

**Republic of Croatia
Ministry of Agriculture
Directorate of Fisheries**



Annual report on balance between fishing capacity and fishing opportunities for 2016

pursuant to Article 22 of the *Regulation (EU) No 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 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)*

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TABLE OF CONTENT

<u>1. SECTION A: DESCRIPTION OF THE FISHING FLEET SEGMENTS IN RELATION TO FISHERIES.....</u>	<u>3</u>
1.1 DESCRIPTION OF FLEETS	3
A. DESCRIPTION AND ANALYSIS OF SMALL-SCALE FLEET PREVIOUSLY CATEGORIZED AS “FOR PERSONAL NEEDS”	3
B. ANALYSIS OF THE FLEET	4
1.2 LINK WITH FISHERIES	6
1.3 DEVELOPMENT IN FLEETS	11
1.4. IMPACT OF BLUEFIN TUNA FISHERY ON THE PROFITABILITY OF THE FLEET	11
1.5. FISHERIES INFORMATION SYSTEM (FIS) DEVELOPMENT AND DATA VALIDATION	12
<u>2. SECTION B: IMPACT ON FISHING CAPACITY OF FISHING EFFORT REDUCTION SCHEMES ADOPTED UNDER MULTIANNUL MANAGEMENT OR RECOVERY PLANS OR UNDER NATIONAL SCHEMES.....</u>	<u>14</u>
2.1 STATEMENT OF EFFORT REDUCTION SCHEMES	14
2.2 IMPACT ON FISHING CAPACITY OF EFFORT REDUCTION SCHEMES	15
2.3 FUTURE ADDITIONAL NATIONAL MANAGEMENT MEASURES FOR THE LIMITATION OF THE FISHING EFFORT	15
<u>3. SECTION C: STATEMENT OF COMPLIANCE WITH ENTRY / EXIT SCHEME AND WITH LEVEL OF REFERENCE</u>	<u>16</u>
<u>4. SECTION D: SUMMARY REPORT ON THE WEAKNESSES AND STRENGTHS OF THE FLEET MANAGEMENT SYSTEM TOGETHER WITH A PLAN FOR IMPROVEMENTS AND INFORMATION ON THE GENERAL LEVEL OF COMPLIANCE WITH FLEET POLICY INSTRUMENTS</u>	<u>16</u>
4.1 SUMMARY OF WEAKNESS AND STRENGTHS OF FLEET MANAGEMENT SYSTEM	16
4.2 PLAN FOR IMPROVEMENTS IN FLEET MANAGEMENT SYSTEM.....	17
4.3 INFORMATION ON GENERAL LEVEL OF COMPLIANCE WITH FLEET POLICY INSTRUMENTS ..	17
<u>5. SECTION E: INFORMATION ON CHANGES OF THE ADMINISTRATIVE PROCEDURES RELEVANT TO FLEET MANAGEMENT</u>	<u>18</u>
<u>6. SECTION F: ESTIMATION AND DISCUSSION OF BALANCE INDICATORS.....</u>	<u>18</u>
I) TECHNICAL INDICATORS.....	18
THE INACTIVE FLEET INDICATOR.....	18
THE VESSEL UTILIZATION INDICATOR.....	19
II) BIOLOGICAL INDICATORS.....	21
SUSTAINABLE HARVEST INDICATOR.....	21
STOCKS-AT-RISK INDICATOR.....	22
III) ECONOMIC INDICATORS	22
RETURN OF FIXED TANGIBLE ASSETS (ROFTA) AND CURRENT REVENUE AGAINST BREAK-EVEN REVENUE (CR/BER)	22
IV) SOCIAL INDICATORS.....	24
<u>7. OVERALL: STATEMENT OF OPINION ON BALANCE OF FLEET CAPACITY WITH FISHING OPPORTUNITIES</u>	<u>28</u>
<u>8. ACTION PLAN</u>	<u>31</u>
A. REVISION AND ADJUSTMENT OF ACTION PLAN.....	31
B. ADDITIONAL MANAGEMENT MEASURES TO BE APPLIED IN ORDER TO SECURE THE BALANCE OF CAPACITY AND THE STATUS OF THE RESOURCES	32
C. PROGRESS REPORT.....	33
<u>9. REFERENCES</u>	<u>34</u>

1. Section A: Description of the fishing fleet segments in relation to fisheries

In accordance with the Article 22 of the Regulation (EU) No 1380/2013, Croatia has put in place measures to adjust its fishing capacity with the available resources.

As the TACs are only applicable for the Bluefin tuna in the case of Croatia, the measures related to this particular fleet have been strictly imposed in accordance with the applicable regulations and recommendations of the ICCAT. Having said this, Croatian capacity as calculated using the SCRS methodology is in line with the opportunities and has been duly communicated to the Commission.

This report is prepared in line with the Guidelines provided by the Commission. However, given that Croatia acceded to the EU on 1st July 2013, and started applying the EU structural funds only in 2016, the effects of such measures to the balance of the fleet and resources are expected over the next period. In terms of the assessment of the long-term profitability of the fleet segments, it should be pointed out that the characteristics of the Croatian fleet, in particular small-scale, mean that in most cases the profitability may not be judged based on the incomes from just fishing activity, and hence should be interpreted with caution. As the importance and the sustainability of the small-scale fleet is in the core of the CFP. This is an important element that needs to be considered when assessing the overall fleet capacity.

Croatian fleet capacity ceiling was set at the date of accession, and has been fixed for the first time in the Annex II of Regulation (EU) 1380/2013. The ceiling as set in the Annex II is 53.452,00 GT and 426.064,00 kW. The permanent cessation of fishing activities funded under the EFF had an effect in 2015 and 2016 and resulted with a decrease of the ceiling capacity to 51.287,52 GT and 416.877,28 kW by the end of 2016. It can be stated that fleet management measures in Croatia were based primarily on an array of effort management measures pursuant to national legislation in force (with the exception of the BFT fleet where a strict regime of capacity calculation was applied in order to guarantee the matching of the capacity with the resources). As foreseen in the Fleet Report submitted in 2015, permanent cessation of fishing activities was one of the measures under the OP for the EFF and it was implemented in 2015 and 2016 for PS and DTS fleet segments. In 2016 permanent cessation of fishing activities for PS and DTS segments was continued under the EMFF, as was planned in the 2016 fleet report action plan.

The figures listed in this report indicate the number of 7.746 vessels in 2016. The ceiling limit set in the Annex II of the Regulation (EU) No 1380/2013 includes also the total of 3.500 vessels included in the Fleet register pursuant to accession negotiations.

The licences in Croatia are issued for an indefinite time (no provisions on withdrawal if vessel is inactive). Croatian national legal framework foresees the possibility of a vessel being erased from the register under certain circumstances which needs to be further developed.

1.1 Description of fleets

A. Description and analysis of small-scale fleet previously categorized as “for personal needs”

Prior to its accession to the EU Croatia had a very specific category of non-commercial fishery that was registered in the commercial category in 2015, pursuant to the regulations in force. The transition process of their full registration ended in April 2015, while the administrative process of licensing followed throughout 2016. These vessels' licence holders are not full-time fishermen, nor do they depend on fishing activity and only perform it in very specific places and in very specific times. Exactly this is the reason why they fall into a separate category of commercial fleet, that is nationally defined by the Marine Fisheries Act, and limited both in catch and fishing gears. According to the list of vessels that have been designated for granting licences under conditions set by national legislation, the capacity of these vessels was included in the fleet register in 2015. However, most of the vessels remained inactive in 2015 and 2016, as the licences were not issued due to the prolonged administrative procedure and Fisheries Information System updating.

Following the transfer from the previous non-commercial fishery into the commercial sector, Croatia included the small-scale vessels for personal needs into the national sampling scheme, and submitted the revision of the National Data Collection Programme for 2016 in late 2015. The amendment of the National Programme for 2016 was evaluated by STECF EWG 16-01 (Evaluation of Proposals to Revise DCF National Programmes for 2016) which considered that all changes to the National

Programme were acceptable, including the revision regarding the inclusion of the aforementioned fleet to the commercial fleet “*Inclusion of small-scale fisheries for personal needs into the PGP will be delayed. Data for transversal variables will be available in 2016 and for economic variables in 2017*”. As regards to the Data Collection Framework fleet segment categorization, all these vessels fall under the polyvalent passive gears segment (PGP), but they are not full-time engaged in the fishery and most of them remained inactive in 2015 and 2016. Taking into account the above mentioned constrains, Croatia was able to conduct the required data gathering and include in the analysis of active vessels the limited share of the segment which was active during 2016. Characteristics of the PGP fleet segment, including the active small-scale vessels that entered the commercial fleet in 2015, for reference year 2016 are shown in Table 1.

It should be noted that economic and fishing activity data analysis for 2015 and 2016 should be taken with caution, as the fleet was mostly inactive in 2015 and with limited activity in 2016. It is expected that in 2017, after all remaining licences have been issued, and entire fleet segment shows its activity potential, the real potential of the segment shall be known. Therefore, economic and fishing activity data analysis of the segment shall be more reliable in the following years. In connection to the gradual issuing of fishing licences and progressive, but still limited, increase of the fishing activities, an overall increasing trend is expected in the values of fishing activity and economic data.

It is important to mention though that this fleet category including the vessels previously operating for personal needs is still kept as a ring-fenced category, with specific requirements and constrains. The catches of this particular fleet element and their possibilities to market the fish as well as the gears allowed are strict and technical measures foresee the possibility to exercise this activity on a local scale. However, as this has been the traditional category existing prior to the accession, the social needs were of particular concern. With all constrains of the operation of this fleet and their particular social and traditional characteristics, it may not be expected that they are economically viable, and the activity they have does not show indications as to the substantial impact on the resources (given their very sporadic and very limited catches and manner of operation). Albeit their number might indicate importance, this is assessed as a skewed indication since their overall activity does not correspond to the activity of the fishermen that are engaged in full or even half-time fisheries. Additionally, owners of the licenses for this particular fleet are not envisaged to be beneficiaries of public aid.

Table 1. Characteristics of PGP segment in 2016.

Fleet segment	Total GT	Number of vessels	Landing (kg)	Landing value (eur)	Days at sea	Share of vessels in total fleet	Share in total landing (%)	Share in total landing value (%)	
PGP	VL0006	1.834,14	2.118	9.009,79	49.681,17	3.441	27,34%	0,01%	0,09%
PGP	VL0612	1.416,23	616	20.851,63	160.116,64	3.009	7,95%	0,03%	0,28%

B. Analysis of the fleet

In 2016, majority of the fleet (7.118 vessels) was small-scale (91,90%), composed of 3.865 vessels with LoA less than 6 m (49,9%) and 3.253 vessels with LoA between 6 and 12 m (42%). Only 628 vessels corresponding to 8,1% of the fleet was large-scale. The large-scale fleet contained 386 vessels, or 4,98% with LoA between 12 and 18 m; 118 vessels, or 1,52% with LoA between 18 and 24 m and 124 vessels, or 1,60% with LoA between 24 and 40 m. It should be noted that one purse seiner previously in the PSVL40XX fleet segment was modified in 2016 (the owner of the vessel had the vessel shortened). Therefore, according to the new measurement, in 2016 the vessel belongs in the PSVL2440 fleet segment. Although the structure of the fleet somewhat changed with the inclusion of 3.500 small-scale vessels for personal needs, the fleet operates essentially the same. Another significant factor in the large-scale fleet reduction is scrapping of vessels.

Table 2. Overall fleet characteristics in 2016.

Vessel length	Total GT	Total kW	Total no. vessels	Share in total fleet	Small-scale vs. Large-scale
VL0006	3.659,01	40.328,50	3.865	49,90%	91,90%
VL0612	11.458,81	186.798,76	3.253	42,00%	
VL1218	7.015,97	62.225,95	386	4,98%	8,10%
VL1824	7.964,44	34.117,90	118	1,52%	
VL2440	19.059,67	64.130,54	124	1,60%	
TOTAL	49.157,90	387.601,65	7.746		

In 2016, the most important fleet segment in terms of share in landing weight was the purse seine segment (PS, 91,25% of total landings weight) with around 3,5% of active vessels. The PGP segment including the largest number of vessels, is constituted mainly of small-scale vessels for personal needs transferred to the commercial category in 2015. This segment is managed as a specific fleet category with catch and gear restrictions and special licences, and is important as a specific social and traditional category. The largest number of vessels in the in main commercial fleet were active in driftnet and fixed nets segment (DFN, in Croatia fixed nets – gillnets and trammel nets, 986 active vessels or 18,7% of the active fleet).

The key difference between the PS and DFN segments is that PS segments remain active and fishing activity represents the main activity, while the DFN is highly seasonal and does not present necessarily the main activity. This is further emphasized by the fact that the total landings of DFN segment represent less than 1% of total landings, indicating the low activity rather than high impact. The same is applicable for hook and line gears (HOK) and miscellaneous active gear (MGO), that together constitute some 12% of active fleet, but their share in landings is around 1%. This is also due to the fact that these fleet segments are composed almost entirely of vessels less than 6 and 12 m LoA whose activity is largely seasonal and operate on local basis. In large majority of the cases, these activities are not the main source of income for the licence owner, and the fleet displays highly seasonal character. The demersal trawls (DTS) are the second most important in terms of shares in landings weight, as they have 5,6% share in landings weight and constitute 7,4% of active fleet. It is obvious that the main fleet segments in terms of landings weight are purse seines and demersal trawls, with over 96,9% share in landings and around 22,7% of active vessels in the main commercial fleet.

