

## **ANNUAL REPORT LITHUANIA**

### **Annual report 2017 to achieve a sustainable balance between fishing capacity and fishing opportunities**

**31 May 2018**

#### **Introduction**

The report is composed pursuant to REGULATION (EU) No 1380/2013 OF THE 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 COMMISSION IMPLEMENTING REGULATION (EU) 2017/1756 of 27 September 2017 repealing Regulation (EU) No 1013/2010 laying down implementing rules on the Union Fleet Policy as defined in Chapter III of Council Regulation (EC) No 2371/2002 (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). It summarizes the current state of national fisheries fleet management measures and efforts to achieve a sustainable balance between fishing capacity and fishing opportunities.

#### **1. Capacity**

##### **1.1 Description of fleet**

Lithuanian fisheries fleet is divided in three larger parts based on fishing grounds. Every part consists of smaller segments classified by mostly used fishing gear type. In total there are 5 segments. Also we distinguish two more segments (VL 12-18 and VL-18-24) for the inactive vessels to calculate inactive fleet indicator (see Table 3).

The first fisheries fleet part operates in the coastal zone of the Baltic Sea. There are two segments - AREA27 DFN 10-12 and AREA72 PG 00-10. These segments are composed of coastal fishing vessels with the length <12 m and the main engine power  $\leq$  110 kW. Perch, bream, roach, salmon, pike, cod, flat fish, smelt, pike perch and eels are fished mostly.

The second part of fisheries fleet operates in the Baltic Sea and the North Sea. There are two segments - AREA27 TM 24-40 and AREA27 DTS 24-40. These segments are composed mostly of fishing vessels with length >12 meters and main engine power 165 – 220 kW. The main target species – cod, herring, sprat and salmon.

The third fisheries fleet part operates mainly in waters of NAFO, NEAFC, SPRFMO, Mauritanian EEZ, and Moroccan EEZ as well as in the Norwegian waters and the North Sea. There is one segment OFR TM-40XX and it is composed of fishing vessels with length >40 meters. Mostly mackerel, horse mackerel, sardines, round sardinella are fished.

Two Lithuanian vessels were involved in pelagic fishery in Mauritanian EEZ in 2017. Two Lithuanian fishing vessels were fishing in Moroccan EEZ.

During 2017 four Lithuanian vessels carried out fishery in the NEAFC regulatory area. The quotas in NAFO were exchanged into NEAFC quotas.

Two fishing vessels were involved in the shrimp's fishery in the Svalbard area (Norwegian Exclusive Economic Zone).

During 2017 one Lithuanian vessel carried out fishery in SPRFMO regulatory area.

## 1.2 Development of fishing capacity

By the end of the year 2017 Lithuanian fishing fleet consisted of 144 vessels. In total 40 210 GT and 46 469 kW.

Comparing to 2016 the total capacity was reduced slightly by 671 GT (1,64 %) and 1595 kW (3,31%) (Figure 1). The overall capacity does not exceed the ceilings set by the Council Regulation (EC) No 1380/2013.

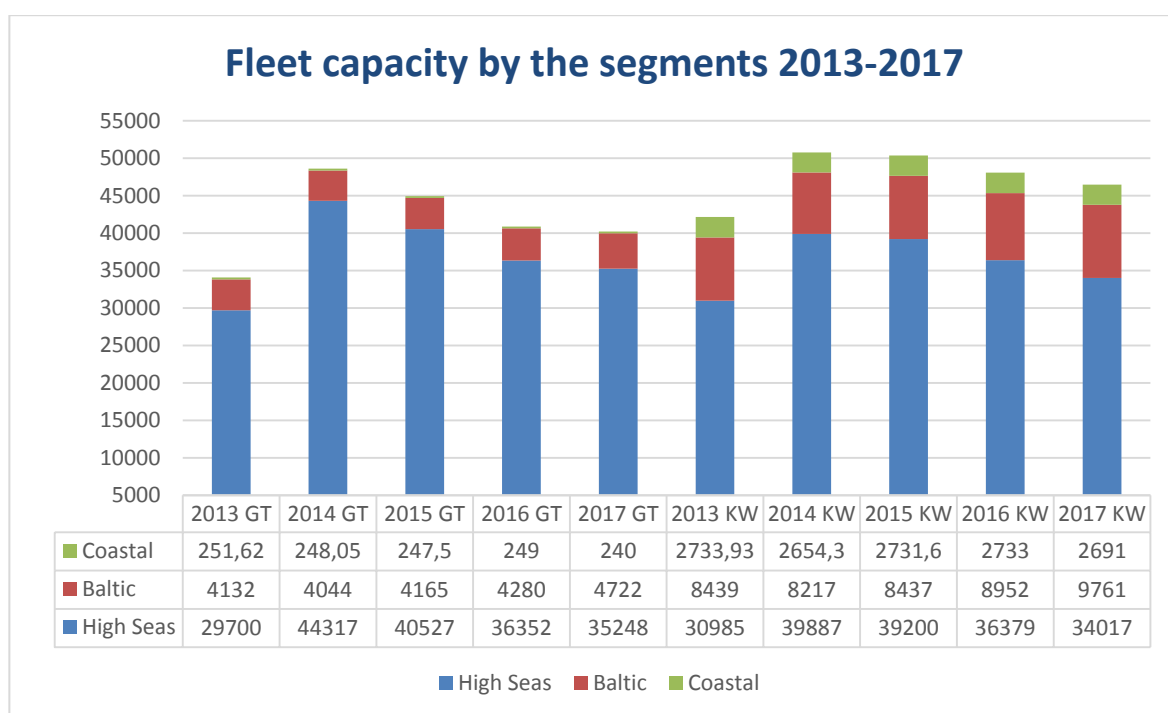


Figure 1. Fishing fleet capacity by the segments 2013 – 2017.

