the Bulgarian aquatory in Black sea – two demersal and two pelagic during 2018.

The biological indicator Sustainable harvest indicator reflects the magnitude which a fleet segment depends on reserves object to overfishing. In the current context "overfished catch" means that fishing of reserve exceeds the value Fmsy, i.e. percentage of death from fishing corresponds to maximum sustainable catch. The calculation of the Sustainable indicator is done according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries (COM (2014) 545 final) and landings data reported under DCF. F and Fmsy data was taken from the report for Black Sea assessments (STECF 17-11) for 2016 and 2017. The results for the estimated value of the Sustainable harvest indicator are shown in **Table 20**. For 20 of the segments, the value of the indicator for two consecutive years is above 1, which may be a sign of imbalance. These segments realized income, relying on fishing opportunities which are structurally set at higher levels than the levels of exploitation corresponding to the maximum sustainable catch. In 9 of these 20 segments there is an increase in the value of the indicator for 2017, in 9 segments, there is a decrease and in the last 2 segments the value of the indicator is absolutely the same in 2016 and 2017 (this is possible because both

segments have catches of only 1 species and for the propose of this calculation the same F and Fmsy were used for both years). Only for 1 of the segments - TM 2440 the value of the indicator is below 1 for both years, indicating that currently, the segment is balanced. There were 3 segments for which the indicator was over 1 in 2016 but below 1 in 2017 (FPO 0612, PS 0006 and TM 1824).

Table 20. Indicator for sustainable harvest for 2016 and 2017

Segment	Indicator for sustainable harvest for 2016	for sustainable harvest for 2017
DFN 0006	1.588	1.651
DFN 0612	2.143	2.664
DFN 1218	2.003	2.738
DFN 1824	1.821	4.363
FPO 0006	1.435	1.520
FPO 0612	1.064	0.963
HOK 0006	7.961	5.934
HOK 0612	7.251	8.883
HOK 1218	11.750	11.750
PGP 0006	1.158	1.601
PGP 0612	2.720	7.983
PMP 0006	1.491	1.569
PMP 0612	2.207	1.829
PMP 1218	3.434	3.084
PMP 1824	3.280	2.019
PS 0006	1.054	0.915
PS 0612	1.533	1.282
TBB 0612	3.731	3.731
TBB 1218	5.203	3.513
TBB 1824	1.639	1.565
TM 0612	2.039	2.007
TM 1218	1.832	1.294
TM 1824	1.102	0.916
TM 2440	0.890	0.869

F.3.2. Stocks-at-risk indicator

The indicator is not calculated because the catches in 2018 did not exceed 10% of the biomass from the research surveys of target species. The landings of turbot in 2018 were 55.45 tonnes (reported data to DCF) and the established biomass was 958 tonnes. The landings of sprat in 2018 were 3187.8 tonnes and based on the scientific conclusions from working groups responsible for the Black sea stock assessments the European sprat *(Sprattus sprattus*) was the only stock sustainably exploited.

SECTION G.

Balance sheet analysis between fishing capacity and fishing opportunities

The analysis is prepared on a basis of aggregate assessment and comparison of the technical, economical and biological indicators for 2014, 2015, 2016, 2017 and 2018. Should be considered that the data for biological indicator for 2018 will be available in 2020 year, because of which in determining a trend in the development of segments are taken only available indicators for 2018. This is a possible change in some segments in the next periods.

Tables(batch) 21

Indicator	Definition	Level 1 "Green"	"Level 2 „Yellow"	Level 3 "Red"
Technical	The private between the average and the maximum effort per vessel	>0.9	0.7-0.9	<0.7
Biological 1	$F_{estimated}/F_{target}$	<1	>1	>>1
Biological 2	Catch/Biomass	As defined By types / stocks	As defined By types / stocks	As defined By types / stocks
Economical 1	ROI (Return on investment)	ROI>target point	0 < ROI < Target point	ROI<0
Economical 2	CR/BER Current earnings/Equilibrium point	CR/BER >1	CR/BER Approximately =1	CR/BER <1