Table 3. Landings weight distribution by fishing technique in 2016.

Fishing technique	Total GT	Total kW	Total no. vessels	Active vs. Inactive main commercial fleet	Share in active fleet	Landing weight (kg)	Share in total landing weight
DFN	3.046,24	48.099,35	987	5.280 = 68,16%	18,69%	634.615,39	0,88%
DRB	668,03	8.249,90	52		0,98%	603.841,90	0,84%
DTS	8.950,81	59.048,58	392		7,42%	4.059.910,90	5,64%
FPO	390,98	7.908,66	167		3,16%	91.658,32	0,13%
HOK	1.113,07	27.707,48	319		6,04%	288.103,10	0,40%
MGO	541,25	11.011,51	340		6,44%	480.415,46	0,67%
PGO	6,83	231,78	6		0,11%	592,70	0,00%
PGP	3.250,37	27.132,49	2.734		51,78%	29.861,42	0,04%
PMP	224,89	4.284,57	96		1,82%	114.491,16	0,16%
PS	16.059,40	65.521,45	187		3,54%	65.699.553,96	91,25%
INACTIVE	14.906,03	128.405,88	2.466		= 31,84%	-	-
TOTAL	49.157,90	387.601,65	7.746			72.003.044,30	

1.2 Link with fisheries

Landings in 2016 included 114 species in total. The tables below list the most important ones in terms of quantity and value. In total 10 species accounted for more than 95% in total landing (Table 4), while 23 species accounted for over 90% of landing value (Table 5). Quantities landed have been stable over time, with the share of small pelagic species targeted in purse seine fisheries, sardine and anchovy, by far dominating the overall structure (more than 86% of total landing weight in 2016). Small pelagic species also constituted the most important species in terms of value, accounting for over 52% of total landing value. On the other hand, species targeted by demersal trawling, red mullet and hake, account for 1,3% and 0,9% respectively in terms of quantity, but 3% and 5% respectively in terms of the value.

Table 4. Species representing over 95% of Croatian landing weight in 2016.

Species	Species FAO code	Total landing weight (kg)	Share in total landing weight (%)
Sardine	PIL	54.314.736,38	75,43%
Anchovy	ANE	8.230.061,35	11,43%
Chub mackerel	MAS	1.863.249,24	2,59%
Jack and horse mackerels nei	JAX	986.492,83	1,37%
Red mullet	MUT	968.059,82	1,34%
Hake	HKE	668.263,51	0,93%
Deep-water rose shrimp	DPS	654.160,85	0,91%
Horned and musky octopuses	OCM	370.225,18	0,51%
European flat oyster	OYF	322.478,39	0,45%
Norway lobster	NEP	229.546,27	0,32%
TOTAL		72.003.044,30	

Table 5. Species representing over 90% of Croatian landing value in 2016.

Species	Species FAO code	Total landing value (eur)	Share in total landing value (%)
Sardine	PIL	20.756.566,12	36,68%
Anchovy	ANE	7.779.171,15	13,75%
Norway lobster	NEP	2.903.387,36	5,13%
Hake	HKE	2.457.691,17	4,34%
Deep-water rose shrimp	DPS	2.001.793,71	3,54%
Red mullet	MUT	1.665.354,90	2,94%
European squid	SQR	1.496.025,21	2,64%
Common sole	SOL	1.473.084,20	2,60%
Common octopus	OCC	1.228.397,21	2,17%
Warty venus	VEV	1.047.309,10	1,85%
Horned and musky octopuses	OCM	985.043,41	1,74%
European flat oyster	OYF	950.293,63	1,68%
Gilthead seabream	SBG	764.649,90	1,35%
Bluefin tuna	BFT	706.770,33	1,25%
John dory	JOD	703.680,30	1,24%
Chub mackerel	MAS	689.716,07	1,22%
Great Mediterranean scallop	SJA	673.093,28	1,19%

Species	Species FAO code	Total landing value (eur)	Share in total landing value (%)
Red scorpionfish	RSE	609.846,08	1,08%
Common cuttlefish	CTC	524.704,14	0,93%
Monkfishes nei	MNZ	443.844,97	0,78%
Gurnards; searobins nei	GUX	414.794,67	0,73%
Jack and horse mackerels nei	JAX	369.813,14	0,65%
Gurnards; searobins nei	TUR	336.924,92	0,60%
TOTAL		56.589.071,66	

The most important fleet segment in terms of contribution to total landings is purse seines from 24 to 40 meters LoA. This fleet segment accounts for 57% of landings in 2016. Overall, purse seine segments with 91.25% of landings form the backbone of Croatian fisheries. These fleet segments target sardines and anchovies, and fall under the provisions of the multiannual management plan for small pelagic in GSA 17 as adopted under the GFCM. The effect of the measures foreseen by the GFCM management plan is an overall decrease in the landing of small pelagic species by around 9% in 2016 compared to 2014 (Table 6).

Table 6. Annual decrease in the landing weight (kg) of most important small pelagic species compared to 2014.

Small pelagic species	2014	2015	2016
Sardine	56.942.807,29	51.084.240,52	54.314.736,38
Anchovy	9.114.937,57	12.623.775,95	8.230.061,35
Chub mackerel	637.938,49	566.104,13	1.863.249,24
Jack and horse mackerels nei	234.472,77	436.746,86	986.492,83
Other small pelagic	5.039.555,08	806.677,35	9.799,66
SPF TOTAL	71.969.711,20	65.517.544,81	65.404.339,46
Difference 2014-N	-	- 8,97%	- 9,12%

The largest number of vessels in the main commercial fleet were active in drift net and fixed nets segment (DFN, in Croatia fixed nets – gill nets and trammel nets, 987 active vessels or 38% of the main commercial fleet), but less than 1% of landing volume. Their actual activity is highly seasonal and the calculation of different parameters is skewed due to the nature of this activity. The most important segment in this gear class was the one between 6 and 12 meters LoA, with 649 vessels, representing over 25% of the active fleet. Only fixed nets are used in Croatia (trammel and gill nets), and they operate in shore and coastal waters, in limited areas and during limited periods. These fishermen have 44 fishing days yearly and catch around 13 kg per fishing day on average.

The overall contribution of the segment to the effort and catch is very limited. In the further analysis, the specific impact of the small-scale fleet in relation to its activity and social context is considered. Croatia is fully in line with the provisions of the Basic regulation that calls for the recognition of the specificities of the small-scale fleet, taking into account all the relevant provisions and elements of the fleet policy. Additionally, catch reporting requirements in Croatia for vessels less than 10 m LoA are based on monthly fishing reports that are particularly suited for passive gears. In the further description of fleet segments a metier approach as shown in Table 7 was taken - segments selected in ranking by effort, landing weight and value are further analysed. Out of 23 clustered fleet segments in total, 10 segments were selected by the ranking procedure. These segments, that constitute more than 90% of total landing, landing value and effort, are the following: purse seiners from 12 to 40 meters LoA, demersal trawlers and demersal seiners from 6 to 40 meters LoA, fixed netters and hooks and lines vessels from 6 to 12 meters LoA, and vessels with other mobile gears up to 6 meters LoA.

Table 7. Characteristics of fleet segments in 2016 ranked by share in total landing. Selection of fleet segments that achieve 90% of the total landing, landing value and effort. Segments highlighted in blue constitute for over 90% of any variable considered.

Fleet segment	Tonnage GT	Number of vessels	Landing (kg)	Landing value (eur)	Fishing days	LPUE Landing (kg)/ Fishing day	Fishing days per vessel	Share of vessels in active fleet	Share in total landing	Share in total landing value	Share in total effort GT*Fishing days	
PS	VL2440	11.181,17	70	41.605.947,40	18.962.474,87	12.081	3.443,92	173	1,33%	57,78%	33,51%	35,52%
PS	VL1824	3.917,13	48	19.153.698,55	8.849.879,16	7.874	2.432,52	164	0,91%	26,60%	15,64%	8,11%
PS	VL1218	748,63	35	4.667.726,88	2.327.204,64	4.187	1.114,81	120	0,66%	6,48%	4,11%	0,82%
DTS	VL1218	3.318,18	180	1.678.251,76	5.655.439,03	16.319	102,84	91	3,41%	2,33%	9,99%	14,24%
DTS	VL1824	2.266,14	34	948.257,45	3.387.867,54	4.881	194,28	144	0,64%	1,32%	5,99%	2,91%
DTS	VL0612	1.342,49	164	783.750,19	2.743.459,39	12.384	63,29	76	3,11%	1,09%	4,85%	4,37%
DTS	VL2440	2.024,00	14	649.651,50	2.550.616,40	2.296	282,95	164	0,27%	0,90%	4,51%	1,22%
DFN	VL0612	2.313,08	649	473.911,53	2.977.455,87	39.064	12,13	60	12,29%	0,66%	5,26%	23,76%
DRB	VL1218	447,46	32	408.396,12	1.666.324,79	3.518	116,09	110	0,61%	0,57%	2,94%	0,41%
MGO	VL0006	220,48	263	386.205,92	2.049.143,37	14.264	27,08	54	4,98%	0,54%	3,62%	0,83%
PS	VL0612	210,37	32	270.629,63	317.325,47	2.536	106,72	79	0,61%	0,38%	0,56%	0,14%
HOK	VL0612	918,50	233	260.093,07	1.761.924,30	10.064	25,84	43	4,41%	0,36%	3,11%	2,43%
DRB	VL0612	165,57	19	170.751,88	612.814,69	1.608	106,19	85	0,36%	0,24%	1,08%	0,07%
DFN	VL0006	335,54	321	135.989,27	598.309,94	16.145	8,42	50	6,08%	0,19%	1,06%	1,42%
MGO	VL0612	267,42	74	92.095,44	355.588,75	4.812	19,14	65	1,40%	0,13%	0,63%	0,34%
PMP	VL0612	175,99	53	84.077,31	220.824,42	3.149	26,70	59	1,00%	0,12%	0,39%	0,15%
FPO	VL0612	318,40	120	74.054,46	600.535,79	13.265	5,58	111	2,27%	0,10%	1,06%	1,11%
PMP	VL0006	40,90	42	26.986,45	115.946,63	1.652	16,34	39	0,80%	0,04%	0,20%	0,02%
DRB	VL1824	55,00	1	24.693,90	98.557,31	166	148,76	166	0,02%	0,03%	0,17%	0,00%
DFN	VL1218	205,62	16	24.671,04	191.206,20	760	32,46	48	0,30%	0,03%	0,34%	0,04%
PGP	VL0612	1.416,23	616	20.851,63	160.116,64	2.155	9,68	3	11,67%	0,03%	0,28%	0,80%
FPO	VL0006	49,79	45	17.477,86	121.226,58	4.105	4,26	91	0,85%	0,02%	0,21%	0,05%
HOK	VL0006	77,84	80	16.471,30	87.945,67	2.421	6,80	30	1,52%	0,02%	0,16%	0,05%
HOK	VL1218	116,73	6	11.538,73	100.265,72	295	39,11	49	0,11%	0,02%	0,18%	0,01%
PGP	VL0006	1.834,14	2.118	9.009,79	49.681,17	2.381	3,78	1	40,11%	0,01%	0,09%	1,15%
PMP	VL1218	8,00	1	3.427,40	10.826,44	150	22,85	150	0,02%	0,00%	0,02%	0,00%
MGO	VL1218	53,35	3	2.114,10	4.460,38	200	10,57	67	0,06%	0,00%	0,01%	0,00%
PS	VL0006	2,10	2	1.551,50	6.574,46	186	8,34	93	0,04%	0,00%	0,01%	0,00%
PGO	VL0006	5,16	5	541,70	4.269,90	191	2,84	38	0,09%	0,00%	0,01%	0,00%
FPO	VL1218	22,79	2	126,00	591,68	15	8,40	8	0,04%	0,00%	0,00%	0,00%
PGO	VL0612	1,67	1	51,00	114,47	3	17,00	3	0,02%	0,00%	0,00%	0,00%
DFN	VL2440	192,00	1	43,55	99,96	18	2,42	18	0,02%	0,00%	0,00%	0,00%
TOTAL	34.251,87	5.280	72.003.044	56.589.072	183.145							

The species that constituted majority of landings of the fleet segments selected in Table 7 are shown in Table 8. Majority of the landings of purse seines in the segment from 24 to 40 meters LoA included sardine (82,9%) and anchovy (12,3%) and similarly for purse seine vessels from 18 to 24m LoA, sardine (82,7%) and anchovy (12,8%). More or less the same structure can be observed (in similar shares) in all PS segments above 12 m LoA, however purse seines under 12 m LoA have a slightly different landing composition and do not target as much sardine and anchovy. This is a result of different purse seine nets used more in the coastal area, with different mesh sizes. Also these segments have a high contribution of other gears in their landing, such as fixed nets, longlines, etc.