## 1.3 Compliance with entry/exit scheme and with level of reference

Lithuania applies Entry/Exit scheme as defined in Council Regulation (EC) No 1380/2013 Article 23. For 2017, the same like for the previous recent years, no public aid was granted and the entry of new capacity into the fleet is compensated by the withdrawal of capacity. Changes in the data are presented in the Table 1.

In the reporting period no vessels with a capacity of over 100 GT entered the fishing fleet with public support and no engines of any fishing vessels of a length of 12 meters or more have been replaced with public support.

Table 1. Entry/Exit regime 2017-12-31

|          | <b>Lithuania</b>                    | <b>GT</b>   |        | <b>kW</b>   |        |
|----------|-------------------------------------|-------------|--------|-------------|--------|
| <b>1</b> | Capacity of the fleet on 01/05/2004 | <b>GTFR</b> | 76 738 | <b>kWFR</b> | 80 702 |

|    |  |              |         |              |         |
|----|--|--------------|---------|--------------|---------|
| 2  | Capacity level for the application of the entry-exit regime              | <b>GT 04</b> | 77 282  | <b>kW 04</b> | 82 102  |
| 3  | Entries of vessels of more than 100 GT financed                          | <b>GT10</b>  | 0       | <b>kW</b>    | 0       |
| 4  | Other entries or capacity increases (not included in                     |              | 120 324 |              | 123 263 |
| 5  | Increases in tonnage GT for reasons of safety                            | <b>GTS</b>   | 0       |              |         |
| 6  | <b>Total entries ( 3 + 4 + 5 )</b>                                       |              | 120 324 |              | 123 263 |
| 7  | Exits before 1/1/2007 financed with public aid                           | <b>GTa1</b>  | 1 616   | <b>kWa</b>   | 3 135   |
| 8  | Exits after 1/1/2007 financed with public aid                            | <b>GTa2</b>  | 2 334   |              | 5 482   |
| 9  | Other exits (not included in 7 and 8)                                    |              | 156 861 |              | 160 588 |
| 10 | <b>Total exits ( 7 + 8 + 9 )</b>   |              | 160 811 |              | 169 205 |
| 11 | Power of engines replaced with public aid conditional to power reduction |              | 0       | <b>kWr</b>   | 0       |
| 12 | <b>Capacity of the fleet on 31/12/2017 (1+6-10)</b>                      | <b>GTt</b>   | 36 251  |              | 34 760  |
| 13 | <b>Fleet ceiling on 31/12/2017</b>                                       |              | 73 489  |              | 73 516  |

#### 1.4 Impact of fishing effort reduction schemes

Lithuania's fishing fleet in the Baltic sea was significantly reduced before the multiannual cod management plan for the Baltic Sea (Council Regulation (EC) No 1098/2007 of 18 September 2007 establishing a multiannual plan for the cod stocks in the Baltic Sea and the fisheries exploiting those stocks, amending Regulation (EEC) No 2847/93 and repealing Regulation (EC) No 779/97), therefore this plan had not much impact on fleet reduction. From 2005 to 2007 the capacity of the Baltic Sea fleet was reduced by 2 711 GT and 4821 kW and by 37,5 % and 35,3 % respectively. Lithuania takes a note that fleet reduction after 2007 occurred due to the withdrawal of high seas' vessels from the fleet (see Table 1).

## 2. Biological Indicators

Lithuanian Baltic cod quota consists of two parts: Eastern cod stock (25-32 ICES Subdivisions) and Western cod stock (22-24 ICES Subdivisions). Every year Lithuania swaps Western cod quota to Eastern cod quota. Lithuanian fleet segments are not associated with the

Western cod landings therefore Western cod not included in analysis for biological indicators calculations

$F/F_{msy}$  indicators have not been calculated for high seas fleet segment because the areas (FAO 34) where this fishery has been carried out are outside ICES areas (FAO 27). Also there are not any assessment reports for CECAF pelagic stocks  $F/F_{msy}$  that could fully substitute ICES advice with a relevance for annual report between fishing capacity and fishing opportunities requirements.

## 2.2. Sustainable harvest indicator (SHI)

The SHI (sustainable harvest indicator) was used to assess whether vessels are relying on overfished stocks.

The SHI indicator,  $F_{estimated}/F_{target}$ , is a measure of whether the economic activity of a fleet segment is, on average, less or more dependent on overfished stocks. A value less than one is usually considered as indicating a sustainable exploitation of the stock and a value higher than one is usually considered as a sign of overfishing of the stock.

Eastern Baltic Cod - The age-based Eastern Baltic (subdivisions 24-32) cod stock assessment could no longer be accepted by ICES WGBFAS in 2014 mainly because of age reading problems as well as changes in growth rates leading to unknown changes in catchability. From 2014 onwards the stock has been assessed as a category 3 stock and an FMSY value has no longer been provided by ICES. Therefore, the last F and FMSY value available is the one from the 2014 assessment. As consequence, the EWG 17-08 Prep. meeting decided to withdraw Eastern Baltic cod completely from the SHI index calculations as there is currently no basis to determine the status of the stock.

Lithuanian Baltic Sea fishing fleet in 2016 consisted of 8 segments which are described in „Fleet economics“ data call: PG VL0010, DFN VL0012, DTS VL1824, TM VL1824, DFN VL2440, DTS VL2440, TM VL2440, TM VL40XX. Segments PG VL0010, DFN VL0012 are operating in coastal area others - in the open Baltic Sea.

SHI values that were calculated for all stocks with assessment data, even if the proportion of landings value of the assessed stocks made up less than 40% of the total landings value of the fleet segment (in such cases, the indicator is considered as unrepresentative/unreliable).

SHI values calculated only for those fleet segments for which the proportion of landings value of the assessed stocks made up more than 40% of the total landings value of the fleet segment.

