

## **ANNUAL REPORT LITHUANIA**

### **Annual report 2016 to achieve a sustainable balance between fishing capacity and fishing opportunities**

**31 May 2017**

#### **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 repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC (Council Regulation (EC) No 1380/2013) Part IV and COMMISSION REGULATION (EU) No 1013/2010 of 10 November 2010 laying down implementing rules on the Union Fleet Policy as defined in Chapter III of Council Regulation (EC) No 2371/2002 Articles 12 and 13 and COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL (Guidelines for the analysis of the balance between fishing capacity and fishing opportunities according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy). 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.

Four Lithuanian vessels were involved in pelagic fishery in Mauritanian EEZ in 2016. Two Lithuanian fishing vessels were fishing in Moroccan EEZ. Moreover one Lithuanian vessel was involved in pelagic fishery in Angolan EEZ in 2016.

During 2016 six 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 2016 no any fishing activity was carried out in SPRFMO regulatory area.

## 1.2 Development of fishing capacity

By the end of the year 2016 Lithuanian fishing fleet consisted of 144 vessels. In total 40 881 GT and 48 064 kW.

Comparing to 2015 the total capacity was reduced by 4 058 GT (7,91 %) and 2304 kW (4,57%) (Figure 1). The overall capacity does not exceed the ceilings set by the Council Regulation (EC) No 1380/2013.

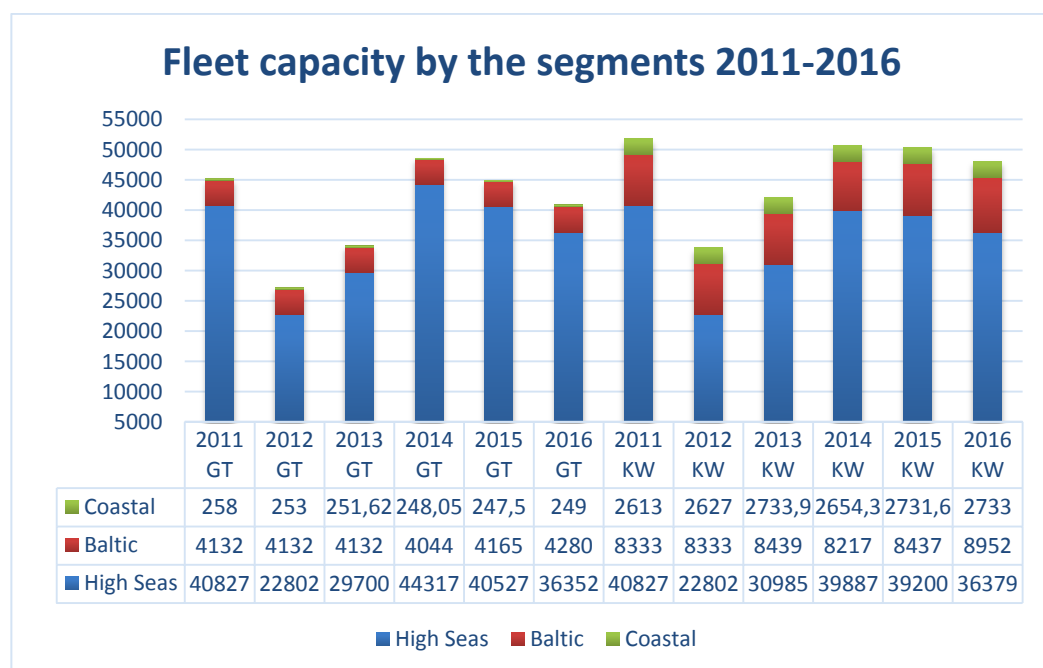


Figure 1. Fishing fleet capacity by the segments 2011 – 2016.