For demersal trawls, the composition in segments from 24 to 40 and from 18 to 24 meters LoA mainly includes deep-water rose shrimp (32,8% and 28,6% respectively), hake (14,5% and 16% respectively) and Norway lobster (9,6% and 6,4% respectively). In the demersal trawl segments from 12 to 18 m LoA and 6 to 12 m LoA the main species landed were red mullet (31,8% and 22,6% respectively) and hake (14,3% and 12,6% respectively), while European squid and Norway lobster are also caught in larger quantities. The differences between different segments of the same gear groups can be explained by the fishing grounds exploited (smaller segments tend to stay closer to shore, use gears other than bottom trawl nets and exploit different fishing grounds, whereas larger segments tend to operate in areas further from the shore).

On the other hand, the fixed nets segment from 6 to 12 m LoA, which represents the largest number of vessels active in the main commercial fleet, and has the second highest contribution to effort, has a total landing of less than 1%. The main species targeted are common sole (19,3%) and a mixture of other demersal species (gilthead seabream 8,8%, red scorpionfish 3,4%, gurnards 3,3% etc).

MGO segment includes a variety of traditional mobile and active gears, such as hand gathering gears and harpoon, which have different target assemblages. Molluscs are mainly targeted, including Warty venus (26%), smooth callista (12,8%) and European flat oyster (10,7%), followed by common octopus (16,2%).

HOK segment from 6 to 12 meters LoA in 2016 mainly targeted Bluefin tuna (26,9%), followed by hake (16%) and swordfish (7,5%). The increase in the landing of Bluefin tuna in 2016 is due to the increase of allocated quota.

Compared to 2015 landing composition, there were no relevant changes in 2016, however overall landing of small pelagic fish in purse seine segments decreased by further 9% as a result of the management regime implemented pursuant to the provisions of the GFCM and national legal framework.

Table 8. Landing composition for selected fleet segments in 2016.

Fleet segment		Species	Species FAO code	Total landing (kg)	Total landing value (eur)	Share in total landing value of fleet segment	Share in total landing of fleet segment
PS	VL2440	Sardine	PIL	34.509.394,05	13.187.885,41	69,55%	82,94%
		Anchovy	ANE	5.114.305,30	4.834.114,18	25,49%	12,29%
		Chub mackerel	MAS	1.212.990,85	449.010,94	2,37%	2,92%
PS	VL1824	Sardine	PIL	15.835.780,05	6.051.698,63	68,38%	82,68%
		Anchovy	ANE	2.456.852,85	2.322.252,29	26,24%	12,83%
		Chub mackerel	MAS	528.689,55	195.704,19	2,21%	2,76%
PS	VL1218	Sardine	PIL	3.809.646,48	1.455.869,70	62,56%	81,62%
		Anchovy	ANE	613.070,00	579.482,49	24,90%	13,13%
		Chub mackerel	MAS	88.087,00	32.607,03	1,40%	1,89%
DTS	VL1218	Red mullet	MUT	533.059,10	917.022,45	16,21%	31,76%
		Hake	HKE	239.787,46	881.872,97	15,59%	14,29%
		European squid	SQR	95.127,71	733.794,01	12,98%	5,67%
DTS	VL1824	Deep-water rose shrimp	DPS	271.466,70	830.713,63	24,52%	28,63%
		Hake	HKE	151.475,90	557.087,10	16,44%	15,97%
		Norway lobster	NEP	61.081,95	772.587,41	22,80%	6,44%
DTS	VL0612	Red mullet	MUT	177.427,97	305.229,63	11,13%	22,64%
		Hake	HKE	98.782,16	363.293,88	13,24%	12,60%
		Norway lobster	NEP	36.143,63	457.158,19	16,66%	4,61%
DTS	VL2440	Deep-water rose shrimp	DPS	213.207,50	652.435,00	25,58%	32,82%
		Hake	HKE	94.284,85	346.754,00	13,59%	14,51%
		Norway lobster	NEP	62.372,25	788.907,61	30,93%	9,60%
DFN	VL0612	Common sole	SOL	91.545,50	800.246,18	26,88%	19,32%
		Gilthead seabream	SBG	41.504,64	207.244,74	6,96%	8,76%
		Red scorpionfish	RSE	16.075,85	302.895,30	10,17%	3,39%
MGO	VL0006	Warty venus	VEV	100.950,36	890.025,16	43,43%	26,14%
		Common octopus	OCC	62.674,93	339.337,72	16,56%	16,23%
		Smooth callista	KLK	49.249,20	194.003,59	9,47%	12,75%
HOK	VL0612	Bluefin tuna	BFT	69.927,04	620.838,91	35,24%	26,89%
		Hake	HKE	41.605,21	153.012,63	8,68%	16,00%
		Swordfish	SWO	19.524,10	151.728,61	8,61%	7,51%

1.3 Development in fleets

Croatia's capacity ceiling was fixed by way of Regulation (EU) 1380/2013. Furthermore, permanent cessation of fishing activities was envisaged as part of the OP for the EFF as well as for the EMFF, with the target date for achieving results by the end of 2015 for the EFF and the end of 2017 for EMFF respectively.

In the course of 2016, 2.119 new vessels entered the fleet without public aid, for a total of 1.985,74 GT and 15.806,18 kW. In the same year 2.219 vessels left the fleet for a total of 5.782,75 GT and 56.243,81 kW out of which 29 vessels permanently left the fleet within the permanent cessation of fishing activities measures for a total of 299,80 GT and 4.506,62 kW.

The ceiling capacity set in 2016 is 51.287,52 GT and 416.877,28 kW. The capacity reduction by fleet segment in 2016 is shown in the table below.

Table 9. Permanent cessation of fishing activities in 2016 under the EMFF.

Fleet segment		Total GT	Total kW	Number of vessels
DTS	VL0612	67,86	829,52	7
	VL1218	226,87	1.370,70	12
	VL1824	169,00	654,00	3
	VL2440	309,00	590,40	1
<i>Total DTS</i>		<i>772,73</i>	<i>3.444,62</i>	<i>23</i>
PS	VL0612	23,34	301,00	2
	VL1218	103,73	761,00	4
<i>Total PS</i>		<i>127,07</i>	<i>1.062,00</i>	<i>6</i>
Total		899,80	4.506,62	29

Total capacity of vessels scrapped in 2016, according to the measure permanent cessation of fishing activities, is included in the total fleet capacity expressed in GT and kW. As the measure was executed during September to November 2016, these vessels were active in the first period of the year and their capacity is included in the capacity of each fleet segment in 2016.

1.4. Impact of Bluefin tuna fishery on the profitability of the fleet

As the TACs are only applicable for the Bluefin tuna stock in case of Croatia, the measures related to this particular fleet have been strictly imposed in accordance with the applicable regulations and recommendations of the ICCAT. This means that BFT Fleet is under a strict regime of capacity calculation, which was applied in order to guarantee the matching of the capacity with the availability of the resources.

Tuna farming represents one of the pillars of the national fishing sector in general and significantly determines the Croatian mariculture. Investment in this segment proved to be economically very successful. Tuna farming in Croatia is engaged in four companies of which three are at the Zadar and one in the Split area. Total Croatian farming capacity is limited to the capacity of 7.880 tons as reported to ICCAT 1 July 2008. Croatian maximum input of wild caught Bluefin tuna into its farms was limited to 2.947 tons in accordance with level of the input quantities registered with ICCAT by Croatian farms in 2006.

According to the capacity plan for 2016, a total of 11 vessels were authorized to participate in the BFT PS fishery, while 12 vessels were authorized to participate in HL fishery.

The Croatian total quota of 551,22tons in 2016 was allocated as follows:

- to the PS gear group 515,38 tons;

- to the HL gear group 30 tons;
- 2 tons to the sport fishery and can be exhausted only in official competitions in sport fishery (according to the competition calendar of Croatian national association for sport fishery on sea); and
- 3,84 tons to the recreational fishery – “big game fishing”.

The criteria for allocation of individual quotas take into account historical data regarding participating in this fishery and the overall quota. HL quota has been allocated to 12 hooks and line vessels. Given the size of this fleet and its artisanal character, the total quota of 19 tons was allocated to this segment and individual quotas was assigned to each vessel. The fishing for hooks and line vessels is closed from 1st January until 1st April.

As Croatia is a tuna farming county, and all catch of purse seine fisheries is transferred to cages for farming, there is no landing of purse seines *per se*, therefore in the further analysis catch data is considered. Estimation of value of fish caught using average Bluefin tuna price is not appropriate since quota is caught within Joint fishing operation, and it is mostly own by the farms and not the vessels. This means that the value of catch is not representing vessel income. At the same time majority of vessels are own by the farming company or they are under contract and working in cooperation with farm company.

Total Croatian catch of BFT in 2016 in commercial fisheries was 519,0169 tons. Out of this amount, 84,02% was caught using purse seines (PS), i.e. 436,0685 tons. After the end of PS season, the remaining amount was reallocated and caught using coastal artisanal long-lines (LL 1,9099 tons) and hand lines (HL, 77,701 tons). Total catch of BFT in 2016 in sport and recreational fisheries was 3,338 tons.

The number of PS vessels engaged in BFT fishing season in 2016 has increased from 9 in 2015 to 11 in 2016 in line with Article 45 of Recommendation 14-04, while the number of vessels using hook and line gears remained the same (12) in 2016 when compared to 2015.

1.5. Fisheries Information System (FIS) development and data validation

During 2015 Croatia started implementing the national validation and verification system under the National Plan for the Implementation of the Validation and Verification System in Republic of Croatia, approved by the European Commission. In 2016 validation procedures of logbooks, catch reports, VMS data and sales notes have been further developed, while the finalization of the national VALID system with automated alarms and business procedures is planned for late 2017. Cross-check procedures are performed prior to reporting according to internal procedures for statistical and reporting purposes (EC, ICCAT, DCF, GFCM, EUROSTAT, FAO etc) and include specific rules developed for each report in order to verify and validate data.

During 2017 and early 2018 a full traceability system of fisheries products up until first sale shall be established. This process started in 2016 by implementing an electronic transport document and linking first sale with logbooks and catch reports. The aim is to enhance the estimation of economic indicators and monitor fish prices in domestic market as well as import and export more efficiently.

In 2016 the upgrading of the national FIS (Fisheries Information System) in regard to the fleet register and the new FIS module used for license issuing has been finalized. Both registers, fleet register and register of licences, are directly linked which enables efficient data verification of data. Catch reporting requirements in Croatia for all vessels under 10 m LoA are based on monthly catch reports that are particularly suited for passive gears. Small-scale vessels for personal needs, that were transferred to the commercial fleet in 2015 also fall under the national requirement. As the current calculation of fishing days slightly exaggerates fishing days for passive gears, the methodology will be harmonized with results of the DCF Workshops on transversal variables I and II in 2017.

Currently 651 VMS and e-logbook devices have been installed on fishing vessels, including 279 above 15m LoA, 169 between 12m and 15m LoA and 203 below 12m LoA. In addition to obligations

pursuant to Article 9 of the Basic Regulation, the following vessels are equipped with a VMS device and e-logbook: every authorized active demersal trawler (OTB), purse seiner (PS) and vessel with dredges (DRB) regardless of LoA, HL and LL vessels with BFT quota, vessels with quota for recreational fisheries of BFT. The e-logbook has greatly improved catch reporting and timely availability of catch and effort data in recent years.

In addition to elements as required by the Basic regulation, the information on fish size of sardine and anchovy was added to the e-logbook for purse seiners. As fisheries in Croatia are managed through national fishing zones, fish size is an important element in terms of indirectly monitoring the stocks. As this data is linked with VMS data, the indication of the movement of fish of a certain size in certain periods and fishing zones is obtained.