	Métier		Technical indicator	Biological indicators		Economic indicators		Conclusion
				Bio 1	Bio 2	ROI 1	CR/BER 2	
2014	DFN	VL0006						Level 3
	PS	VL0006						Level 3
	PMP	VL0006						Level 3
	FPO	VL0006						Level 3
	HOK	VL0006						Level 3
	PGP	VL0006						Level 3
	DFN	VL0612						Level 3
	PS	VL0612						Level 3
	FPO	VL0612						Level 3
	HOK	VL0612						Level 3
	PGP	VL0612						Level 3
	PMP	VL0612						Level 3
	DFN	VL1218						Level 3
	PMP	VL1218						Level 3
	TM	VL1218						Level 3
	PMP	VL1824						Level 3
	TM	VL2440						Level 2

	Métier		Technical indicator	Biological indicators		Economic indicators		Conclusion
				Bio 1	Bio 2	ROI 1	CR/BER 2	
2015	DFN	VL0006						Level 3
	PS	VL0006						Level 3
	PMP	VL0006						Level 3
	FPO	VL0006						Level 3
	HOK	VL0006						Level 3
	PGP	VL0006						Level 3
	DFN	VL0612						Level 3
	PS	VL0612						Level 3
	FPO	VL0612						Level 3
	HOK	VL0612						Level 3
	PGP	VL0612						Level 3
	PMP	VL0612						Level 3
	TBB	VL0612						Level 3
	DFN	VL1218						Level 3
	PMP	VL1218						Level 3
	TM	VL1218						Level 2
	TM	VL1824						Level 1
	TM	VL2440						Level 1

2016	Métier		Technical indicator	Biological indicators		Economic indicators		Conclusion
				Bio 1	Bio 2	ROI 1	CR/BER 2	
	DFN	VL0006						Level 2
	PS	VL0006						Level 2
	PMP	VL0006						Level 3
	FPO	VL0006						Level 3
	HOK	VL0006						Level 2
	PGP	VL0006						Level 2
	DFN	VL0612						Level 3
	PS	VL0612						Level 2
	FPO	VL0612						Level 2
	HOK	VL0612						Level 2
	PGP	VL0612						Level 3
	PMP	VL0612						Level 2
	TM	VL0612						Level 2
	DFN	VL1218						Level 2
	PMP	VL1218						Level 2
	TM	VL1218						Level 2
	TM	VL1824						Level 2
	TM	VL2440						Level 1

2017	Métier		Technical indicator	Biological indicators		Economic indicators		Conclusion
				Bio 1	Bio 2	ROI 1	CR/BER 2	
	DFN	VL0006						
	PS	VL0006						
	PMP	VL0006						
	HOK	VL0006						
	PGP	VL0006						
	DFN	VL0612						
	FPO	VL0612						
	HOK	VL0612						
	PGP	VL0612						
	PMP	VL0612						
	TM	VL0612						
	DFN	VL1218						
	PMP	VL1218						
	TBB	VL1218						
	TM	VL1218						
	TM	VL1824						
	TM	VL2440						

2018	Métier		Technical indicator	Biological indicators		Economic indicators		Conclusion
				Bio 1	Bio 2	ROI 1	CR/BER 2	
	DFN	VL0006						
	PS	VL0006						
	PMP	VL0006						
	HOK	VL0006						
	PGP	VL0006						
	DFN	VL0612						
	FPO	VL0612						
	HOK	VL0612						
	PGP	VL0612						
	PMP	VL0612						
	DFN	VL1218						
	PMP	VL1218						
	TBB	VL1218						
	TM	VL1218						
	TM	VL1824						
	TM	VL2440						

G.1. Segment from 0 to 6 meters

In 2018 the total number of fishing vessels in this segment is 662 and keeps the previous 2017 levels. In 2018 continues a visible positive trend of decrease of the number of the inactive vessels.

According to the segmentation used in the data collection framework (DCF) for active vessels with a length of 0 to 6 m and in 2017 the following segments are retained: DFN, PS, PMP, FPO, HOK and PGP. There is an increase in the number of vessels in the PMP polyvalent segment (vessels which have fished with several fishing gear and none of them has used more than 50% of fishing time). Also, there is an increase of the fishing vessels in the DFN segment(nets) compared to the previous year. The greatest change is in the HOK segment of 50 fishing vessels in 2017 to only 12 in the current 2018. Overall, the tendency for the selective use of passive fishing techniques is preserved.