Because eastern cod was totally removed from the SHI calculations only SHI values were calculated for DTS VL1824, TM VL1824, TM VL2440, TM VL40XX in 2016 (Table 2). Other values were taken from file [STECF 17-18 - Balance capacity - Indicator table.xlsx](#) in STECF website: <https://stecf.jrc.ec.europa.eu/reports/balance>. Because eastern cod values were removed from SHI indicator calculation, SHI values differ from calculated before. Dynamics of SHI values provided in Figure 2.

Table 2. Calculated SHI values for Baltic sea segments in 2016.

| Fleet segment | SHI value |
|---------------|-----------|
| DTS VL1824    | 0,874     |
| TM VL1824     | 0,875     |
| TM VL2440     | 0,875     |
| TM VL40XX     | 0,869     |

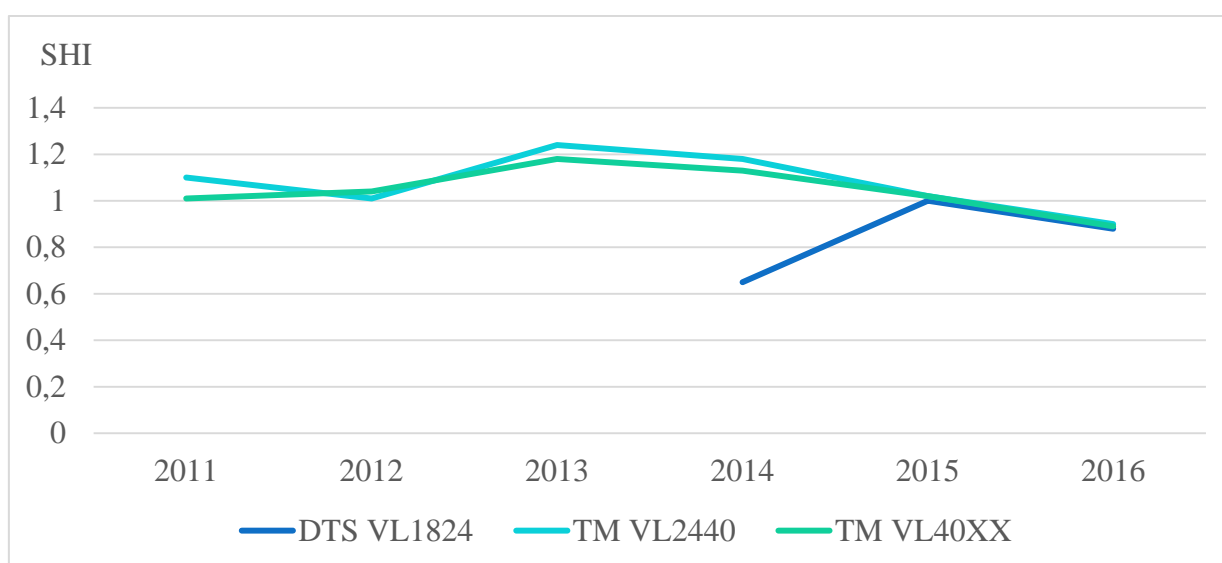


Figure 2. Dynamics of SHI values in 2011-2016.

Dynamics of SHI values show slightly decreasing trend for segments TM VL40XX and TM VL2440.

It should be mention that Baltic eastern cod stock is in very bad state. Lithuanian fishing quota for the Baltic eastern cod decreased from 3710 tonnes to 1597 tonnes from 2014 to 2018. It is expected (ICES ADGBS working group) that eastern cod quota will decrease in 2019 too. It means that fleet segments depending on eastern cod landings probably soon will be out of balance. Lithuanian fleet segments strongly (more than 50 percent of income is coming from cod) depending on cod landings are DFN VL1012, DFN VL2440, DTS VL2440.

### 3. Economic indicators

#### 3.1. Fleet segment description

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#### 3.1. Fleet segment description

Lithuanian fishing fleet is subdivided by fleet segments based on Commission implementing decision (EU) 2016/1251 adopting a multiannual Union programme for the collection, management and use of data in the fisheries and aquaculture sectors for the period 2017-2019. Segmentation is

used to specify distinct types of fisheries as well as to avoid reporting of confidential data, where insufficient number of enterprises compose particular segment. Fleet segments are as follows:

OFR TM-40XX – segment consists of long distance fishery vessels operating predominantly in CECAF and also in SPRFMO, NAFO and NEAFC. Landings are composed mainly from small pelagic species, such as HMZ, MAS, JAX and PIL, as well as PRA and PCR. Due to confidentiality reasons, segments is not detailed by fishing techniques. This clustered segment contains vessels using TM, DTS and FPO techniques. Almost all vessels are larger than 40m.

AREA27 TM 24-40 – includes pelagic trawlers 24-40 m and over 40 m, which are operating in Baltic Sea. Target species for the main gear are SPR and HER. Segment also includes vessels using demersal trawler as second gear but with less effort than pelagic trawler.

AREA27 DTS 24-40 – segment consist of 24-40 m demersal trawlers, fishing in Baltic Sea. Fleet is mainly targeting COD and FLE with demersal trawler as the main gear. Segment also includes vessels using pelagic trawler as second gear but with less effort than demersal trawler.

AREA27 DFN 10-12 – Due to confidentiality reasons this segment is clustered from passive gear coastal vessels from 10-12 m length and 24-40 m. length vessels fishing in Baltic sea with drift netters.

AREA72 PG 00-10 – small scale fishery segment under 10 m in length which operates only in coastal area of Baltic Sea. Main species are European smelt and Baltic cod.

### 3.2 Return on Fixed Tangible Assets (ROFTA)

Return on Fixed Tangible Assets (ROFTA) is estimated instead of Return on Investment (ROI) as value of fishing rights is not available and intangible assets are not included in calculations. If ROFTA is smaller than the low-risk long term interest rates available elsewhere, then this suggests that the fleet segment may be overcapitalized and if less than zero and less than the best available long-term risk-free interest rate, this is an indication of long-term economic inefficiency that could indicate the existence of an imbalance.