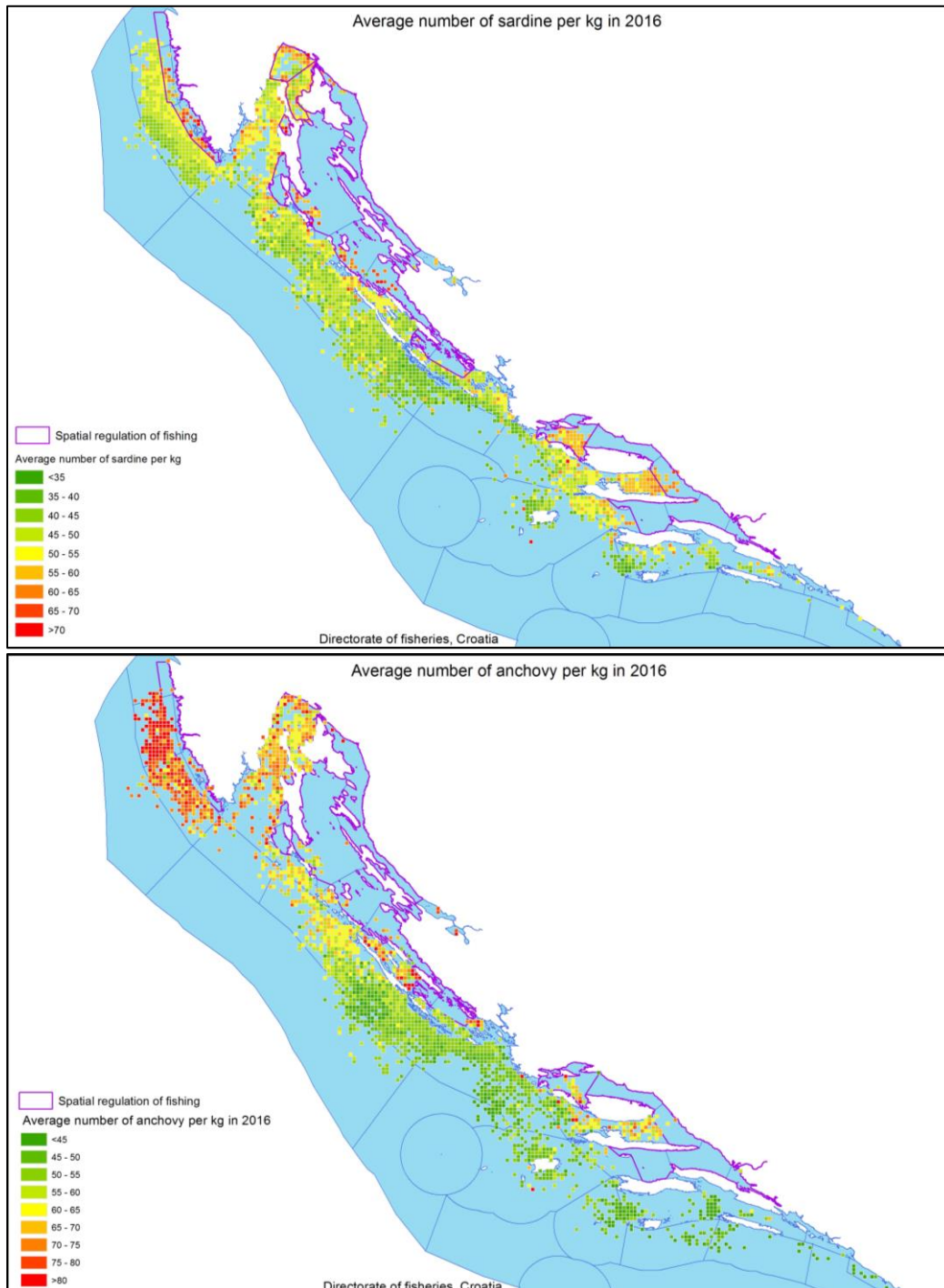


Figure 1. Number of sardine and anchovy per kg in purse seine fishery in 2016.

2. Section B: Impact on fishing capacity of fishing effort reduction schemes adopted under multiannual management or recovery plans or under national schemes

2.1 Statement of effort reduction schemes

In 2016, Croatia has implemented the measure for withdrawal of the vessels from the fleet under the EMFF. In addition an array of measures for spatial and temporal restrictions of fleet activities were implemented. These were based on a complex scheme of closed areas, temporal closures, different technical measures applicable in different areas and overall managing of the effort in all segments.

Since October 2013, exploitation of sardine and anchovy is regulated by the GFCM-level management plan for small pelagic stocks in GSA 17, and the amendments to this plan were adopted in 2014, 2015 and 2016. All vessels actively fishing for anchovies and sardines in GSA 17 are subject to the provisions of this plan. In terms of effort management, the vessels fishing actively for small pelagics have a limit of activity of 20 days per month with a total maximum of 180 days per year, with additional limit of 144 days for vessels targeting anchovies and 144 days for vessels targeting sardines. The limitation of days has a direct consequence on the effort. Furthermore, in 2016 (as per provisions from 2015) spatial and temporal closures were implemented in this fishery.

On national level in 2016, temporal closures included periods from 1 January to 10 January, 16 January to 31 January (EMFF), 6 May to 21 May (EMFF) and 15 December to 31 December. During the period 21 December to 24 December vessels of less than 18 m LoA with total landing of small pelagics in 2016 of less than 200 tonnes per vessel (34 vessels) were excluded from this restriction. In addition, during the periods 30 April to 6 May and 21 May to 31 May only 5 fishing days per vessel were permitted for each of these two periods.

This spatio-temporal restriction mechanism resulted with a total of 62 days of closure for the entire PS fleet. In comparison to the GFCM management framework, this was 47 days more than the binding obligation. The described scheme was implemented in addition to the national scheme of spatio-temporal restrictions in channel areas through restrictions for vessels over 12 m which lasted 6 months in continuity. The effect of effort management was a 5% reduction in the number of fishing days in 2016 in the purse seine fleet compared to 2014 (Table 10). Croatia is implementing the National program for control, monitoring and surveillance of the GFCM management plan. In respect to the program and in order to ensure that effort restrictions were followed, vessels were continuously monitored via VMS within the Fisheries Monitoring Centre and data was cross-checked with electronic logbook and sales notes data. The inspection was notified immediately upon reaching monthly and annual effort limits.

Table 10. Reduction in the total number of fishing days in the purse seine fleet in 2016 compared to 2014.

Fleet segment		Fishing days		
		2014	2015	2016
PS	VL0006	174	116	186
	VL0612	3.295	2.930	2.536
	VL1218	4.976	4.210	4.187
	VL1824	8.526	6.723	7.874
	VL2440	11.123	9.956	12.081
	VL40XX	166	172	NA
Total		28.260	24.107	26.864
Difference from 2014		-	-14,70%	-4,94%

For bottom trawlers, in 2016 temporal closure was implemented in period from 16 September to 15 October (EMFF fund) in the fishing zones C and D and part of the fishing zone E.

Pursuant to the national legislation in force, a diverse set of fisheries management measures is in place in Croatia, including: temporal and spatial restrictions for certain fishing gears; engine power restrictions in certain areas and temporal and spatial restrictions and closures for certain species during their spawning periods. Restrictions are permanent in some areas, and some restrictions cover significant parts of internal waters and territorial sea. In line with scientific advice, trawling is under strict temporal and spatial restriction regime, particularly in internal waters while a no-take zone for bottom trawling has been established in the area of the Jabuka Pit during the period from 25 July 2015 till 16 October 2016.

For the purpose of managing of resources in line with the provisions of the Council Regulation (EC) No 1967/2006, management plans were adopted for purse seines and trawl nets in 2014 while the management plans for the shore seines and small purse seines are in the pipeline. The management plans adopted contain provisions on future developments in effort management for these gears, such as temporal and spatial closures and authorisation of fishing license holders. The management plans for purse seines and trawl nets shall be revised during 2017.

2.2 Impact on fishing capacity of effort reduction schemes

The GFCM plan for small pelagics in the Adriatic restricts the capacity to the level corresponding to the capacity of all pelagic trawlers and purse seiners fishing actively for small pelagic stocks in 2014. Effort management measures are foreseen under the plan. The plan was further amended in 2014, 2015 and 2016 setting additional effort limitations for vessels targeting anchovies and introducing additional obligations of spatial and temporal closures. Capacity reduction measures to be implemented on national level under national management plans (implemented by the EFF OP and EMFF OP) and applied to the purse seine fleet are considered to be complementary to effort measures foreseen through the GFCM plan.

2.3 Future additional national management measures for the limitation of the fishing effort

In accordance with the obligations stemming from the GFCM multiannual plan for small pelagics in GSA 17, Croatia has undertaken the process of authorizing the bottom trawlers and purse seiners. By limiting the number of authorizations, Croatia has limited the overall capacity for the period of 3 years and expects also the effect on reductions of fishing effort.

A biological rest-period (closed season in the winter period) for small pelagic species (sardines and anchovies) has been in place in Croatia since 2006. In 2016, this period has been extended for additional 15 days during the winter period, as a matter of immediate attention and not as a re-current fishing stop. In accordance with the GFCM Recommendation and the national Management plan for purse seines, additional temporal closures have been applied in May 2016 (15 days in continuity) in the whole territorial waters of Croatia, affecting all vessels targeting small pelagic species. In addition there was a limitation of further 11 days during May as in both of the periods around the continuous temporary closure it was allowed to have five fishing days per vessel in each of them. These measures are seen as emergency measures and applied in 2016. similar scheme is foreseen for 2017.

In terms of bottom trawling, Croatia already operates a rather strict regime of temporal and spatial closures in internal waters in particular (channel areas). Revision and a possible increase of these areas are being considered, together with the introduction of a rest period (closed season, temporal closure) during a part of the year.

Given the importance of the Jabuka pit (central Adriatic) as a spawning and a nursery area for demersal species, a specific management regime in this area shall be reactivated in 2017. The management regime in question concerns bottom trawl activities and implies possible closures of the area (spatial regulation). Temporal and spatial restrictions shall, as a direct consequence, have the effect on fishing effort as the number of the possible days at sea is reduced.

3. Section C: Statement of compliance with entry / exit scheme and with level of reference

Croatia did not have a capacity ceiling prior to the accession to the EU and its capacity was initially fixed at the levels as at the date of accession. The capacity ceilings and capacity reduction is shown in the table below. The capacity ceiling as set in 2015 was further lowered by 899,80 GT and 4.506,62 kW by the end of 2016, resulting in the cumulative reduction from 1 July 2013 of 4,05% GT and 2,16% kW.

The ceiling set in 2016 is 51.287,52 GT and 416.877,28 kW.

Table 11. Capacity ceilings as of date of accession to the EU.

CAPACITY CEILING	Total GT	Total kW	Capacity reduction	Cumulative reduction (from 1.July 2013)	Measure of reduction
1 July 2013	53.452,00	426.064,00	None	None	None
31 Dec 2014	53.452,00	426.064,00	None	None	None
31 Dec 2015	52.187,32	421.383,90	1.264,68 GT 4.680,10 kW	2,37% GT 1,10% kW	PCFA EFF
31 Dec 2016	51.287,52	416.877,28	899,80 GT 4.506,62 kW	4,05% GT 2,16% kW	PCFA EMFF

PCFA - Permanent cessation of fishing activities

In 2016 a number of vessels included in purse seine and demersal trawl fishery exited the fleet with public aid. The entering of the new capacity in the fleet (without public aid) is compensated by prior capacity withdrawal (without public aid) of at least equal amount. Vessels exiting the fleet are replaced by other vessels in line with the provisions of the Marine Fisheries Act and the Ordinance on the fishing license for commercial fishing at sea and fishing license register, in line with the fleet policy requirements.

Croatia ensures that the fishing capacity of its fleet does not exceed at any time the fishing capacity ceilings set in accordance with the provisions of the CFP.

Effective reduction of capacity in PS and DTS segments took place in line with the Action plan submitted in 2015 as well as its revision for 2016, which included measures for permanent withdrawal within the scope of EMFF OP. The targeted date for achieving these results under the EMFF is end of 2017. Other measures in terms of activity regulation are foreseen in relevant national legislation on passive gears.

Overall, Croatia complies with the entry/exit scheme and the level of reference.

4. Section D: Summary report on the weaknesses and strengths of the fleet management system together with a plan for improvements and information on the general level of compliance with fleet policy instruments

4.1 Summary of weakness and strengths of fleet management system

In 2013, Croatia started implementing the DCF in line with the applicable rules. Furthermore, two management plans were adopted in 2014, the one for purse seines and the one for bottom trawlers.

These documents contain numerous provisions on future effort reduction and fleet management. The implementation of the OP for EMFF is expected to have a positive result in terms of fleet management.

Fleet management in Croatia has always been based on effort management rather than capacity management by itself. Effort is regulated through numerous technical provisions as well as through a complex set of temporal and spatial prohibitions and closed areas.

Given the fleet structure of Croatia, whereby the largest share of active vessels use fixed nets and similar gears, it is strongly believed that capacity measures might not be the right option for these segments. This fleet operates locally and only part-time, which in terms of fleet management does not necessarily mean that the capacity can be matched with the resources easily. The activity of the fleet and their total catches do not indicate significant impact on the resource. As the overall number of active days of coastal gears is far less than the one in trawl segment, Croatia firmly believes that significant impact on the status of the resources could be achieved by measures in the trawl segment rather than in the fixed nets segment.

Croatia has adopted the basic rules for entry/exit scheme, and adjusted all elements of fleet register in accordance with the EU requirements. This relates among other things to fleet segmentation in the register.

Since fleets of different member states exploit the resources in the GSA 17, it is considered that closer sub-regional approach shall be needed in order to achieve the balance of the fleets, particularly in small pelagic fisheries and in bottom trawl fisheries. A long cooperation at the level of science exists at the level of GSA 17, and the administrations of the three MSs have been closely cooperating recently in development of the discard plan for small pelagic species in GSA 17. Croatia believes that the regional approach is one of the key elements in order to maintain sustainable levels of exploitation.