G.1.1. Segment DFN/VL 0006

Approximately 73% of active vessels with a length of 0 to 6 meters are in this segment, indicating that gillnets are the most usable fishing gear in the case of small-scale fishing, but have to be counted and drop by as much as 13% of last year's levels.

The technical indicator figures calculated for the period 2013-2018, indicate that the usability of fishing vessels in this segment is extremely low or there is a technical overcapacity here. In terms of overall economic performance in the segment, there is an improvement in 2014 and 2015 compared to 2013. In 2017 and 2018 there is a decline of the indicators values. Based on this, it can be judged that the segment is profitable in the short term, but not in the long run. The values calculated for the Sustainable Harvest Indicator by the segment remain high and in 2016 and 2017, respectively, the segment has a significant impact on the stock. The stocks-at-risk indicator is not calculated, as catches do not exceed 10% of the biomass found for the target species (turbot and sprat) as a result of the scientific surveys. The overall analysis shows that the segment DFN / VL 0006 remains unbalanced in 2018.

G.1.2. Segment PS/VL 0006

The number of fishing vessels in this segment varies between 12 and 19 for the period 2014-2018 as the smallest (12 vessels in total) preserves during 2017 nad 2018. The calculations of the technical indicator indicate that there is no good usability of fishing vessels in this segment as well. In terms of the economic indicators, in 2018, there is an increase over previous years, with levels reaching their highest levels. In the case of the biological indicator, as in the case of the economic one, there is an improvement of the values compared to the previous years. Taking into account the positive values of two of the indicators, it can be concluded that the segment is balanced.

G.1.3. Segment PMP/VL 0006

In 2018 in the segment the high number of vessels reached in the previous 2017 retaines. The data of the technical indicator remain low and indicate the existence of overcapacity. Return on investment in the segment is markedly higher than the 2017 levels. By comparison, in 2017, they are -5.57% and in 2018 the values are already positive (79.05%). The ratio between current segment revenue and the break-even revenu during the period from 2014 to 2016 was negative until it reached a positive value in 2017. The positive trend is also maintained in 2018, with the values of the indicator already 6.60. In terms of the biological indicator, improvement is seen compared to 2016 and reach 1.569 in 2017. Given the improved performance over previous years, it can be concluded that the PMP / VL 0006 segment is balanced in terms of fishing capacity and fishing opportunities.

G.1.4. Segment FPO/VL 0006

In 2018, as in the previous years, a small number of vessels operated in the segment. Given this, no figures for 2013, 2017 and 2018 were provided for the calculated indicators due to the non-representativeness of the sample.

G.1.5. Segment HOK/VL 0006

The number of fishing vessels in this segment has decreased almost 4 times compared to the previous year 2017. The calculations of the technical indicator show that the segment increases the usability of the vessels. In terms of the return on investment, it is still negative in 2018, but has a positive trend of growth and reaching levels in previous years. The high values of the

biological indicator are retained in 2017. The overall assessment of the indicators shows that the segment is unbalanced.

G.1.6. Segment PGP/VL 0006

As in the HOK/VL 0006 segment, there is a significant reduction in the number of vessels in the segment. According to the data of the technical indicator, both in the previous years and in 2018 there is an imbalance and inefficient use of the fishing vessels. Return on investment rose significantly from 2.60% in 2017 to 21.02% in 2018. Growth is also seen in the other economic indicator. The biological indicator values for 2017 show a slight increase, but are still close to 1. Given the data presented, the segment remains unbalanced in terms of fishing capacity and fishing opportunities.

G.2. Segment from 6 to 12 meters

This segment accounts for approximately 60% of fishing vessels. In 2018, their number was 1,100 vessels, of which 704 were active. The percentage of inactive vessels compared to the total number in the segment remains high in 2018. According to the DCF segmentation for 6 to 12 m active vessels in 2018, the following segments are observed: DFN, PS, FPO, HOK, PGP, PMP, TM and TBB. The PS, TM and TBB segments are not included in the analysis, given the small number of vessels in.