#### 3.2.1. ROFTA for the fleet segment OFR TM- 40XX (long distance fleet)

| Values for calendar year<br>(thousand €)        | 2012    | 2013    | 2014    | 2015     | 2016     |
|---|---------|---------|---------|----------|----------|
| Net profit                                      | 4881,4  | 10101,9 | 1320,3  | -21365,1 | -1911,9  |
| Fleet tangible asset value<br>(replacement)     | 41354,6 | 29210,9 | 86300,5 | 124804,7 | 104240,3 |
| ROFTA= Net profit / tangible<br>asset value (%) | 11,80   | 34,58   | 1,53    | -17,12   | -1,83    |
| ROFTA – risk free long-term<br>interest rate*   | 4,77    | 27,90   | -2,91   | -20,72   | -4,58    |

Data source: AIRBC, JRC, ECB

\* - arithmetic average of long-term interest rate for the previous 5 years in relation to reference year.

In 2016 Lithuanian long-distance fleet generated 1,9 million Euro net loss. However, compare to 2015, economic performance of long distance fleet showed signs of recovery. Decline of net profits in 2015-2016 was related to the growth of capital related costs when value of tangible assets significantly increased accordingly raising related costs. In 2015 value of tangible assets increased by 44% but declined 16,4% in 2016. However, capital value remained at almost highest level since 2008 (with exception in 2015). Lower profits in relation to enlarged capital value has led to negative ROFTA two years in row and might indicate the signs of overcapitalization if in short term future, negative returns will remain.

### 3.2.2 ROFTA for the fleet segment AREA27 TM 24-40 (Baltic Sea)

| Values for calendar year<br>(thousand €)        | 2012   | 2013   | 2014   | 2015   | 2016   |
|---|--------|--------|--------|--------|--------|
| Net profit                                      | 1210,9 | 846,4  | 60,6   | 163,4  | 456,1  |
| Fleet tangible asset value<br>(replacement)     | 2567,3 | 2640,2 | 1895,7 | 2496,9 | 4405,6 |
| ROFTA= Net profit / tangible<br>asset value (%) | 47,17  | 32,06  | 3,20   | 6,55   | 10,35  |
| ROFTA – risk free long-term<br>interest rate*   | 40,13  | 25,38  | -1,24  | 2,95   | 7,61   |

Data source: AIRBC, JRC, ECB

\* - arithmetic average of long-term interest rate for the previous 5 years in relation to reference year.

Pelagic trawler segment operating in Baltic sea, in 2016 achieved 456 thousand Euro net profit. This segment was generating positive returns from fisheries since 2009, with relatively stable capacity. Despite the significant increase of value of tangible assets in 2016, segment generated sufficient net profit to have 10,5% of ROFTA and 7,6% ROFTA taking into account average of interest rates of 5 years, indicating that even deducting risk free long-term interest rate, ROFTA is still high compare to other fleet segments in both, large scale as well as long distance fleet.

### 3.2.3. ROFTA for the fleet segment AREA27 DTS 24-40 (Baltic Sea)

| Values for calendar year<br>(thousand €)        | 2012   | 2013   | 2014   | 2015   | 2016   |
|---|--------|--------|--------|--------|--------|
| Net profit                                      | 91,9   | -746,6 | -960,1 | 58,6   | -55,5  |
| Fleet tangible asset value<br>(replacement)     | 3748,1 | 4241,4 | 3198,5 | 2224,2 | 2431,6 |
| ROFTA= Net profit / tangible<br>asset value (%) | 2,45   | -17,60 | -30,02 | 2,64   | -2,28  |
| ROFTA – risk free long-term<br>interest rate*   | -4,58  | -24,28 | -34,45 | -0,96  | -5,03  |

Data source: AIRBC, JRC, ECB

\* - arithmetic average of long-term interest rate for the previous 5 years in relation to reference year.

In 2016 large scale demersal fleet obtained 55 thousand Euro net loss. Demersal trawlers segment is facing problems to achieve positive returns since 2013 with slight improvements in 2015 when demersal trawler segment which also includes mixed fisheries vessels achieved higher quota of small pelagic species, which currently are profitable. Increased share of pelagic species in landings from this segment improved situation from the record high losses in 2013 and 2014, but still was not able to obtain positive returns in 2016. Value of tangible assets had a tendency to decline from 2012 to 2016 and even with lower capital value, 2016 results shows negative ROFTA and signs of overcapitalization.

#### 3.2.4. ROFTA for the fleet segment AREA27 DFN 10-12 (Baltic Sea and coastal area)

| Values for calendar year<br>(thousand €)        | 2012  | 2013  | 2014  | 2015   | 2016   |
|---|-------|-------|-------|--------|--------|
| Net profit                                      | 24,0  | 76,4  | 69,1  | -117,7 | -103,4 |
| Fleet tangible asset value<br>(replacement)     | 330,9 | 233,6 | 237,4 | 365,8  | 338,3  |
| ROFTA= Net profit / tangible<br>asset value (%) | 7,26  | 32,72 | 29,08 | -32,19 | -30,56 |
| ROFTA – risk free long-term<br>interest rate*   | 0,23  | 26,05 | 24,65 | -35,79 | -33,31 |

Data source: AIRBC, JRC, ECB

\* - arithmetic average of long-term interest rate for the previous 5 years in relation to reference year.

Fleet segment AREA27 DFN 10-12 represents netters, operating in coastal area (10-12 m length) and larger vessels operating in Baltic Sea (24-40 m) with drift and fixed nets. This segment achieved significant losses in 2015 and 2016, mostly influenced by 24-40 m length passive gear vessels fishing with nets. Specifics of DFN 24-40 m vessels activity is similar to demersal trawlers, targeting mainly Baltic cod which currently do not generate profitable fisheries. In 2016 ROFTA in this segment declined to 30,6%, to the same level 2 years in row and shows overcapitalization.