Croatia emphasizes the need to invest further efforts into gaining a clearer picture of stock distributions, in particular if sub-stocks have been identified, as overall assessments have been made at the level of GSA 17 and GSA 18 jointly for some species and indicators. With the distribution of the fleet and its activity, some of the elements contained in the analysis of harvest indicators might need considerations, given the gaps in data available. This can have an effect on future assessments of biological indicators, which may be linked with general assessment of balance of fleets to the resources. It is believed that effort management measures and technical measures may be a more suitable tool in maintaining and/or achieving the sustainable levels of exploitation at the level of GSA 17.

4.2 Plan for improvements in fleet management system

With the adoption of management plans for purse seines and bottom trawls, it has become possible to issue authorizations based on historical record and activity in these fisheries. Croatia defined criteria as minimal fishing activities in period from 1 July 2009 – 30 June 2014. In total, there are 705 special fishing authorizations, out of which 480 for bottom trawls and 225 for purse seine. Given that some vessels have authorizations for both gears, in total 683 vessels were authorized. As the legal provisions allow for certain corrections, the final figure might slightly differ, but in negligible percentages.

The number of authorized vessels is foreseen to remain stable over the next 3-year period, and further capacity reduction shall be addressed through permanent cessation of fishing activities measures that are implemented under the current OP and are envisaged for implementation under the EMFF. Croatia also intends to further develop the national legal framework in terms of application of the entry-exit scheme. Provisions on effort restrictions in the fleets targeting anchovies and sardines are also expected to show the results in subsequent years.

4.3 Information on general level of compliance with fleet policy instruments

The key legal instrument governing fleet management in Croatia is the Marine Fisheries Act (OG 81/2013, 14/2014, 152/2014), which in essence allows for the implementation of the EU *acquis*. It also contains the key administrative elements, stipulating the key bodies and their activities. Also, the Act provides for the measures of fleet licencing and fleet registration. Pursuant to the Act, a specific Ordinance governing the issue of fleet licencing and licence transfer as well as entry-exit provisions has been adopted. In administrative sense, the provisions of these two instruments constitute the key framework for fleet management. The Act and the Ordinance contain also numerous provisions guaranteeing the compliance with the fleet policy in general. As the instrument of control, Croatia

operates a rather complex system of verifications at the level of general fleet registration (as applicable to all merchant vessels) and at the level of specific provisions on fishing fleet (i.e. engine certification). National control and inspection schemes and programs have been drafted and adopted in order to closely follow the fleet in terms of effort management. The most important one relates to the management plan for small pelagic species in GSA 17, for which very specific provisions apply.

Croatia in general complies with the fleet policy instruments.

5. Section E: Information on changes of the administrative procedures relevant to fleet management

Administrative procedures relevant to the management of the fishing fleet remained in 2015 the same as in previous years. The process of authorisation of trawlers and purse seiners, which started in 2014 and was finalised in 2015, represents an additional management instrument for these fleets resulting so far with the total of 705 fishing authorizations, out of which 480 for bottom trawls and 225 for purse seines. The number of vessels authorized is 683, given that some vessels operate multiple gears and the numbers may vary although insignificantly. As for other fleet segments, the licensing procedure is still under way for small-scale fleet previously categorised as for personal needs and is expected to be finalised during the 2016.

6. Section F: Estimation and discussion of balance indicators

This section contains the indicators as they have been calculated using the DCF data submitted to the EC data call in 2017 for the period 2012-2016. Technical indicators were calculated based on a 5-year methodology for the period 2012-2016 for 32 active unclustered fleet segments and 5 inactive fleet segments in 2016, while economic indicators were calculated based on a 4-year methodology for the period 2012-2015 for 23 clustered fleet segments that are consistent during the observed time period. Some of the indicators, in particular some economic indicators, should be interpreted with caution. Croatian fisheries in some fleet segments include a variety of gears that were grouped in accordance with the DCF methodology, but in reality operate on highly seasonal and local basis with differing operational patterns. In these segments (DFN, HOK, FPO, MGO, PGO, PGP and PMP) socio-economic constraints and realities are particularly important, as these activities include primarily small vessels operating in coastal waters. The point of particular sensitivity is the issue of revenue and activity, whereby all vessels that were active for one day were included in the analysis. With this approach, the number of vessels seems to be disproportionately high in relation to any of the indicator, and in small-scale fleet segments indicates economical unviability in most cases. This approach should be taken with caution, as in most cases small-scale fishermen do not see this as the only source of income and are active in a highly limited area or time, with negligible overall impact. The social dimension in such cases is strongly emphasised, as this forms a key element of national fisheries management scheme and policies. Croatia acknowledges the need to have a uniform approach to these indicators, but would like to point out some specific elements in cases when management measures are linked with a multi-gear and multi-species fishery that does not necessarily constitute a high-value or an industrial branch. In such cases, the vessels were categorized into one or the other category based on the applicable rules, but never the less in the DFN and the HOK segments the overall income distribution does not depend on fisheries. These vessels do not participate in catches and landings in real percentages even in relative terms, and hence Croatia believes that the assessments should be further considered. Croatia fully acknowledges and supports the need to have a uniform approach based on best available indicators and data, and shall highly appreciate the guidance by the EC and the STECF as well as any further clarification and discussion on the issue.

i) Technical indicators

The Inactive Fleet Indicator

The results of the Inactive Fleet Indicator show that in 2016 around 32% of Croatian fleet was inactive. Most of these vessels are shorter than 12 meters (3.865 in VL0006 and 3.253 in VL0612), while only a small percentage of the large scale fleet is inactive (2,4%). With the structure of the fleet in mind and process of inclusion of small scale vessels previously categorised for personal needs,

which was still ongoing in 2016, it can be assumed that high majority of these inactive vessels have passive gears listed in their licenses (gillnet and trammel net fleet segments).

The segment that has highest percentage of inactive vessels (18,42% in number) is VL0612 which is most affected with inclusion of small scale vessels previously categorised for personal needs, and which shows decrease of 22% in number of inactive vessels from 2015 to 2016. This decrease is a result of issuing licenses for small scale vessels for personal needs that progressed during the 2016 enabling activation of these vessels. Percentage of inactive vessels in other segments (besides vessels less than 12 m) is stable over years.

The overall inactive indicator needs to be considered against the applicable rules and technical measures in Croatia. The licenses for different fisheries in question were issued, as has been stated before, without the requirement of activity. In addition, since even the active fleet in this segment does not use fisheries as the main source of income, the inactive licenses are in most cases kept as the given right rather than the actual activity element, as the owners in all cases have other sources of income. The legal and technical frameworks in Croatia imply a right assigned to the owner without the requirement of activity. This in turn results in a situation whereby the license owners do not depend on this activity directly for the time being, but need to keep on the possibility (particularly since the national legal framework does not allow for any ceasing of rights issued).

In accordance with the Croatian national legal system, there is no obligation of activity of the vessel. The licence is issued under certain conditions but these do not include the obligation of a minimum activity. Furthermore, Croatian national legal system allows for a temporary inactivity while the rights stemming from the licence are not withdrawn. As a result of this system, high percentage of inactive vessels in some segments should not be considered as overcapacity because fishery is not their main activity or economic interest.

Table 12. Inactive fleet indicator.

Fleet segment		Number of vessels					No. inactive vessels as % of total vessels				
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
INACTIVE	VL0006	1.449	1.520	1.544	2.632	3.865	15,4	16,1	17,2	22,7	12,8
INACTIVE	VL0612	2.111	2.181	2.183	4.564	3.253	14,3	15,6	16,7	39,0	16,7
INACTIVE	VL1218	396	399	400	394	386	2,1	2,2	2,4	1,3	1,4
INACTIVE	VL1824	125	128	128	128	118	0,6	0,7	0,8	0,4	0,5
INACTIVE	VL2440	125	129	129	130	124	0,9	1,0	1,0	0,5	0,5
National fleet		4.211	4.358	4.385	7.849	7.746	33,3	35,6	38,1	64,1	31,8

Fleet segment		Inactive kW as % of fleet kW					Inactive GT as % of fleet GT				
		2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
INACTIVE	VL0006	2,5	2,5	2,8	7,0	4,0	1,5	1,5	1,7	4,4	2,2
INACTIVE	VL0612	12,7	14,0	14,4	25,9	18,4	5,1	5,6	5,9	16,0	8,8
INACTIVE	VL1218	3,8	4,0	4,4	3,4	4,2	3,6	3,7	4,1	3,6	4,3
INACTIVE	VL1824	1,7	2,0	2,1	1,8	2,0	2,9	3,5	3,6	3,4	3,5
INACTIVE	VL2440	5,8	6,3	6,1	4,7	4,5	13,8	15,2	14,7	11,9	11,5
National fleet		26,5	28,8	29,9	42,7	33,1	26,9	29,5	30,0	39,2	30,3

The Vessel Utilization Indicator

The VUI indicators shown in the table below were calculated using maximum observed days for each un-clustered fleet segment. In the analysis, these results are referred to. With the methodological and data-availability considerations in mind, the results of the VUI indicate that the segments have rather stable activity level over the years. Among length classes of all gear groups a different situation can be observed, from most homogenous to very low values of utilisation indicator. This can be explained by different nature and areas of operation of the vessels, as well as by different operational realities in some gears used in Croatia. Furthermore, for some small gears (DFN, HOK), this also indicates and confirms the specific realities of highly seasonal and highly small-scale approach to the activity. In the

most significant segments we can notice that PS segments are rather stable over the past years with slight improvement. This can be explained by the introduction of effort management measures in terms of limiting number of total fishing days targeting small pelagic. Regarding DTS segments situation is stable with no significant trend in all length classes. Some changes between years are also affected by the changes in the number of vessels which change segments over the years based on their gear activity.

Similarly as for the inactive fleet indicator, the results of this indicator need to be considered in view of the fleet structure and its activity. Again, it should be noted that particularly in smaller fleet segments fishing activities do not represent the only source of income, and rarely are the main one. Due to this fact, in those segments even though the indicator shows values less than 0,7 it is considered that it is not really a sign of imbalance. This particularly holds true for FPO, HOK and MGO segments with vessels of less than 12 meters. With the seasonal character of the vessels, and their overall characteristics of operations, the VUI is calculated against the parts of the fleet that are in fact more dependent on this activity than majority. Croatia considers that in future analysis this indicator should be weighed as well, in order to indicate the shares or real influence of the activity of some fleet segments.

Table 13. Vessel utilisation indicator calculated using maximum sea days on a vessel level (aggregated to un-clustered fleet segments). Trend is determined using the slope equation and a 5% threshold to indicate significance, as: Slope > 0.05 increasing; Slope < -0.05 decreasing; -0.05 < Slope < 0.05 no significant trend and slope = 0 flat/null trend.

Fleet segment		Vessel utilisation indicator (VUI)					Trend (5%)
		2012	2013	2014	2015	2016	
DFN	VL0006	0,30	0,31	0,31	0,29	0,28	no significant trend
DFN	VL0612	0,32	0,32	0,32	0,33	0,29	no significant trend
DFN	VL1218	0,57	0,61	0,66	0,63	0,74	increasing
DFN	VL2440	↓				↓	flat/null
DRB	VL0006		↓	0,80			-
DRB	VL0612	↓	0,85	0,81	0,71	0,68	decreasing
DRB	VL1218	0,93	0,77	↓	0,69	0,65	no significant trend
DRB	VL1824		↓	↓	↓	↓	flat/null
DRB	VL2440		↓	0,41			-
DTS	VL0006	↓	↓	0,41	↓		-
DTS	VL0612	0,42	0,41	0,66	0,41	0,41	no significant trend
DTS	VL1218	0,41	0,42	0,77	0,45	0,45	no significant trend
DTS	VL1824	0,57	0,63	0,50	0,61	0,65	no significant trend
DTS	VL2440	0,69	0,74	0,47	0,77	0,80	increasing
FPO	VL0006	0,53	0,52	↓	0,48	0,46	no significant trend
FPO	VL0612	0,47	0,38	0,32	0,49	0,43	no significant trend
FPO	VL1218				↓	↓	flat/null
HOK	VL0006	0,38	0,27	0,34	0,29	0,32	no significant trend
HOK	VL0612	0,33	0,30	↓	0,35	0,37	flat/null
HOK	VL1218	↓	↓	0,29	↓	↓	increasing
MGO	VL0006	0,27	0,29	0,46	0,04	0,27	increasing
MGO	VL0612	0,42	0,45	↓	0,46	0,44	flat/null
MGO	VL1218	↓	↓	↓	↓	↓	increasing
MGP	VL0612				↓		-
MGP	VL2440	↓					-

Fleet segment		Vessel utilisation indicator (VUI)					Trend (5%)
		2012	2013	2014	2015	2016	
PGO	VL0006	↓	↓	↓	↓	↓	flat/null
PGO	VL0612		↓	↓		↓	flat/null
PGP	VL0006	↓	0,85	0,71	0,21	0,01	decreasing
PGP	VL0612	0,58	0,56	0,57	0,27	0,04	decreasing
PMP	VL0006	0,43	0,47	0,59	0,49	0,45	no significant trend
PMP	VL0612	0,42	0,49	0,48	0,52	0,52	increasing
PMP	VL1218	↓	↓	↓	↓	↓	flat/null
PMP	VL2440		↓	↓			-
PS	VL0006	↓	↓	↓	↓	↓	flat/null
PS	VL0612	0,49	0,55	0,52	0,57	0,54	no significant trend
PS	VL1218	0,59	0,59	0,61	0,67	0,62	increasing
PS	VL1824	0,64	0,67	0,73	0,76	0,81	increasing
PS	VL2440	0,67	0,73	0,76	0,83	0,84	increasing
PS	VL40XX	↓	↓	↓	↓		-
TM	VL1218				↓		-

ii) Biological indicators

Sustainable Harvest Indicator

The SHI (Sustainable Harvest Indicator) was calculated by STECF EWG 15-17 based on the best available F and Fmsy values at that time.