G.2.1. Segment DFN/VL 0612

In the segment DFN/VL 0612, 65% of the active fishing vessels fall, featuring a length between 6 and 12 m., which is 14% more than the previous 2017. The values of the technical indicator indicate the existence of technical overcapacity and the substantial unusability of the fishing vessels in the segment. In 2018 there was a slight increase in economic indicators compared to 2017, reaching levels of 2016. Return on investment rose from -6.78% in 2017 to -4.30% in 2018. Growth is also seen in the ratio between current segment revenue and revenue at the break-even revenue, as the values are now approaching 0, but in 2018 the segment remains unprofitable. By preserving the negative values for the future, the segment can be considered economically ineffective and in the long run.
The low values for the economic and technical indicators, as well as the high values in the biological indicator, indicate that the segment DFN/VL 0612 is unbalanced.

G.2.2. Segment PMP/VL 0612

Approximately 23% of the active fishing vessels with a length of 6-12 m operate in this segment. Here too, the technical indicator values are low and indicate a lack of usability of the fleet. Return on investment marks a significant growth in 2018, reaching its highest values of 76.07%, making the segment the second most profitable segment in after segment PMP/VL 0006. According to the data computed for the ratio between current segment revenue and revenue at the break-even revenue, there is a significant increase in values in 2018 compared to 2017. This positive trend is expected to remain in the years to come. Biological indicator values are down from 2016, but still above the allowable thresholds. In general, the segment is in imbalance.

G.2.3. Segment FPO/VL 0612

With respect to the technical indicator data, the segment is in an imbalance. Indicator values are low, indicating the poor usability of fishing vessels. Economic indicators are negative for the period 2013-2015. In 2016, return on investment and CR/BER has reached positive values, but in 2017 and 2018 they again reach negative values. The segment remains economically inefficient in the short and long term. The positive trend to reduce the Sustainable Harvest Indicator values in this segment is also maintained in 2017, as the indicator reaches a value of 0.963. Currently, the segment is unbalanced.

G.2.4. Segment HOK/VL 0612

The calculations of the technical indicator have been significantly increased over the 2014-2017 period, but also for this segment indicate the inefficient use of fishing vessels. The data on economic indicators are heterogeneous for the monitored period. In 2016 return on investment has a positive value of 4.53%, but in 2017 it is negative (-10.75%). For 2018, the indicator values are higher than those of the previous 2017, but still remain negative (-2.09). An increase is also observed in the ratio between current segment revenue and break-even revenue. And in 2017 there was an increase in the values of the biological indicator. The segment is unstable and unbalanced in the short and long term.

G.2.5. Segment PGP/VL 0612

The usability of the vessels in this segment is low according to the calculations made. For economic indicators - return on investment and the ratio between current segment revenue and break-even revenue, the negative trend for values over the entire period of 2014-2018 remains. Sustainable Harvest Indicator values show a significant growth from 2.720 in 2016 to 7.983 in 2017, and remain above the allowable thresholds. The segment is unbalanced and economically ineffective.

G.3. Segment from 12 to 18 meters

In 2018, this segment includes a total of 66 fishing vessels, of which 57 are active. Thus, the percentage of inactive vessels is approximately 14%, meaning preserving the ratio from the previous 2017. According to the DCF segmentation of the active vessels with a length of 12 to 18 m in 2018, the following segments are observed: DFN, PMP, TM, TBB and PGP. The PGP segment cannot be analyzed due to the presence of only 2 vessels in.

G.3.1. Segment DFN/VL 1218

The values of the technical indicator again show the poor usability of the fishing vessels in the segment. The positive values for the return on investment for the period 2015-2017 are negative in 2018 (-6.51) The same trend is observed in the ratio between current segment revenue and revenue at the break-eveen revenue, as during 2015 , 2016 and 2017 the operators were able to cover their costs (CR/BER> 1), but in 2018 this is no longer the case. A negative trend is shown regarding the biological indicator values, which again exceed the permissible limits. In 2017 is noticed an increase to 2.738, against 2.003 in 2016. In view of this, as well as the low fleet usability in this segment, it can be concluded that there is an imbalance between fishing capacity

and fishing opportunities.