#### 3.2.5. ROFTA for the fleet segment AREA72 PG 00-10 (coastal area)

| Values for calendar year<br>(thousand €)        | 2012  | 2013   | 2014  | 2015  | 2016  |
|---|-------|--------|-------|-------|-------|
| Net profit                                      | 126,5 | 105,2  | 10,8  | 90,0  | 101,0 |
| Fleet tangible asset value<br>(replacement)     | 161,7 | 83,7   | 78,7  | 90,3  | 120,4 |
| ROFTA= Net profit / tangible<br>asset value (%) | 78,22 | 125,63 | 13,71 | 99,67 | 83,87 |



|  |       |        |      |       |       |
|--|-------|--------|------|-------|-------|
| ROFTA – risk free long-term interest rate* | 71,18 | 118,95 | 9,27 | 96,07 | 81,13 |
|--|-------|--------|------|-------|-------|

Data source: AIRBC, JRC, ECB

\* - arithmetic average of long-term interest rate for the previous 5 years in relation to reference year.

Small scale fleet, fishing with passive gears in coastal area of Baltic Sea generated 101 thousand Euro net profit in 2016 and generated positive returns in 2012-2016 period. Small scale coastal fisheries do not require high value of capital, therefore tangible asset value of this segment is relatively low compare to the national fleet. As a result, low value of tangible assets and positive returns generate sufficiently high ROFTA, for example 83,9% in 2016.

### 3.3. The ratio between a fleets current revenue (CR) and break-even revenue (BER)

The ratio between CR and BER shows a financial viability of particular fleet segment and how close the current revenue is to the income required to break even in the short term. According to the methodology, if the ratio is greater than 1, then enough income is generated to cover variable, fixed and capital costs, indicating that the segment is profitable, with potential undercapitalization. Conversely, if the ratio is less than 1, insufficient income is generated to cover variable, fixed and capital costs, indicating that the segment is unprofitable, with potential overcapitalization. If the CR/BER result is negative, this means that variable costs alone exceed current revenue, indicating that the more revenue is generated, the greater the losses will be.

#### 3.3.1. Ratio between CR and BER for the segment OFR TM- 40XX (long distance fleet)

| Values for a calendar year (thousand €) | 2012    | 2013    | 2014     | 2015     | 2016    |
|---|---------|---------|----------|----------|---------|
| Current revenue (CR)                    | 36151,2 | 59114,1 | 95828,5  | 53583,2  | 64024,2 |
| Break-even revenue (BER)                | 16659,7 | 30137,9 | 100415,8 | 264434,6 | 72798,2 |
| CR/BER                                  | 2,17    | 1,96    | 0,95     | 0,20     | 0,88    |

Data source: AIRBC, JRC

CR/BER ratio indicates that long distance fleet in 2016 generated insufficient amount of income to cover total costs and is close to overcapitalization,

#### 3.3.2. Ratio between CR and BER for the segment AREA27 TM 24-40 (Baltic Sea)

| Values for a calendar year (thousand €) | 2012   | 2013   | 2014   | 2015   | 2016   |
|---|--------|--------|--------|--------|--------|
| Current revenue (CR)                    | 3128,5 | 3272,2 | 2346,0 | 2930,8 | 3354,5 |
| Break-even revenue (BER)                | 947,0  | 1109,7 | 2239,1 | 2392,9 | 1983,5 |

|        |      |      |      |      |      |
|--------|------|------|------|------|------|
| CR/BER | 3,30 | 2,95 | 1,05 | 1,22 | 1,69 |
|--------|------|------|------|------|------|

Data source: AIRBC, JRC

Pelagic trawler segment operating in Baltic sea was profitable in 2016 as well as in previously in 2012-2015 period. CR/BER indicator, higher than 1 disclose that sufficient income was generated from pelagic species to keep fisheries profitable.

### 3.3.3. Ratio between CR and BER for the segment AREA27 DTS 24-40 (Baltic Sea)

| Values for a calendar year (thousand €) | 2012   | 2013    | 2014    | 2015   | 2016   |
|---|--------|---------|---------|--------|--------|
| Current revenue (CR)                    | 3797,9 | 3450,7  | 1633,1  | 1702,8 | 1836,3 |
| Break-even revenue (BER)                | 3612,0 | 98810,6 | -4357,1 | 1656,1 | 2081,7 |
| CR/BER                                  | 1,05   | 0,03    | -0,37   | 1,03   | 0,88   |

Data source: AIRBC, JRC

Weak economic performance of demersal trawlers is apparently seen from CR/BER ratio, especially in 2013 and 2014 when subsequent year had a negative value, indicating that only variable costs are not covered by income. Higher share of pelagic species in the landings of the segment improved situation, but in 2016 CR/BER fell below 1 meaning that total income from segment is still insufficient to run profitable fishing.

### 3.3.4. Ratio between CR and BER for the segment AREA27 DFN 10-12 (Baltic Sea and coastal area)

| Values for a calendar year (thousand €) | 2012  | 2013  | 2014  | 2015   | 2016   |
|---|-------|-------|-------|--------|--------|
| Current revenue (CR)                    | 305,2 | 258,0 | 278,0 | 255,0  | 237,9  |
| Break-even revenue (BER)                | 221,4 | 82,5  | 102,8 | -152,8 | -186,8 |
| CR/BER                                  | 1,38  | 3,13  | 2,70  | -1,67  | -1,27  |

Data source: AIRBC, JRC

Economic performance of clustered fleet segment DFN 10-12 influenced by large scale netters in terms of CR/BER showed overcapitalization in 2015 and 2016 as income generated from large netters did not cover variable costs and even increased volume of catches will result in higher losses.