As this indicator depends on the stock assessment and the calculation of the Fmsy, some of the values and stocks included in some segments should be taken with caution. As the full set of data (in particular value of catches) have only been available for Croatia since 2013, and some stock assessments were not performed, some uncertainties as to this indicator remain. This particularly holds true for the DFN segment. At the same time, due to a new stock assessment performed in 2015 by the GFCM working group, and changes in the method of assessment from small pelagic, indicator value can be rather different. Results presented in the table below concern only those fleet segments for which more than 40% of the stocks that constitute the catch, F and Fmsy values were available. For PS segments the share of those stocks is from 83% to 98%, and for DTS segment only 40%.

Table 14. Overview of available and significant SHI per fleet segment.

Fleet segment		SHI				
		2012	2013	2014	2015	Trend 14-15
PS	VL1218	3,4	2,3	2,3	2,2	decreasing
PS	VL1824	3,3	2,3	2,3	2,2	decreasing
PS	VL2440	3,3	2,3	2,3	2,2	decreasing
PS	VL40XX	3,6	2,3	2,3	2,2	decreasing
DFN	VL1218	-	3,7	2,5	2,5	decreasing
DTS	VL1218	4,8	4,4	3,3	3,2	decreasing
DTS	VL1824	4,6	4,5	3,3	3,3	decreasing
DTS	VL2440	-	4,8	3,4	3,3	decreasing

*PSVL40XX does not exist from 2016.

Table 14 shows also the value of Sustainable harvest indicator. It is obvious that PS segments are highly dependent on the stock status, and at the same time those stocks (sardine and anchovy) are

overexploited. Only one DTS segment has more than 40% dependency on the stocks available for analysis, and it is also out of balance. Regarding DFN segment, total landing of this segment is 0,03% of total fleet landing, and it is composed of only 16 vessels. These vessels are highly selective and catch mostly flatfish, but their influence is insignificant in terms of stock exploitation.

Given the need to secure sustainability and safeguard the implementation of the GFCM plan for small pelagics in GSA 17, and stock situation of hake, red mullet and Norway lobster, Croatia believes that these DTS and PS segments need to be addressed in terms of capacity imbalance. Additionally, PS and DTS segments participate with more than 96% share in the total landing meaning that capacity reduction measures in these segments could be the most effective in improving of the overall status of resources.

Potential imbalance can be observed also in the DFN segment, but during 2015 new Ordinance for fixed nets have been published with additional restrictions and regulations. In this light we can expect improvement in these segments. However, Croatia shall continue to carefully follow the situation in DFN fleet segment in relation to stocks exploited, and further analysis shall be performed for 2017 reference year.

Stock assessment of red mullet and hake indicates certain elements of overexploitation in terms of SSB and in relations of F_{cur} and F_{msy} . These two biological elements were particularly considered when deciding that DTS fleet segments need to be carefully addressed.

Stocks-at-risk Indicator

There were no stocks at risk targeted by Croatian fleet, as per available data.

iii) Economic indicators

Return of fixed tangible assets (RoFTA) and Current Revenue Against Break-Even Revenue (CR/BER)

For Croatia, these indicators were calculated for the period 2012-2015 for 23 clustered fleet segments that are consistent in the period.

For the 23 clustered fleet segments in 2016 RoFTA indicates that for:

- 10 fleet segments values are below 1% threshold;
- 7 fleet segments values are between 1% and 5%; and
- 8 fleet segments values are over 5% threshold.

CR/BER indicates that for:

- 9 fleet segments values are below threshold; and
- 14 fleet segments values are over threshold.

According to the results, in 2015 an overall economic recovery is indicated. In the short-term, most of the segments are positive and increasing, but from the perspective of profitability per unit of capital invested, the values are not so high. Despite the relatively high amounts of the replacement value of the vessel, ROFTA does not show better results due to insufficiently generated net profit.

For the demersal trawl segments, and only for vessels between 12 and 18 m LoA in 2015, CR/BER is the only positive indicator. Other values suggest only a slight increase compared to the previous period.

Although economic results indicate that PS VL2440 has operated with a net loss, it is important to note that this segment is involved in tuna purse seining. As the entire catch of Bluefin tuna is immediately transferred to cages for farming, there is no landing *per se*. The potential value of this catch is afterward recorded through tuna farm revenues. Furthermore, a large quantity of small pelagic fish landed by these vessels on the landing sites is designated for tuna feeding. The small pelagics intended for tuna feeding have a lower market value. In this capacity, the aim of this fishery is not the

profitability of a single vessel but the contribution to the overall operation of the company which owns both the farm and vessels. In general, indicators for purse seiners are showing more favourable opportunity in 2015, showing slow but steady progress.

According to the economic indicators, the most stable segments of the period are FPO VL0006, HOK and MGO VL0006 and DRB, while DTS and PS show slightly weaker results.

Table 15. Economic indicators for 2012-2015.

BER - excluding Opportunity cost of capital.

RoFTA - calculated as Net profit* / (fleet depreciated replacement value); to be compared against TRP: return on risk free long term investment minus inflation where Net profit* = (Income from landings + other income) - (crew wage + unpaid labour + energy + repair + other variable costs + non variable costs + annual depreciation).

Fleet segment		Current revenue to break-even revenue ratio (CR/BER)				Trend 13-15
		2012	2013	2014	2015	
DFN	VL0006	- 0,10	0,71	0,64	1,08	increasing
DFN	VL0612	- 0,00	0,70	1,42	1,67	increasing
DFN	VL1218	- 0,70	0,67	0,75	1,24	increasing
DRB	VL0612	1,93	2,59	2,55	4,03	increasing
DRB	VL1218	- 1,98	0,66	1,65	3,29	increasing
DTS	VL0612	- 0,36	0,24	0,28	0,54	increasing
DTS	VL1218	- 0,30	0,85	1,16	1,34	increasing
DTS	VL1824	- 0,33	0,15	0,31	0,47	increasing
DTS	VL2440	- 0,09	0,03	0,10	0,46	increasing
FPO	VL0006	- 0,59	1,02	28,34	15,33	increasing
FPO	VL0612	- 1,38	- 2,22	- 0,69	- 0,44	increasing
HOK	VL0006	- 2,75	- 5,62	15,22	8,76	increasing
HOK	VL0612	- 0,88	2,50	0,85	2,02	no significant trend
MGO	VL0006	0,81	2,85	2,88	4,31	increasing
MGO	VL0612	- 1,23	0,62	- 0,07	0,11	decreasing
PGP	VL0006	- 0,52	- 0,07	- 0,26	- 0,20	no significant trend
PGP	VL0612	- 0,54	- 1,24	0,39	- 0,43	no significant trend
PMP	VL0006	- 2,47	0,37	0,62	0,61	increasing
PMP	VL0612	- 0,22	- 1,67	4,65	2,49	increasing
PS	VL0612	- 2,37	2,15	1,10	0,96	decreasing
PS	VL1218	- 0,24	1,33	1,29	1,13	decreasing
PS	VL1824	0,41	1,21	1,25	1,30	no significant trend
PS	VL2440	0,38	0,96	0,68	0,86	no significant trend
TOTAL		- 0,03	0,82	0,98	1,07	increasing

Fleet segment		Return on Fixed Tangible Assets (ROFTA)				Trend 13-15
		2012	2013	2014	2015	
DFN	VL0006	-13%	-3%	-4%	1%	increasing
DFN	VL0612	-8%	-3%	3%	6%	increasing
DFN	VL1218	-13%	-2%	-2%	2%	increasing
DRB	VL0612	14%	18%	15%	28%	increasing
DRB	VL1218	-24%	-3%	6%	18%	increasing
DTS	VL0612	-13%	-6%	-5%	-3%	increasing

Fleet segment		Return on Fixed Tangible Assets (ROFTA)				Trend 13-15
		2012	2013	2014	2015	
DTS	VL1218	-10%	-1%	1%	2%	increasing
DTS	VL1824	-9%	-6%	-4%	-3%	increasing
DTS	VL2440	-7%	-6%	-6%	-4%	increasing
FPO	VL0006	-12%	0%	316%	155%	no significant trend
FPO	VL0612	-14%	-23%	-16%	-12%	increasing
HOK	VL0006	-24%	-43%	103%	68%	no significant trend
HOK	VL0612	-16%	10%	-1%	7%	no significant trend
MGO	VL0006	-4%	42%	38%	69%	increasing
MGO	VL0612	-14%	-3%	-11%	-8%	decreasing
PGP	VL0006	-88%	-57%	-38%	-7%	increasing
PGP	VL0612	-11%	-17%	-4%	-8%	increasing
PMP	VL0006	-257%	-16%	-24%	-32%	decreasing
PMP	VL0612	-8%	-24%	23%	12%	increasing
PS	VL0612	-25%	7%	1%	0%	increasing
PS	VL1218	-18%	3%	3%	1%	no significant trend
PS	VL1824	-4%	2%	2%	2%	increasing
PS	VL2440	-4%	0%	-2%	-1%	no significant trend
TOTAL		-8%	-1%	0%	1%	increasing

iv) Social indicators

Regardless of the fact that the category of small-scale coastal fisheries (vessels between 0-12 meters using passive gears) is not economically significant, it is of significant social importance due to the large number of vessels. Analysis of the economic data collected under the DCF for the reference year 2015 shows that small scale fleet segments, with 6.913 vessels cover about 89% of vessels in the fleet and only 2,24% of total landing. Average length of these vessels is only 6 m and average age of 36 years, which limits their fishing activities to fishing grounds near the port and to one day fishing trips.

Analysis of effort and landing of the small-scale fleet shows that two segments, DFNVL0612 and MGOVL0006 cover over 50% of days at sea of small-scale fleet, similar as in landing weight and landing value. Although MGOVL0006 covers less than 4% of the small-scale fleet, it is significant both in small-scale fleet landing value and total landing value (Table 7, Table 16). Regarding average vessel age, youngest vessels are in MGOVL0006.

On the other hand, even though PGPVL006 and PGPVL0612 cover almost 40% of small-scale fleet vessels, their share in days at sea, landing weight and values is insignificant even in small-scale fleet. Segments with low share of vessels and low activity (around 5% in small-scale fleet) are FPOVL006 and FPOVL0612 which together cover less than 3% of small-scale vessels, around 7% DAS, 6% of landing weight and 8% of landing value, PMPVL006, PMPVL0612 (less than 2% vessels, 4% DAS, 7% landing weight and 4% landing values) and HOKVL0006 (between 1 and 2% in each category). HOKVL0612 covers a significant part in landing weight and value, predominantly consisted of Bluefin tuna, hake and swordfish (Table 8).

Table 16. Fleet segments that form small-scale fisheries and their share in landing weigh, landing value and days at sea in 2016.

Fleet segment	% Number of vessels	Average age of vessel	Average age of licence holder	% DAS	% Landing weight	% Landing value
DFN VL0006	4,64	34,94	50	15,79	8,42	6,49
DFN VL0612	9,39	34,18	50	37,29	29,34	32,30
FPO VL0006	0,65	30,31	46	1,96	1,08	1,31
FPO VL0612	1,76	36,22	51	5,96	4,59	6,52
HOK VL0006	1,16	31,91	47	2,10	1,02	0,95
HOK VL0612	3,46	29,61	48	10,05	16,82	20,20
INA VL0006	14,31	34,18	53	-	-	-
INA VL0612	18,69	36,91	56	-	-	-
MGO VL0006	3,80	25,85	45	13,02	23,91	22,23
MGO VL0612	1,11	32,30	48	4,43	5,83	3,91
PGP VL0006	30,71	38,00	63	2,68	0,59	0,59
PGP VL0612	8,93	39,22	63	2,23	1,29	1,74
PMP VL0006	0,61	31,93	46	1,50	1,67	1,26
PMP VL0612	0,78	32,56	48	2,97	5,42	2,51
Total	100,00	35,80	51	100,00	100,00	100,00

The average age of vessels licence holder in small-scale fleet is 51. According to available data from the fleet register, the average age of vessel correlates with the average age of licence holders. The most vivid small-scale fleet segment is MGOVL0006 with average licence holders age of 45. Together with HOK and PMP this group consists of younger population (the youngest vessels licence holder is 18 years old) with gears suitable also for other activities as tourism or transport. The oldest segment is PGP in general, with 30% of vessels in small scale fleet (average vessel age of 39) and average vessels licence holders' age of 63. This group of vessels, previously categorised as "for personal needs", fall into a separate category of commercial fleet. Most of these vessels licence holders are older than 60, retired and occasionally engaged in fishing activities. In this category is also the oldest Croatian fisherman in small scale fleet and in active fleet, 102 years old.