### 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 2016, 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 2016-12-31

	<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
<b>2</b>	Capacity level for the application of the entry-exit regime	<b>GT 04</b>	77 282	<b>kW 04</b>	82 102
<b>3</b>	Entries of vessels of more than 100 GT financed with public aid	<b>GT10</b> <b>0</b>	0	<b>kW</b> <b>100</b>	0
<b>4</b>	Other entries or capacity increases (not included in 3 & 5)		119 874		122 213
<b>5</b>	Increases in tonnage GT for reasons of safety	<b>GTS</b>	0		
<b>6</b>	<b>Total entries ( 3 + 4 + 5 )</b>		119 874		122 213
<b>7</b>	Exits before 1/1/2007 financed with public aid	<b>GTa1</b>	1 616	<b>kWa</b>	3 135
<b>8</b>	Exits after 1/1/2007 financed with public aid	<b>GTa2</b>	2 334		5 482
<b>9</b>	Other exits (not included in 7 and 8)		155 744		158 053
<b>10</b>	<b>Total exits ( 7 + 8 + 9 )</b>		159 694		166 670
<b>11</b>	Power of engines replaced with public aid conditional to power reduction		0	<b>kWr</b>	0
<b>12</b>	<b>Capacity of the fleet on 31/12/2016 (1+6-10)</b>	<b>GTt</b>	36 918		36 245
<b>13</b>	<b>Fleet ceiling on 31/12/2016</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

### 2.1. Biological indicators of exploitation of stocks (cod, herring, sprat) in the Baltic Sea

Biological indicator dynamics for years 2011–2015 provided in Figure 2. Also  $F/F_{msy}$  indicator decreases for the last three year for sprat, but  $F/F_{msy}$  indicator increases for the herring stock. In 2015 indicators are lower comparing to previous years.  $F/F_{msy}$  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. For this reasons biological indicators were provided only for the coastal and Baltic fleet segments.

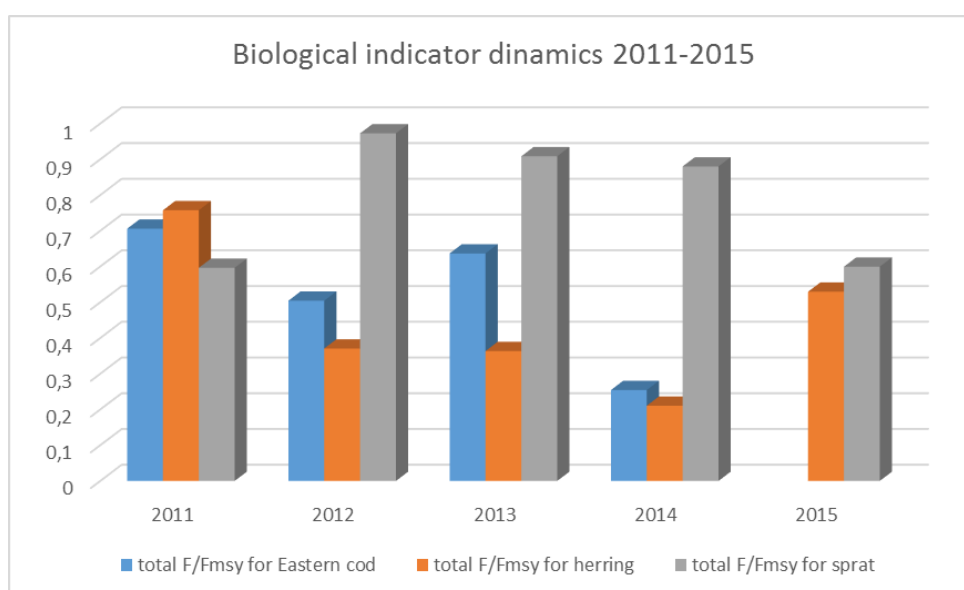


Figure 2. Biological indicator dynamics for years 2011–2015.

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 therefore Western cod not included in analysis for biological indicators.

Eastern Baltic Cod - the age based Eastern Baltic (subdivisions 25-32) 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  $F_{MSY}$  value has no longer been provided by ICES. The EWG 16-09 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.

Analysis of the national current ( $F$ ) and targeted ( $F_t=F_{msy}$ ) fishing mortality has shown that the ratio was less than 1 for all two stocks (herring sprat) in 2015 (Figure 2):

- total  $F/F_{msy}$  for herring - 0,529661913,
- total  $F/F_{msy}$  for sprat - 0,599678901.