### 3.3.5. Ratio between CR and BER for the segment AREA27 PG 00-10 (coastal area)

| Values for a calendar year (thousand €) | 2012  | 2013  | 2014  | 2015  | 2016  |
|---|-------|-------|-------|-------|-------|
| Current revenue (CR)                    | 360,7 | 321,7 | 257,6 | 359,7 | 447,2 |

|                          |      |      |       |       |       |
|--------------------------|------|------|-------|-------|-------|
| Break-even revenue (BER) | 92,5 | 85,8 | 214,3 | 106,2 | 191,7 |
| CR/BER                   | 3,90 | 3,75 | 1,20  | 3,39  | 2,33  |

Data source: AIRBC, JRC

Small scale fleet segment PG 00-10 operating in coastal area generated sufficient revenues to cover costs and to earn profits. CR/BER ratio was higher than 1 in the whole 2012-2016 period.

### 3.4. Methodology

Calculations of balance indicators are based on DCF data and presented at fleet segment level. Primary data are collected by annual census survey, for this purpose Questionnaires (code DR-1) are approved by the Order of the Lithuanian Minister of Agriculture No 3D-707 on 4-th August of 2010. Institution, responsible for economic and social data collection, processing and dissemination is State enterprise Agricultural Information and Rural Business Centre (AIRBC). Data collection quality is ensured by application of principles of European Code of Practice. The data collection processes in AIRBC complies the ISO 9001 requirements for data quality and ISO 27001 requirements for data security.

The economic indicators for the purpose to evaluate the extent of economic over or under capitalisation in a fleet taking into account return on fixed tangible assets (ROFTA) and CR/BER were analyzed in report. Data are presented in tables as shown in guidelines. Both indicators require the use of the interest rate in each MS of a low risk long term investment for comparison purposes. According to The Commission recommendation, harmonized 5 year average long-term interest rates for convergence assessment calculated by the European Central Bank, were used. Long term interest rate data for Lithuania was downloaded from European Central Bank data base and it is defined as: “Long-term interest rate for convergence purposes - Unspecified rate type, Debt security issued, 10 years maturity, New business coverage, denominated in Euro. Average long-term interest rates for 5-year period are provided in the table below:

| Period    | Average interest rate % |
|-----------|-------------------------|
| 2008-2012 | 7,03                    |
| 2009-2013 | 6,68                    |
| 2010-2014 | 4,44                    |
| 2011-2015 | 3,60                    |
| 2012-2016 | 2,75                    |

Data source: ECB

ROFTA for fleet is presented as the net profit of the fleet divided by total value of tangible assets of the fleet. Data on direct income subsidies was excluded from the calculation. For the estimation of total value of tangible assets, Perpetual Inventory Method (PIM) was used according to the advice from the PGECON<sup>1</sup> working group on best practices for calculating fleet depreciated replacement values. Data for the breakeven revenue (BER) and current revenue (CR) calculation, except for opportunity costs, was obtained from DCF data. Opportunity costs of capital was used from JRC

<sup>1</sup> Planning Group on Economic Issues (PGECON), 16<sup>th</sup> – 19<sup>th</sup> April 2012, Salerno (Italy)

calculations. As required in guidelines, data on direct income subsidies was excluded from the calculation. In ROFTA and CR/BER calculations all monetary values were adjusted for inflation to 2015 prices and were taken from JRC calculations.

#### 4. Vessel Use Indicators

##### 4.1 Inactive fleet indicator

The vessel “Inactive fleet” indicator was calculated for the period 2012-2017 aggregated by vessel length segments\*. Figure 3 shows the proportion of inactive vessels aggregated by year and length segments of the total fleet (%). Source data taken from data collection programme (economic scientific data).

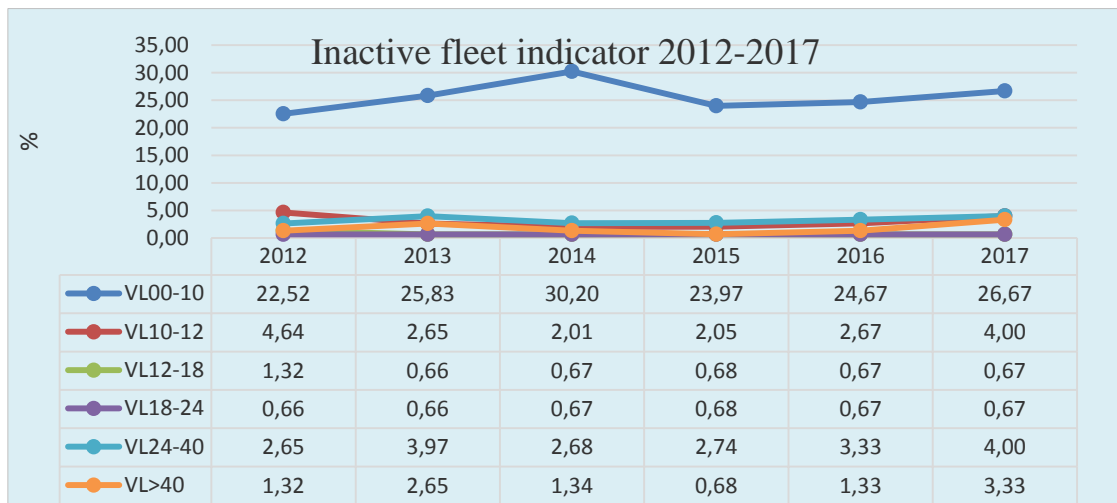


Figure 3. Inactive fleet indicator 2012-2017 by vessels number share from all fleet.