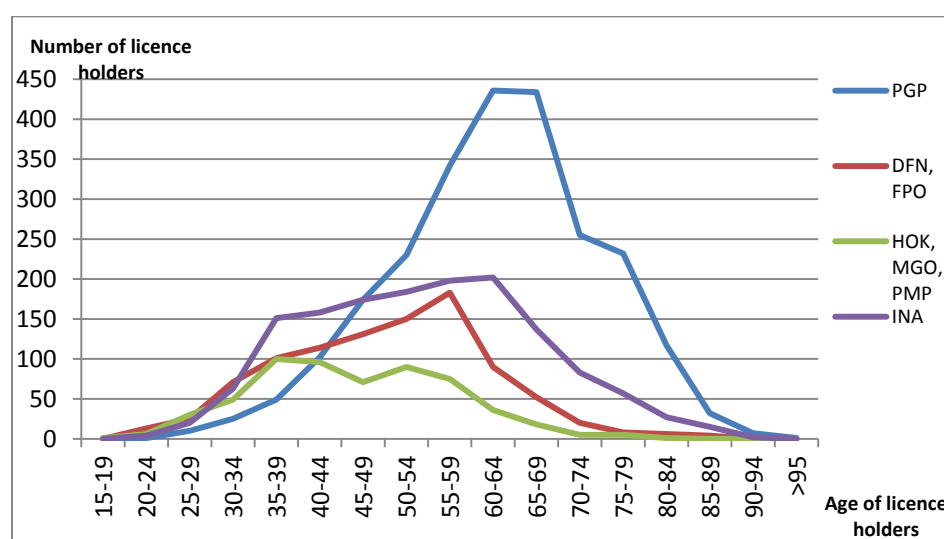


Figure 2. Number of vessel owners by age (5-year age groups) for small-scale fleet in 2016.

Days at sea for passive gears have a distinct seasonal character, depending on migration of target species to the inshore area during the warmer period of the year (Figure 3). Data for 2015 show that on average vessels from fleet segment DFN VL0006 have 67 days at sea during the year while DFN VL0612 segment has 78 days at sea.

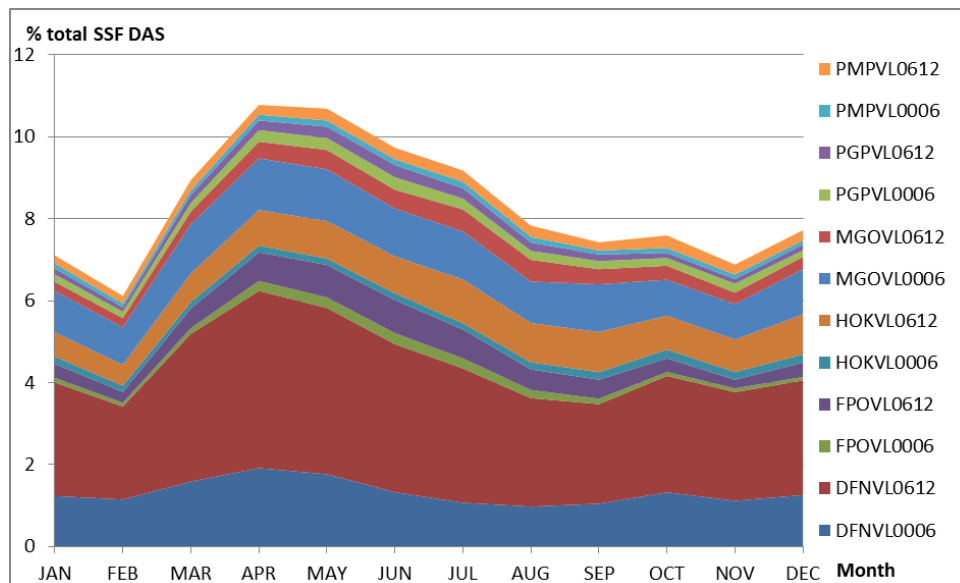


Figure 3. Days at sea per month in the small-scale fisheries for passive gears in 2016.

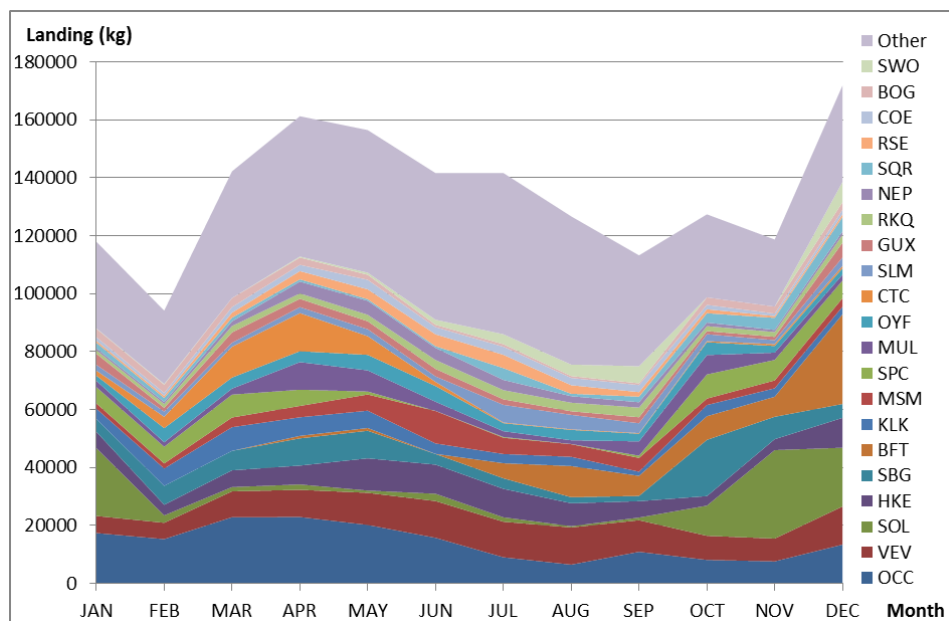


Figure 4. Landing composition in the small-scale fisheries for passive gears in 2016.

In 2016, the total value of landings of small-scale fishery was €9,1 million, covering 16,08% of total value of landings. The catch is highly diverse, with 20 species covering 70% of landing (Figure 4), compared with total landing where 4 species cover 90% of landing. Most of the landing weight and landing value consists of demersal fish (common sole, hake, seabream) (Figure 5). Most of small-scale fisheries catch is sold on the local market, and income is often used as the addition to the home budget. This is the main reason for negative economic indicators in these segments, but for some fishermen in these segments, commercial benefit is not even a priority since they have other sources of income.

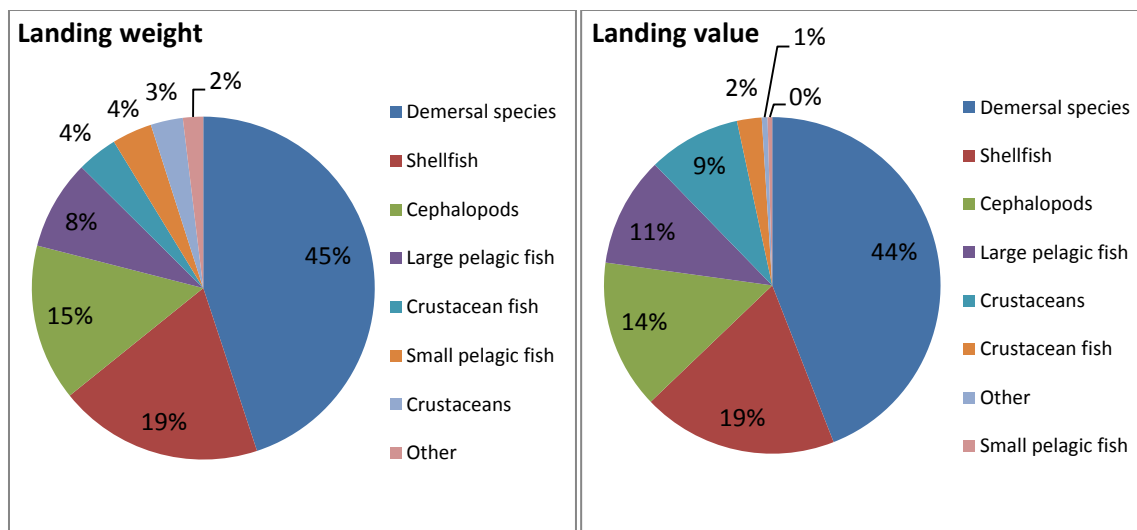


Figure 5. Target assemblage of small-scale fisheries in 2016.

Table 17. Characteristics of small-scale fisheries in 2016.

Fleet segment	Number of vessels	Days at sea	Landing (kg) per DAS
DFN VL0006	321	66,6	6,36
DFN VL0612	649	77,8	9,39
FPO VL0006	45	58,96	6,59
FPO VL0612	122	66,18	9,19
HOK VL0006	80	35,48	5,80
HOK VL0612	239	56,94	5,80
MGO VL0006	263	67,05	21,90
MGO VL0612	77	77,88	15,71
PGP VL0006	2123	1,71	2,63
PGP VL0612	617	4,89	6,93
PMP VL0006	42	48,38	13,28
PMP VL0612	54	74,52	21,75
INA VL0006	989	0,0	0,0
INA VL0612	1292	0,0	0,0

Even though existing indicators show a certain level of imbalance, DFN segment is not included in the Action plan as Croatia considers that addressing the capacity of the most important fleet segments in terms of percentage of landings and activity is the issue of priority. With very low catch and landing values, the DFN segment is considered to be primarily highly artisanal and important in terms of social and economic elements for local population and communities, and actions in that segment are envisaged in future years, primarily by way of regulation of their activities. It is also expected that this fleet segment shall in the forthcoming years be the one mostly encompassed by the EMFF measures of diversification of activities and provision of services complementary to fisheries.

7. Overall: Statement of opinion on balance of fleet capacity with fishing opportunities

Overall, Croatia considers that there are some imbalances in its fleet primarily as compared to the status of the stocks. This corresponds to 2015 status and it has been clearly assessed in all PS and all DTS segments, primarily because of the importance of these segments to the status of the stocks and their participation in landings. It is not considered that there is a structural overcapacity in the DFN segments VL0006 and VL0612, albeit it is acknowledged that the number of active vessel might indicate such situation. These fleet segments show positive trends in economic indicators although they have low economic activity with fisheries being additional source of the income and as such have rather limited contribution to the overall landings (<1%). While these two segments, due to its size, have negligible influence on resources, segment DFN VL1218 represents commercial vessels with negative influence and as such it is consider being out of the balance.

Like in previous years Croatia considers that purse seiners and bottom trawls should be given the most attention in terms of capacity and effort reduction. In the PS segment, the intention to maintain the balance in relation to the availability of small pelagic resources is further supported by measures within the GFCM management plan for the GSA 17, as well as through the national management plan pursuant to the Mediterranean Regulation. In order to effectively maintain balance between key fleet segments and the resources, Croatia intends to continue with the measures provided within the framework of the EMFF for permanent and temporary cessation of fishing activities. In addition, Croatia intends to reduce fishing effort through diversification of activities.

Croatia is aware that indication of imbalance exists in some other segments of the fleet. However, these fleets are considered highly local and operating in very restricted areas, with the need to further consider their effect on the resources. At the same time, Croatia implemented new Ordinance with additional restrictions concerning gears used by these vessels. Croatia shall continue to follow closely these fleet segments so as to prevent a possible negative impact on stocks.

As for the DTS segments, although all DTS segments are considered to be out of balance, following latest stock assessment for demersal species and scientific advice on status of Hake and Norway lobster, Croatia considers that more attention should be given to DTS VL2440 since this segment has the highest dependency on Hake and Norway lobster. Demersal trawlers above 24 meters operate in outer sea, in which main hatching grounds for these species are located. Moreover, in area of Jabuka pit, Croatia introduced special marine management area with no-take zone. This measure affected main fishing grounds of this fleet and it is necessary to take additional action in order to prevent relocation of fleet effort. This should be done through measure of permanent cessation of fishing activities.

In conclusion, overview of balance status per indicator and an overall national assessment on balance by fleet segment is given in the table below.

According to the results of the analysis and national assessment on overall status, out of 23 clustered fleet segments, 9 are considered to be in balance with their fishing opportunities. These include the following fleet segments: DFNVL0006 and DFNVL0612, DRBVL0612 and DRBVL1218, FPOVL0006, HOKVL0006 and HOKVL0612, MGOVL0006 and PMPVL0612.

For the following fleet segments, results indicate a possible imbalance with their fishing opportunities: FPOVL0612, MGOVL0612, PMPVL0006. However, due to considerations presented above, currently there is no intention in including them in the Action plan, though their status shall be further monitored.

PGPVL0006 and PGPVL0612 are managed as a specific category separately from the main commercial fleet, through strict gear and catch restrictions.

Following fleet segments are considered to be out of balance and are included in the Action plan: DFNVL1218, all PS and all DTS segments.