Thus, the biological indicators have revealed that the capacity of the Lithuanian Baltic fishing fleet is in balance for the two Baltic stocks. Biological indicators (based on 2015 ICES and national data) have shown that the Lithuanian Baltic Sea fishing fleet engaged in the Baltic fishery especially herring and sprat is in balance with the fish stocks.

Figure 3. Calculations of biological indicators.

Based on 2015 data	Baltic Sea	
	Herring 25-32	Sprat
Catch per segment (100 tonnes):		
LTU DTS VL2440	8,68524	29,00557
LTU PG VL0010	0,34174	
LTU DFN VL1012	0,05526	
LTU TM VL2440	38,16365	81,03322
Total EU catch (100 tonnes)		
Total EU catch acc. To ICES stock assessments (100 tonnes)	1744	2470
Current F (ICES stock assessments)	0,183	0,268
Current F applied per fleet segment		
LTU DTS VL2440	0,000911353	0,003147163
LTU PG VL0010	3,58592E-05	0
LTU DFN VL1012	5,7985E-06	0
LTU TM VL2440	0,004004557	0,008792268
$F_{msy}^*$	0,22	0,26
Lithuania's quota (100 tonnes)	47,72	106,89

Based on 2015 data	Baltic Sea	
	Herring 25-32	Sprat
Lithuania's quota (%)	2,92	5
Fmsy in relation to Lithuania's quota	0,006424	0,013
F/Fmsy by species in the fleet segment		
LTU DTS VL2440	0,141866842	0,242089466
LTU PG VL0010	0,005582065	
LTU DFN VL1012	0,00090263	
LTU TM VL2440	0,623374426	0,676328339
Catch composition in the segment (%)		
LTU DTS VL2440	18,38305935	17,65144541
LTU PG VL0010	0,723322177	0
LTU DFN VL1012	0,116962555	0
LTU TM VL2440	80,77665592	82,34855459
F/Ft weighted by catch composition for segment		
LTU DTS VL2440	0,026079466	0,04273229
LTU PG VL0010	4,03763E-05	0
LTU DFN VL1012	1,05574E-06	0
LTU TM VL2440	0,503541015	0,556946611
<b>Total of all weighted F/Ft (SHI single species)</b>	<b>0,529661913</b>	<b>0,599678901</b>
Percentage of fleet segment catch used for F/F calculation	100	100
<b>Total of all weighted F/Ft (SHI mixed fisheries)</b>		
<b>LTU DTS VL2440</b>	<b>0,038606255</b>	
<b>LTU PG VL0010</b>	<b>4,03763E-05</b>	
<b>LTU DFN VL1012</b>	<b>1,05574E-06</b>	
<b>LTU TM VL2440</b>	<b>0,538721192</b>	

## Conclusions

Analysis showed that the Lithuanian fishing fleet engaged in the Baltic fisheries is in balance with current herring and sprat stock size.

## 2.2. Sustainable harvest indicator (SHI)

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

SHI calculation methodology:

*For single stock case:*

At first we calculated what share of  $F$  goes to Lithuania catches from total EU catches. Then we calculated what proportion of  $F_{msy}$  goes to Lithuanian quota. After, the difference of these two figures was calculated. This difference was aggregated and applied to the fleet segments shares accordingly by single stock (weighted average formula by value). ( Figure 4)

*For multi-stock case :*

Figure 5 uses  $F$  and  $F_{msy}$  values which derive from Lithuanian catches and quota proportions from EU  $F$  and  $F_{msy}$  (ICES assesment) values. This estimations reflects the extent to which Lithuanian fleet segment is dependent on overfished stocks and actual impact of Lithuanian fleet segments to the stocks.

SHI have not been calculated for the fleet segment TM 40XX because the areas (FAO 34), where this fishery has been carried out, are outside ICES areas (FAO 27). Also there are no 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. SHI provided for the rest fleet segments.

SHI dynamics data provided in Figures 4 – 7.