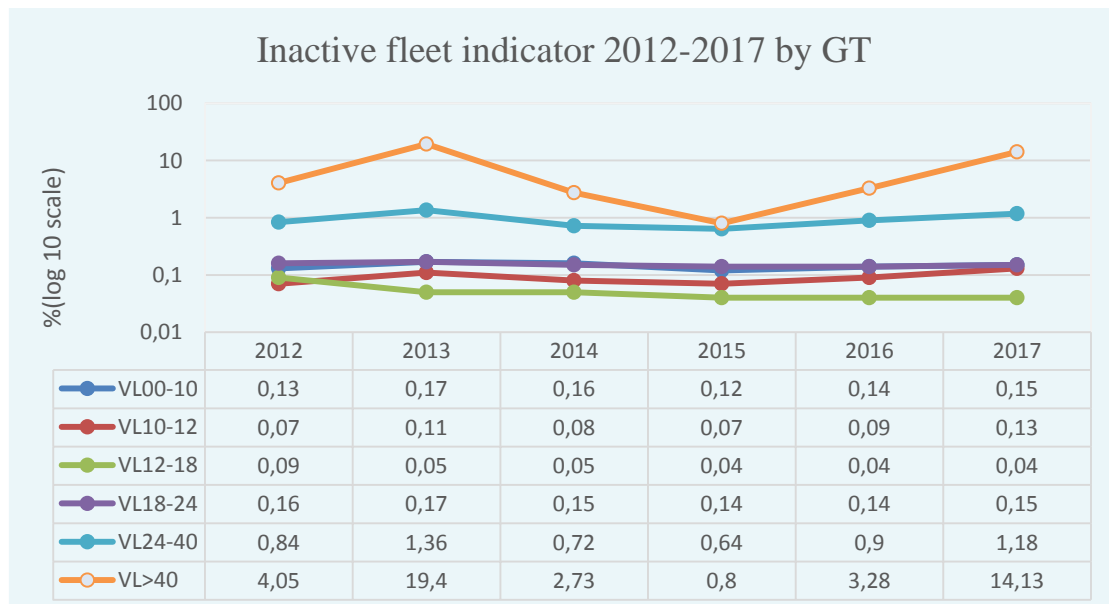


Figure 4. Inactive fleet indicator 2012-2017 by vessels GT share from all fleet.

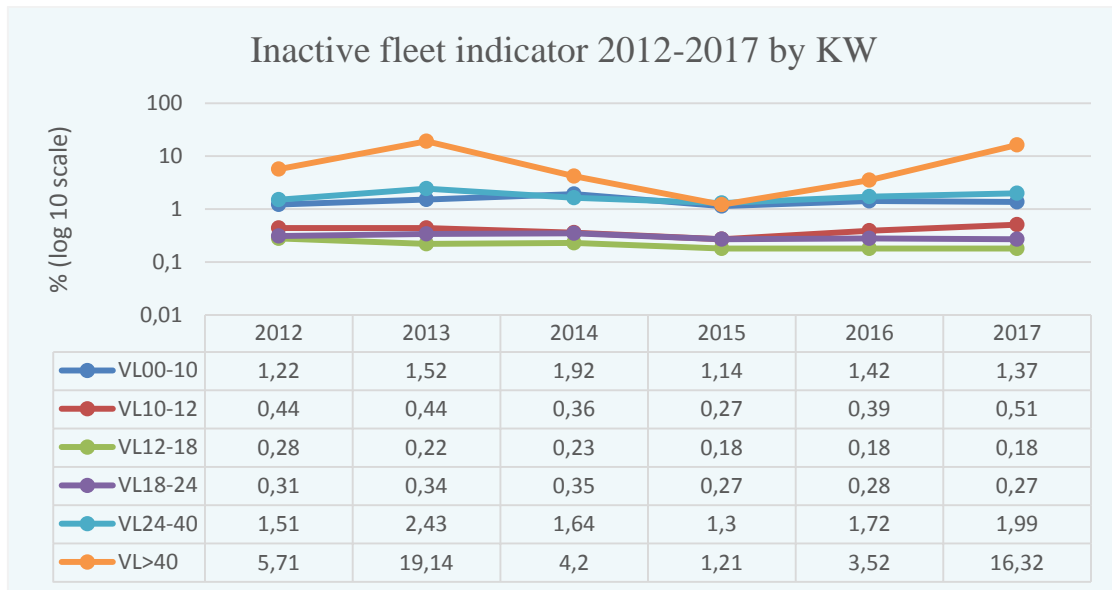


Figure 5. Inactive fleet indicator 2012-2017 by vessels kW share from all fleet.

Inactive fleet indicator analysis shows that all fleet has slightly increased in 2017, comparing to 2016. Figures 4 and 5 do not show any tangible trends, only for the fleet segment VL>40, inactive fleet indicator increase much more than for previous years.

#### 4.2. The vessel utilisation indicator

In the Table 2 the vessel utilisation fleet indicator was calculated for each fleet segment for the period 2012-2017 aggregated by year and fishing gear. The calculated technical indicator is based on observed technical activity.

Table 3. Vessel utilisation indicator 2012-2017

| Vessel length | Gear | Year |      |      |      |      |      |
|---------------|------|------|------|------|------|------|------|
|               |      | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| VL0-10        | PG   | 0,63 | 0,65 | 0,63 | 0,66 | 0,65 | 0,67 |
| VL10-12       | DFN  | 0,78 | 0,8  | 0,8  | 0,7  | 0,73 | 0,66 |
| VL24-40       |      |      |      |      |      |      |      |
|               | DTS  | 0,78 | 0,79 | 0,76 | 0,77 | 0,75 | 0,73 |
|               | TM   | 0,75 | 0,89 | 0,71 | 0,74 | 0,72 | 0,72 |
| VL40XX        |      |      |      |      |      |      |      |
|               | TM   | 0,7  | 0,68 | 0,66 | 0,63 | 0,61 | 0,7  |
|               | DTS  |      |      |      | 0,77 | 0,81 | 0,84 |
|               | PCR  |      |      |      | 0,84 | 0,53 |      |

Calculation methodology where used as follows:

“The ratio between the average effort per vessel in a fleet segment and the observed maximum effort actually expended by a vessel in the segment (in kWdays or GT-days) in the reference year.”