Due to the small size of some segments it is not possible to determine an independent status, however because of their characteristics it can be considered that their status is equal to the status of segments to which they are clustered to. Hence, the segments DFNVL2440, FPOVL1218, MGOVL1218, and PSVL0006 are considered to be out of balance. Segments DRBVL1824 and HOKVL1218 are considered to be in balance. It is also important to note that for the polyvalent segments PGOVL0006, PGOVL0612 and PMPVL1218 the consideration on balance in this way may not be applicable, as these segment are not stable over time.

Table 18. Overview of results of most recent available values of balance indicators and overall status assessment.

Fleet segment		VUI	SHI	CR/BER	ROFTA	OVERALL STATUS	Comment
		Status 2016	Status 2015	Status 2015	Status 2015		
DFN	VL0006	out of balance	na	in balance	in balance	in balance	Economic indicators indicate sufficient profitability with an increasing trend.
DFN	VL0612	out of balance	na	in balance	in balance	in balance	Economic indicators indicate sufficient profitability with an increasing trend.
DFN	VL1218	in balance	out of balance	in balance	not sufficiently profitable	out of balance	SHI indicates high dependency on overfished stocks.
DFN	VL2440	in balance	na	na			Clustered to DFN VL1218 (1 vessel) – out of balance.
DRB	VL0612	out of balance	na	in balance	in balance	in balance	Economic indicators indicate sufficient profitability with an increasing trend. Low utilization is indicated.
DRB	VL1218	out of balance	na	in balance	in balance	in balance	Economic indicators indicate sufficient profitability with an increasing trend. Low utilization is indicated.
DRB	VL1824	in balance	na	na			Clustered to DRB VL1218 (1 vessel) – in balance.
DTS	VL0612	out of balance	na	out of balance	out of balance	out of balance	Technical and economic indicators indicate low utilization and low profitability.
DTS	VL1218	out of balance	out of balance	in balance	not sufficiently profitable	out of balance	SHI indicates high dependency on overfished stocks.
DTS	VL1824	out of balance	out of balance	out of balance	out of balance	out of balance	SHI indicates high dependency on overfished stocks.
DTS	VL2440	in balance	out of balance	out of balance	out of balance	out of balance	SHI indicates high dependency on overfished stocks.
FPO	VL0006	out of balance	na	in balance	in balance	in balance	Economic indicators indicate sufficient profitability with an increasing trend. Low utilization is indicated.
FPO	VL0612	out of balance	na	out of balance	out of balance	out of balance	Technical and economic indicators indicate low utilization and low profitability.
FPO	VL1218	in balance	na	na			Clustered to FPO VL0612 (2 vessels) – out of balance.
HOK	VL0006	out of balance	na	in balance	in balance	in balance	Economic indicators indicate sufficient profitability with an increasing trend. Low utilization is indicated.
HOK	VL0612	out of balance	na	in balance	in balance	in balance	Economic indicators indicate sufficient profitability with an increasing trend. Low utilization is indicated.
HOK	VL1218	in balance	na	na			Clustered to HOK VL0612 (6 vessels) – in balance.
MGO	VL0006	out of balance	na	in balance	in balance	in balance	Economic indicators indicate sufficient profitability with an increasing trend. Low utilization is indicated.
MGO	VL0612	out of balance	na	out of balance	out of balance	out of balance	Technical and economic indicators indicate low utilization and low profitability.
MGO	VL1218	in balance	na	na			Clustered to MGO VL0612 (3 vessels) – out of balance.
PGO	VL0006	in balance	na	na			Clustered to PGP VL0006 (5 vessels).
PGO	VL0612	in balance	na	na			Clustered to PGP VL0612 (1 vessel).
PGP	VL0006	out of balance	na	out of balance	out of balance	na	Category for personal needs which is managed separately from the main commercial fleet, through gear and catch restrictions, as a specific category.
PGP	VL0612	out of balance	na	out of balance	out of balance	na	
PMP	VL0006	out of balance	na	out of balance	out of balance	out of balance	Technical and economic indicators indicate low utilization and low profitability.
PMP	VL0612	out of balance	na	in balance	in balance	in balance	Economic indicators indicate sufficient profitability with an increasing trend. Low utilization is indicated.
PMP	VL1218	in balance	na	na			Clustered to PMP VL0612 (1 vessel) – in balance.
PS	VL0006	in balance	na	na			Clustered to PS VL0612 (2 vessels) – out of balance.
PS	VL0612	out of balance	na	out of balance	out of balance	out of balance	Technical and economic indicators indicate low utilization and low profitability.
PS	VL1218	out of balance	out of balance	in balance	not sufficiently profitable	out of balance	SHI indicates high dependency on overfished stocks.
PS	VL1824	in balance	out of balance	in balance	not sufficiently profitable	out of balance	SHI indicates high dependency on overfished stocks.
PS	VL2440	in balance	out of balance	out of balance	out of balance	out of balance	SHI indicates high dependency on overfished stocks.

8. ACTION PLAN

A. Revision and adjustment of Action plan

Action plan from the previous year is in force until the end of 2017. However, action plan presented in the Fleet report for 2015 has been updated and targets for some segments have been adjusted according to the progress in the implementation of the measures in 2016.

Due to reasons explained in Chapter 7 (high dependency on overfished stocks of hake and Norway lobster, as well as implementation of large area of no-take zone), the target capacity of DTS2440 has been decreased by an additional 20%. Doing so, further reduction has been foreseen in 2017 in order to reach the adjusted target capacity.

For the PS segments, adjustment has been made in order to facilitate the impact of temporal and spatial closures that have been implemented based on Recommendation GFCM/40/2016/3. The Recommendation foresees closure of at least 30% of inner and territorial sea area, which has been identified as a nursery area or as an important area for the protection of early age classes of fish. As a result of this measure in 2016, 52% of inner sea was under total closure with direct impact on PS fleet. Since this measure applies for vessels over 12 meters, the segment PS1218 is most affected, as it is most active in this area. Due to this, part of reduction planned for PS2440 is reallocated to PS1218 segment, in order to compensate restriction in reduction of fishing ground. This reallocation of reduction accounts for 10% of reduction foreseen for segment PS2440 to PS1218 segment, which is foreseen for 2017.

Table 19. Adjusted targets of the active capacity reduction scheme to be achieved using the financial assistance within the EFF OP and EMFF OP.

Fleet segment		Referent active capacity - 2014	Reduction within EFF in 2015	Reduction within EMFF in 2016	Active capacity at the end of 2016	Further reduction within EMFF (in process - 2017)	Adjusted targets of active capacity at the end of 2017	Target status
		GT	GT	GT	GT	GT	GT	
DTS	VL0006	8,48	-	-	-	-	7,63	Reached
DTS	VL0612	1.416,10	4,83	67,86	1.274,63	265,66	1.008,97	As planed
DTS	VL1218	3.660,82	53,00	226,87	3.091,31	455,52	2.635,79	As planed
DTS	VL1824	2.373,16	579,02	169,00	2.097,14	528,45	1.568,69	As planed
DTS	VL2440	2.575,83	468,83	309,00	1.715,00	365,44	1.349,56	Adjusted
PS	VL0006	3,54	-	0,71	1,39	-	2,83	Reached
PS	VL0612	260,95	-	23,34	187,03	-	208,76	Reached
PS	VL1218	883,61	-	103,73	644,90	254,63	390,27	Adjusted
PS	VL1824	4.180,94	63,00	-	3.917,13	679,75	3.237,38	As planed
PS	VL2440	10.758,19	96,00	-	11.181,17	2.170,41	9.010,76	Adjusted
PS	VL40XX		-	-				
Total		26.121,62	1.264,68	900,51	24.109,70	4.719,86	19.420,65	

B. Additional management measures to be applied in order to secure the balance of capacity and the status of the resources ¹

PS fleet

Regarding the PS fleet segment, *in 2017 reauthorization process will start which will bring stricter conditions for authorization for next period. This will inevitably result in decrease of PS fleet in number of vessels and fleet capacity.*

PS segment is subject to the GFCM multiannual management plan in Recommendation *GFCM/40/2016/3* emergency measures were established for *2017 and 2018*. Thus, the fleet targeting small pelagic stocks in Adriatic in GSA 17 is subject to effort limitation in *2017 and 2018* as follows:

- Maximum of 180 fishing days per vessel per year;
- Maximum 20 days per vessel per month;
- Spatial and temporal closure of no less than 15 continuous days and up to 30 continuous days taking place between 1 April and 31 August;
- *Maximum of 144 days targeting anchovy and 144 days per vessel targeting sardine;*
- *Closures for vessels over 12 m length overall for not less than 6 months which shall cover at least 30 percent of the area which has been identified as a nursery area or as an important area for the protection of early age classes of fish (in territorial and inner sea);*
- *Limitation of overall fleet capacity of purse seiners actively fishing for small pelagic stocks in terms of gross tonnage (GT) and/or gross registered tonnage (GRT), engine power (kW) and number of vessels, as recorded both in national and GFCM registers in 2014; and*
- *Catch limit in 2017 and 2018 has been set at the level of total catch of small pelagics (sardine and anchovy) in 2014.*

Following the obligations as previously listed, Croatia plans to implement temporary cessation of fishing activities funded through EMFF during January and May based upon the provisions of the National management plan for purse seine.

DTS fleet

Regarding the DTS fleet segment, *in 2017 reauthorization process will start which will bring stricter conditions for authorization for next period. This will inevitably result in decrease of DTS fleet in number of vessels and fleet capacity.*

As foreseen by the national Management plan for trawl nets, a number of effort management measures are foreseen. They include the following, and these *will be in force in 2017*:

1. Introducing the spatial restriction for trawling in Jabuka Pomo pit area, in the period from *1 September 2017 to 31 October 2020*, with a plan for extension;
2. Introducing a new regime of spatial and temporal closures in channel areas;
3. Introducing of the temporary cessation of fishing activities in total duration of 30 days in national fishing zones based on the scientific advice; and
4. Reducing effort by implementing diversification of fishing activities with a view of promoting fishing tourism.

DFN fleet

Given the analysis and the explanations provided in the report, the indications that there seems to be a discrepancy between the *DFN1218* fleet segment and the resources it exploits should be carefully considered. This fleet segment is particularly local, displays characteristic of highly seasonal activity

¹ Text written in *italic* represents the update of the Action plan

and indicates that the income of the fishermen are not necessarily linked with the fishing activity in the first place (majority of the income). This gives rise to certain doubts as to the measures that need to be deployed, particularly with the social and economic elements in mind. Given the doubts and the realities of the fleet, Croatia enforced additional effort management measures by way of legislative act Ordinance on commercial fishing at sea using gillnets, traps, hooks and line gears, spears and other particular ways of fishing.

The Ordinance contains additional restrictions of the length of gillnets per vessel as well as the additional spatial and temporal restrictions. The measures include:

1. Limiting the length of gillnets to maximum 3.000 meters per vessel with 1.000 meters per each additionally employed fisherman (up to maximum 2 fishermen) in national fishing zones A, B, C, D, F and G and subzone E6 – more restrictive in comparison to provisions of the Mediterranean Regulation which allows for 4.000 meters per vessel with 1.000 meters per each additionally employed fisherman (up to maximum 2 fishermen);
2. Detailed spatial and temporal restrictions (reduction of the overall period allowed for fishing for trammel nets up to 4 months and the prohibition of fishing within a distance of 2 Nm in the areas of fishing zone C); and
3. Technical measures aiming to decrease effort and increase selectivity (i.e. mesh size, net drop).

Having the above mentioned in mind, effects of the combination of measures are expected over the next years. *The first results can be observed in segments with length less than 12m, and further improvement can be expected in the Fleet reports for 2017 and 2018.*

In addition to this, the national licensing system prevents the increase of effort in this segment as it does not allow for issuing of new licenses nor it allows for the transfer of inactive gears from one license to the other.

C. Progress report

Based on the measures implemented during 2016, the following developments can be observed through segments that were recognized as imbalanced in Fleet report for 2015.

Measure of permanent cessation of fishing activities in 2015 and 2016 resulted with a decrease of capacity of authorized PS and DTS (using demersal trawls, OTB) fleet. It is important to stress that this decrease does not correspond to the decrease of active fleet since not all authorized vessels were active in one year. In addition, some vessels have changed length class (like only vessel for PS40XX which changed to PS2440) or in situation where some vessels have both authorizations for PS and DTS.

Table 20. Decrease of capacity of authorized fleet as a result of financial assistance within the EFF OP and EMFF OP and other national measures.

Authorized fleet	Authorised capacity (beginning of 2015)	Reduction through permanent cessation (EFF and EMFF)	Reduction through other national measures	Current capacity of authorized fleet (beginning of 2017)
OTB	13.227,21 GT	1.930,38 GT	252,54 GT	11.005,73 GT
PS	18.489,35 GT	302,8 GT	201,24 GT	18.004,77 GT

** Although authorisation process is finished and capacity is frozen, some minor variations are possible due to ongoing court processes or corrections of vessel tonnage by maritime authorities.*

9. REFERENCES

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