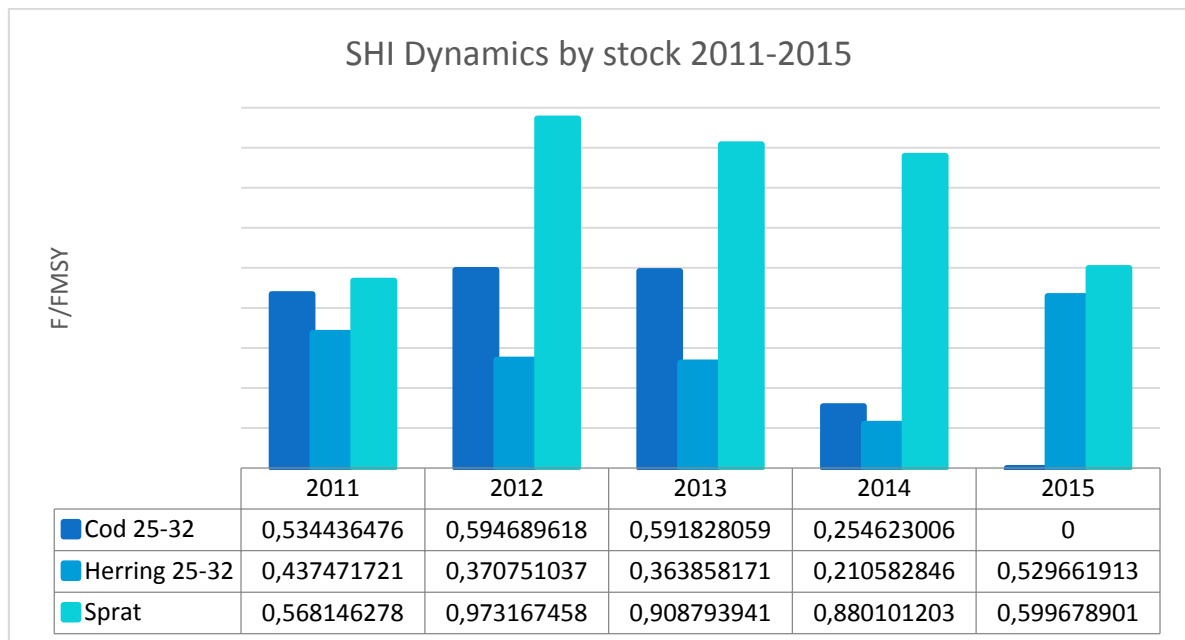


Figure 4. SHI dynamics by stock 2011-2015.