G.3.2. Segment PMP/VL 1218

The values of the technical indicator in this segment for 2018 show a presering of the usage of the fishing capacity over the previous years. The economic indicators show a slight decrease compared to 2017. The return on investment is lowed from 6.19% to 4.56%. The percentage of the indicator, reduced by the interest rate on long-term investments with low risk, remains positive in 2018. The ratios between the current segment revenue and the break-even revenue continue to remain pisitive in 2018. Operators were therefore able to generate enough income to cover their costs in 2018. While preserving these results in future periods it would also be beneficial to invest in the segment and also in the long term. The results of the Sustainable Harvest Indicator calculations show an increase in values from 3.434 in 2017 to 3.084 in 2018 above the allowable thresholds. The present data show that, for the long term, the segment is economically effective. Given the positive economic and technical indicators, as well as the observed decline in biological values, it can be concluded that the segment is balanced.

G.3.3. Segment TM/VL 1218

This segment also has a low technical indicator values. Return on investment as well as indicators of the ratio between current revenues remained positive in 2018, but there was a slight decrease compared to 2017. The values of the biological indicator for 2017 show that it retains relatively low values with a decrease to 1.294 compared to 1.832 in 2016. However, it can be reasonably assumed that there is an imbalance between fishing capacity and fishing opportunities for the segment.

G.3.4. Segment TBB/VL 1218

When reading the results of the indicators for this segment, only available data - those for 2017 and 2018 - were taken into account. The technical indicator shows relatively high figures. The return on investment indicator is positive for both years, with an increase of 2.64% to 8.86% in 2018. The ratio of current income to revenue at the break-even revenues also shows a positive trend. Biological indicator values are down in 2018 compared to 2017, but remain above allowable thresholds. In the short term, the segment is balanced.

G.4. Segment from 18 to 24 meters

The number of fishing vessels in the segment is decreased to 16 in 2018, compared to 2017. Some 2 of vessels have been inactive. According to the DCF segmentation, the following segments are registered for active vessels with a length of 18 to 24 meters: PMP, TBB and TM. Due to the small number of vessels in segments and the variations in fishing gear used, analysis can only be made for the TM segment.

G.4.1. Segment TM/VL 1824 meters

According to the technical indicator calculations, the usability of fishing vessels is low. Overall, this is due to frequent repairs due to the significantly high average age of the vessels. The

economic indicators values are positive. In 2018 return on investment was 9.62%, a significant increase from the level in 2017. The ratio between current segment revenue and the break-even revenue is over 1.0 in the observed period - 1.92 in 2016, 1.11 in 2017 and 2.24 in 2018. Thus, shipowners have generated enough income to cover their costs. For the biological indicator, the values also fall within the sustainable harvest indicator limits. On the basis of the data presented, it can be argued that the segment is balanced, but only in the short term. The segment will continue to be monitored with a view to achieving a sustainable balance between fishing capacity and fishing opportunities.

G.5. Segment over 24 meters

For the period 2017-2018, the number of fishing vessels in this segment is constant. There are also no vessels that have been inactive throughout the year. According to the DCF segmentation, two segments - TM and PMP are considered. The PMP segment will not be taken into account as it has a single fishing vessel and in the period 2015-2017 the segment does not exist.

G.5.1. Segment TM/VL 2440

In 2018, there was a slight increase in the technical indicator values, calculated on the basis of the observed maximum effort. By this indicator, the segment retained the values of the previous years. The economic indicators retain the positive, values as well as the sustainable harvest indicator. Based on this, it can be concluded that the segment is balanced. The segment will continue to be monitored with a view to achieving a sustainable balance between fishing capacity and fishing opportunities.

SECTION H.