Effort has been treated as duration of fishing operation (in hours) from setting the fishing gear to hauling it by every vessel of every fishing effort in certain year. Then average and maximum estimations were calculated from set of efforts. These values multiplied by appropriate kW and then average kW days divided by maximum kW days values to get vessel utilisation indicator result.

Table 3 dynamics do not reveal any significant trends in all fleet segment and all seem to be within balance limits (0,7<), except small scale fleet segment :PG 0-10 (~0,67) and DFN 10-12 (~0,66) which is lower than (0,7>).

### Stocks-at-risk indicator

Stocks-at-risk indicator has not been calculated as Lithuanian fleet catches do not meet requirements (high biological risk) which are set out in the guidelines for this indicator calculation.

### Traffic light

Table 4 shows traffic light data for the year 2016.

Table 4. Traffic light for balance indicators (2016 data).

| No. | Length        | Gear code | ROFT A | Current/Break even Incl. opp. costs | Sustainable Harvest Indicator | Stocks at Risk indicator | Technical indicators |             | Over all Conclusion on balance |
|-----|---------------|-----------|--------|-------------------------------------|-------------------------------|--------------------------|----------------------|-------------|--------------------------------|
|     |               |           |        |                                     |                               |                          | Inactivity           | Utilisation |                                |
| 1.  | <10 m         | PG        | 83,87  | 2,33                                |                               | -                        | 26,67                | 0,67        |                                |
| 2.  | 10-12 m       | DFN       | -30,56 | -1,27                               |                               | -                        | 4,00                 | 0,66        |                                |
| 3.  | 24-40 m       | DTS       | -2,28  | 0,88                                |                               | -                        | 3,33                 | 0,73        |                                |
| 4.  | 24-40 m       | TM        | 10,35  | 1,69                                | 0,88                          | -                        |                      | 0,72        |                                |
| 5.  | >40 m         | TM        | -1,83  | 0,88                                |                               | -                        | 1,33                 | 0,70        |                                |
|     | COM guideline |           | >0     | >1                                  | <0,95                         | -                        | 0-1                  | >0,9        |                                |
|     |               |           |        | >0<1                                | 0,95-1,05                     | -                        | 1-10                 | 0,7-0,9     |                                |
|     |               |           |        | <0                                  | <0                            | >1,05                    | -                    | 10-30       | <0,7                           |

\* Calculation: first figure F and  $F_{msy}$  Lithuania catch and quota proportions.

The segments which are not included in the traffic light VL12-18, DTS VL 18-24 and TM VL 18-24, because it is not calculated for all indicators which specify in the Table 4. For the fleet segment VL 12-18 and for VL 18-24 is calculated only Inactivity fleet indicator, seem to be within balance limits (0,7<), (Figure 3). Sustainable harvest indicator is calculated for the DTS VL 18-24 (0,874), TM VL 18-24 (0,874), TM VL 24-40 (0,875) and TM 40 XX (0,869) shows a sustainable

exploitation of the stock (Table 2). So Overall conclusion on balance for the mention segments is „Green“.

## **5. Summary report on the weaknesses and strengths of the fleet management system and general level of compliance with fleet policy instruments**

At 31 December 2016 Lithuanian fishing fleet comprised of 144 vessels. Lithuanian fisheries fleet is divided in three larger parts (High Seas, Baltic Sea and Coastal) and according to their fishing grounds parts are segmented by mostly used fishing gear type (total 5 segments).

SHI analysis for the Lithuanian fishing fleet segments DTS VL 18-24, TM VL 18-24, TM VL 24-40 and TM VL40 XX (does not exceed 1) and it is usually considered as indicating a sustainable exploitation of the stock, for which indicate that fleet segments are in balance.

In 2016 Lithuanian fishing fleet represented by different fleet segments had quite diverse economic performance indicated by ROFTA and CR/BER. Data in the report is presented for 5 year period to have a comparison of performance in long term period.

For some fleet segments as A27 TM 24-40 (Baltic sea large scale fleet) and A27 PG 00-10 (small scale fleet) both ROFTA and CR/BER was at relatively good level during analyzed period, having positive returns on fixed tangible assets and sufficient income to cover costs and generate profits. In terms of balance of capital and fishing opportunities, the lowest balance indicators was in A27 DFN 10-12 segment, which includes DFN vessels 24-40 m length, merged with 10-12 m length vessels due to confidentiality reasons.

Large scale netters did not succeed to achieve positive ROFTA and obtained negative CR/BER value for both years, 2015 and 2016 showing overcapitalization.

Deteriorating economic performance was also observed in demersal trawlers, fishing in Baltic sea. In 2016 demersal trawler segment obtained negative ROFTA and value of CR/BER was lower than one, indicating that income from catches do not cover total costs and returns are negative to capital value. Although results for demersal trawlers segment show overcapitalization, policy instruments when share of pelagic quota in 2015 was allocated also to demersal trawlers (using second gear pelagic trawler) reduced huge losses from cod fisheries obtained in 2013 and 2014. Data shows, that current situation in Baltic cod fisheries (demersal trawlers and large netters) are not able to generate positive profitability and in some cases even do not cover variable costs.

Decline of net profits in long distance fleet during 2015-2016 was related to the growth of capital related costs when value of tangible assets significantly increased accordingly raising related costs as annual depreciation costs, interest and other capital related costs. Long distance fleet might have overcapitalization signs if ROFTA will not recover to positive value, when capital related costs will decline.

Inactive fleet indicator shows that all fleet has decreased in 2017 comparing to the previous years.

Vessel utilisation indicator shows that all fleet to be within balance limits ( $0,7 <$ ), except small scale fleet segment :PG 0-10 ( $\sim 0,67$ ) and DFN 10-12 ( $\sim 0,66$ ) which is lower than ( $0,7 >$ ).

**6. Changes to the administrative procedures relevant to the management of the fleet**

No changes in administrative procedures relevant to the management of the fleet are observed.