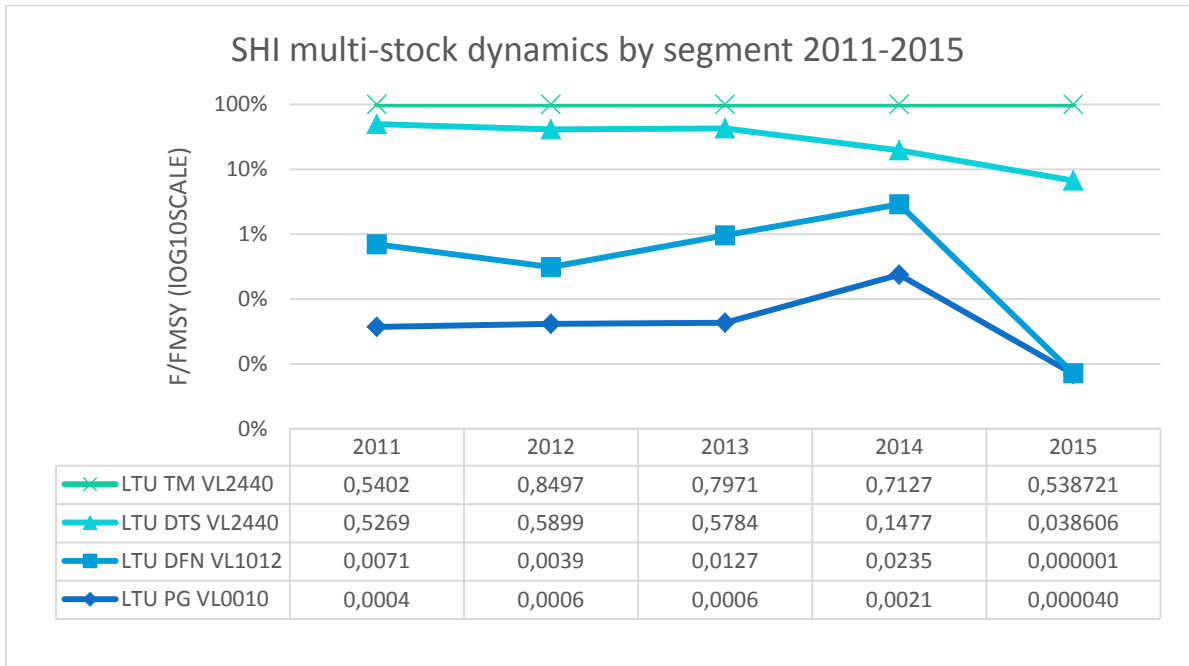


Figure 5. SHI multi-stock dynamics by segment 2011-2015 (multiple stocks)  $F$  and  $F_{msy}$  Lithuanian proportions.

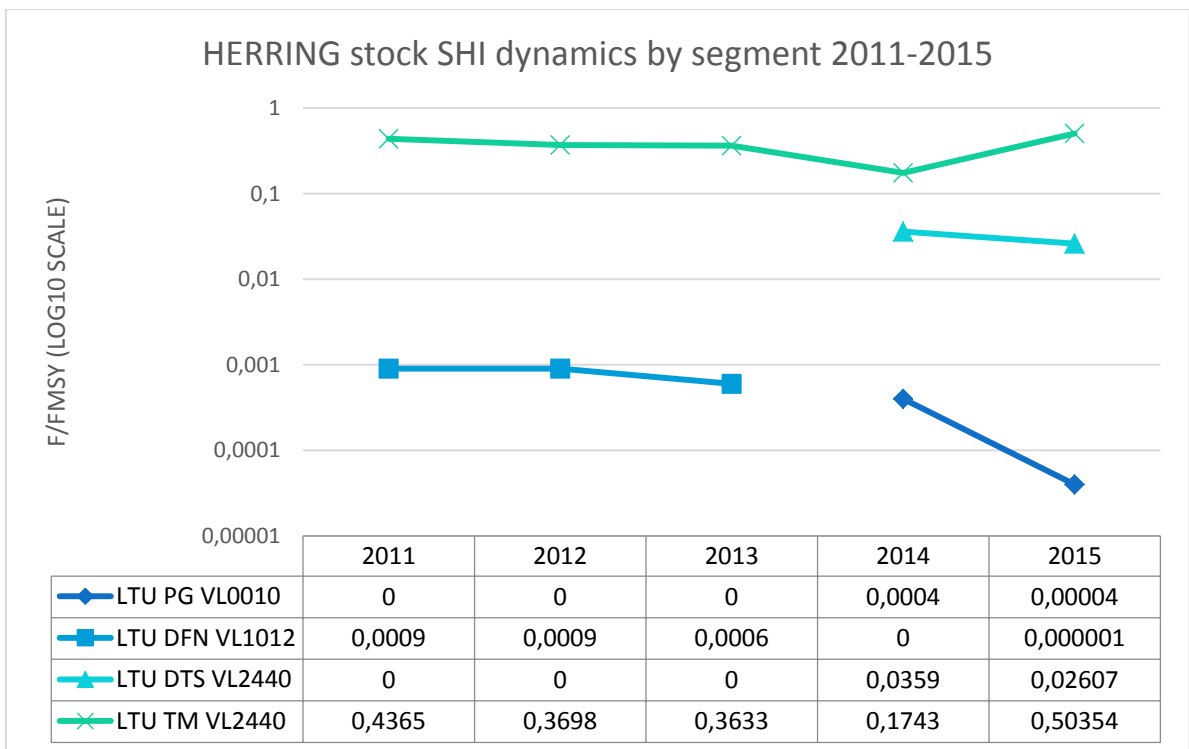


Figure 6. Herring 25-32 stock SHI dynamics by segment 2011-2015.