Adaptation measures for fleet segments, where structural excess capacity is identified

H.1. Administrative measures in the applicable national legislation

With respect to inactive fishing vessels, EAFA continues to apply national legislation and, in particular, Art. 18c of the FAA, according to which there is a possibility of termination of the operation of the fishing license and of the certificates of fishing authorization, issued on the basis thereof, if for two consecutive years the vessel has not engaged in any fishing activity. Vessels which have been suspended on this ground are administrative withdrawn from the fishing vessel register and the released capacity remains in favor of the State and subsequently allocated to fishing vessels wishing to be entered in the Fleet Register. EAFA plans to continue implementing the national legislation in this direction in order to achieve a balance between fishing capacity and fishing opportunities. The implementation of this measure will be carried out annually.
At the present moment, a new regulation for the management of the fishing fleet is in its final phase.
The objectives of these administrative measures are to improve the management of the fishing fleet as well as to achieve better control over the exploitation of fishing capacity.

H.2. Added value, product quality and use of unwanted catches

On 13 April, 2018, the admission of project proposals under Union Priority 1 "Promotion of Environmentally Sustainable, Innovative, Competitive and Knowledge-Based Fisheries with Resource Efficiency" was launched by announcing a procedure through project selection BG14MFOP001-1.007 "Added value, product quality and use of unwanted catches".
The measure promotes investments that add value to fisheries products, in particular by allowing fishermen to process, market and direct sale of their own catches and innovative investments on board vessels, which increase the quality of fishery products.

H.3. Diversification and new forms of income.

On May 18, 2018, the admission of projects under Union Priority 1 "Promoting Environmentally Sustainable, Innovative, Competitive and Knowledge-Based Fishing, characterized by Resource Efficiency" was launched, Measure 1.1 "Diversification and New Forms of Income" ,with a call for proposals through project selection BG14MFOP001-1.001 "Diversification and New Forms of Income ". Through the implementation of the activities, foreseen in the measure, will allow the conservation and restoration of aquatic biodiversity and aquatic ecosystems; ensuring a balance between fishing capacity and available fishing opportunities for all unbalanced segments; improving the competitiveness and viability of enterprises in the fisheries sector, including the small-scale coastal fleet, and improving safety and working conditions.

H.4. Fishing ports, landing quays, fish markets and covered boatshelters.

On June 27, 2018, an admission procedure was launched through project selection BG14MFOP001-1.009 "Fishing ports, landing quays, fish markets and covered boatshelters ". The implementation of the measure will contribute to the specific objective of "Improving the competitiveness and viability of enterprises in the fisheries sector, including the small-scale coastal fleet, and improving safety and working conditions".

H.5. Marketing measures, sector "Establishing of Producer Organizations".

On November 6, 2018, an admission procedure was launched for projects under Measure 5.3 "Marketing Measures", "Establishing of Producer Organizations"
Through the implementation of the procedures through projects selection BG14MFOP001-5.006 "Marketing Measures", Sector "Establishing of Producer Organizations", Measure 5.3 "Marketing Measures" will contribute to the improvement of the market organization of the products from fishing and aquaculture.

H.6. Plans for production and marketing.

On November 9, 2018, an admission procedure was launched for project selection through Project Selection Procedure BG14MFOP001-5.001 "Production and Marketing Plans", Measure 5.1 aims to achieve the specific objective 1 "Improvement of Market Organization for Fishery Products and Aquaculture" to Union Priority 5 "Promotion of marketing and processing".
Assistance under this procedure is aimed at supporting the preparation and implementation of the production and marketing plans of producer organizations and associations of producer organizations in accordance with the provisions and in particular:
- improving the conditions for the marketing of fishery and aquaculture products of their

members;
- improving the economic returns;
- stabilizing markets;
- contributing to food supply and promoting the high quality food and safety standards, while contributing to employment in coastal and vilage areas;
- reducing the environmental impact of the fishing.

H.7. Conservation and restoration of marine biodiversity and ecosystems and compensation regimes within sustainable fisheries.

On 13 December, 2018, a project admission procedure was launched through project selection BG14MFOP001-1.006 "Conservation and Restoration of Marine Biodiversity and Ecosystems and Compensation Regimes within Sustainable Fisheries" under Priority 1 of the Union "Promoting environmental sustainability, innovative, competitive and knowledge-based fisheries characterized by resource efficiency "
The implementation of the actions of the procedure aims to promote environmentally sustainable, innovative, competitive and knowledge-based fisheries, characterized by resource efficiency.