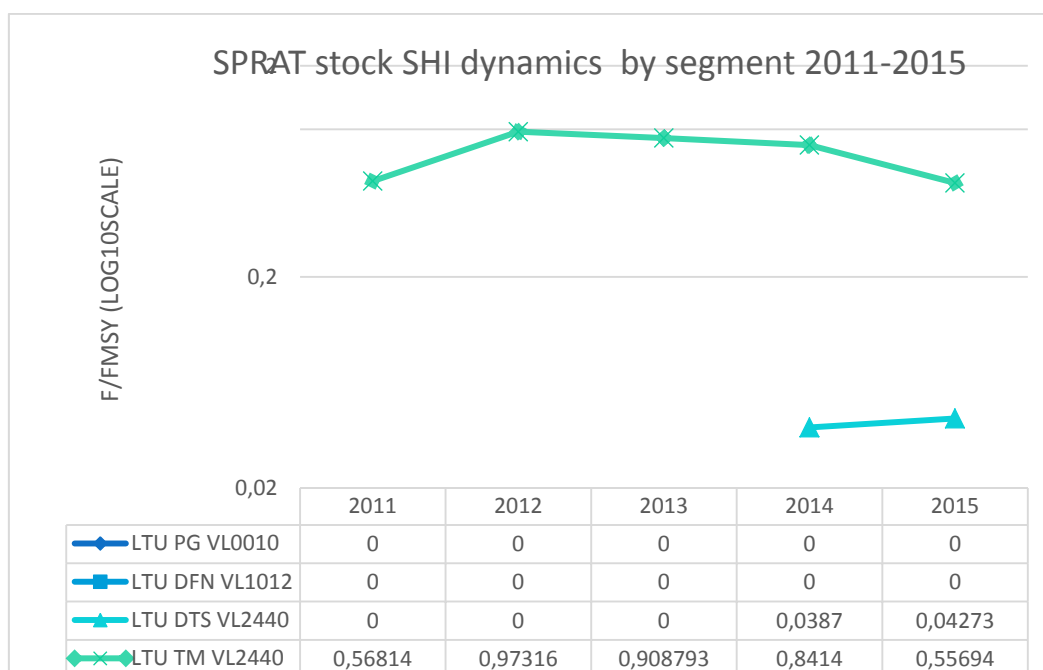


Figure 7. Sprat stock SHI dynamics by segment 2011-2015. During 2011-2015 in fleet segments PG 00-10 and DFN 10-12 and during 2011-2013 no catches were made in fleet segment DTS 24-40.

SHI analysis for single stock has not shown any significant signs of imbalance in LTU fleet segments.

SHI multi-stock values for other fleet segments do not exceed 1 (Figure 4) which indicate that fleet segments are in balance.

### 3. Economic indicators

#### 3.1. Fleet segment description

Lithuanian fishing fleet is represented by following segments:

OFR TM-40XX – segment consists of long distance fishery vessels operating in CECAF, NAFO and NEAFC. Predominantly in CECAF region, landings are composed mainly from small pelagic species, such as Cunene horse mackerel and Round sardinella, whereas in other areas from Atlantic red-fishes, northern prawns and snow crabs.

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 European sprat and Baltic herring. Segment also includes vessels using demersal trawler as second gear.

AREA27 DTS 24-40 – segment consist of 24-40 m demersal trawlers, fishing in Baltic Sea. Target species for the main gear are Baltic cod and European flounder. Segment performance relatively depends on the multiannual management plan for cod in the Baltic Sea. Segment also includes vessels using pelagic trawler as second gear.

AREA27 DFN 10-12 – Segment combines passive gear vessels over 10 m operating in Baltic Sea and coastal area. Main species are Baltic cod, European flounder and European smelt.

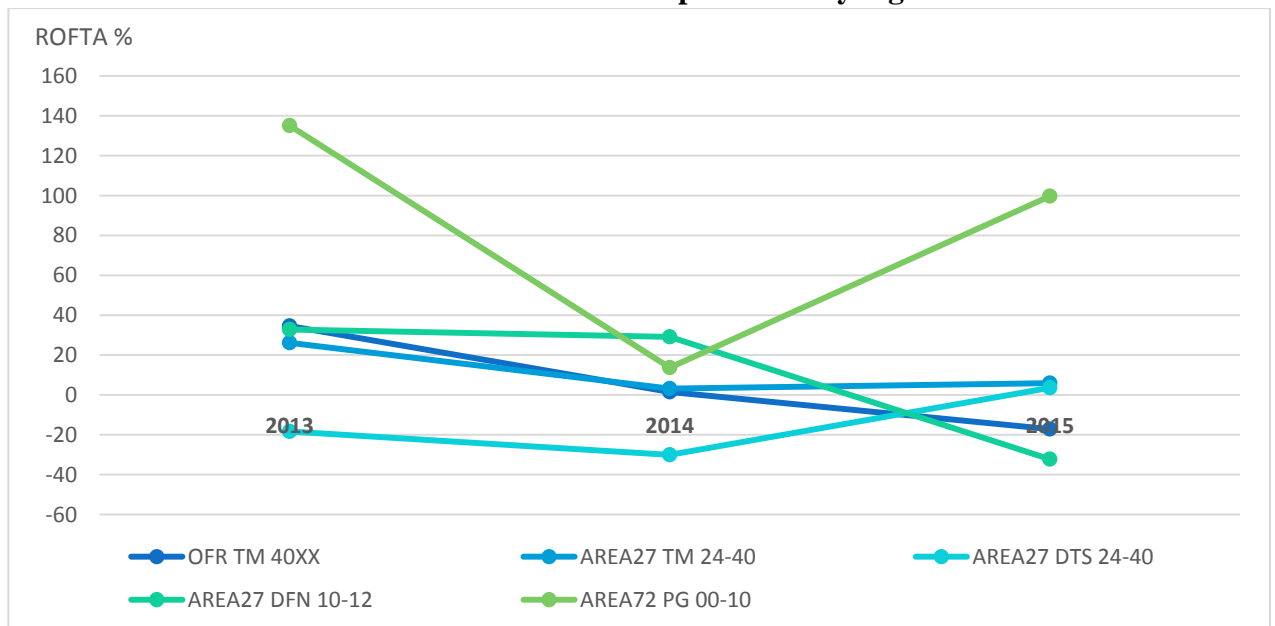
AREA72 PG 00-10 – small scale fishery segment under 10 m in length which operates in coastal area of Baltic Sea. Main species are European smelt and Baltic cod.

The main segments fishing in Baltic Sea in terms of landings volume are pelagic trawlers TM 24-40 and demersal trawlers DTS 24-40 are interrelated by the share of cod, sprat and herring quotas.

### 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.

**ROFTA of Lithuanian fleet presented by segments**



Data source: AIRBC

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

<b>Values for calendar year (€000)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Net profit	10146,4	1329,2	-21365,10
Fleet capital asset value	29339,4	86887,3	124804,75
ROFTA= Net profit / capital asset value (%)	34,58	1,53	-17,12
ROFTA – risk free long term interest rate*	27,55	-4,39	-19,87

Data source: AIRBC

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

Profitability of Lithuanian long distance fleet is decreasing three years in the row (2013-2015). In terms of net profit, decline was strongly influenced by very high depreciation of capital and other costs related to capital. In 2014 and 2015 Lithuanian long distance fleet significantly increased investments to new vessels, as a result capital value for this segment in 2015 was raised 4.2 times compare to 2013. Lower profits in relation to enlarged capital value has led to constant decline of ROFTA and indicates current overcapitalization.

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

<b>Values for calendar year (€000)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Net profit	804,7	61,0	137,04
Fleet capital asset value	3073,8	1908,6	2334,29
ROFTA= Net profit / capital asset value (%)	26,18	3,20	5,87
ROFTA – risk free long term interest rate*	19,15	-2,72	3,12

Data source: AIRBC

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

In 2015, recovery of ROFTA in large scale pelagic fleet was observed, when net profit and fleet capital value increased from 2014 when net profit in was influenced by significantly lower effort and insufficient exploitation of sprat quota. It was rather more related to administrative issues of quota allocation than unfavorable situation of market for sprat. Taking into account the average of long term interest rate for 5 years, ROFTA in 2015 was 3.12% and could be indications of balanced fleet capital.

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

<b>Values for calendar year (€000)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Net profit	-704,4	-966,6	85,05
Fleet capital asset value	3844,6	3220,3	2386,81
ROFTA= Net profit / capital asset value (%)	-18,32	-30,02	3,56

<b>Values for calendar year (€000)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
ROFTA – risk free long term interest rate*	-25,35	-35,94	0,81

Data source: AIRBC

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

In 2015 large scale demersal fleet demonstrates signs of recovery from long term negative returns on tangible assets. Unprofitable demersal fleet had a decreased tendency in capital value, when part of capacity were allocated to pelagic fisheries in Baltic Sea. Data from 2015 indicates an improvement in balance between invested capital and fishing opportunities.

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

<b>Values for calendar year (€000)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Net profit	76,8	69,5	-117,74
Fleet capital asset value	233,9	239,0	365,76
ROFTA= Net profit / capital asset value (%)	32,82	29,08	-32,19
ROFTA – risk free long term interest rate*	25,79	23,16	-34,94

Data source: AIRBC

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

Fleet segment AREA27 DFN 10-12 is representing drift netting vessels, operating in coastal area (10-12 m length) and larger vessels operating in Baltic Sea (24-40 m). Net profit in this segment had a tendency to decrease, mostly influenced by larger vessels. Decline in profitability with increasing asset value, resulted in constant decline of ROFTA and first signs of imbalance.

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

<b>Values for calendar year (€000)</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Net profit	105,7	10,9	90,02
Fleet capital asset value	78,2	79,2	90,31
ROFTA= Net profit / capital asset value (%)	135,11	13,71	99,67
ROFTA – risk free long term interest rate*	128,08	7,79	96,92

Data source: AIRBC

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

Small scale fleet, fishing with passive gears in coastal area of Baltic Sea, showed a recovery of ROFTA in 2015 from the short term decline in 2014. Despite the huge variation in balance

indicators, this segment demonstrates relatively high returns on capital. This also a result of comparatively low capital value where even moderate profits increase ROFTA significantly.

### 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.

In 2015 large scale fishing fleet, consisting from two segments, representing pelagic and demersal trawlers, increased CR/BER to 1.2 and 1.07 respectively. Another fleet segment exceeding 1, was small scale coastal fleet with 3.4 ratio between current revenue and break even revenue required to cover production and capital costs. Long distance fleet constantly decreasing ratio from 2013. Negative value with potential overcapitalization was observed in drift netting vessels.

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

Values for a calendar year (€'000)	2013	2014	2015
Current revenue (CR)	59374,2	96480,1	53583,2
Break-even revenue (BER)*	30260,14	101021,99	264434,61
CR/BER*	1,96	0,96	0,20

Data source: AIRBC, JRC

\* - Opportunity costs of capital included in fixed costs.

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

Values for a calendar year (€'000)	2013	2014	2015
Current revenue (CR)	3404,1	2362,0	2713,0
Break-even revenue (BER)*	1266,15	2251,25	2257,47

Values for a calendar year (€'000)	2013	2014	2015
CR/BER*	2,69	1,05	1,20

Data source: AIRBC, JRC

\* - Opportunity costs of capital included in fixed costs.

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

Values for a calendar year (€'000)	2013	2014	2015
Current revenue (CR)	3348,5	1644,2	1920,5
Break-even revenue (BER)*	49190,56	-4383,47	1795,88
CR/BER*	0,07	-0,38	1,07

Data source: AIRBC, JRC

\* - Opportunity costs of capital included in fixed costs.

**Ratio between CR and BER for the segment AREA27 DFN 10-40 (Baltic Sea and coastal area)**

Values for a calendar year (€'000)	2013	2014	2015
Current revenue (CR)	259,2	279,8	255,0
Break-even revenue (BER)*	82,78	103,42	-152,81
CR/BER*	3,13	2,71	-1,67

Data source: AIRBC, JRC

\* - Opportunity costs of capital included in fixed costs.

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

Values for a calendar year (€'000)	2013	2014	2015
Current revenue (CR)	323,1	259,3	359,7
Break-even revenue (BER)*	85,76	215,66	106,24
CR/BER*	3,77	1,20	3,39

Data source: AIRBC, JRC

\* - Opportunity costs of capital included in fixed costs.

### 3.4. Methodology

Calculations of balance indicators are based on DCF primary data and presented in accordance with relevant fleet segment basis. Data collection is based on annual census survey. Questionnaires (code DR-1) are approved by the Order of the Lithuanian Minister of Agriculture No 3D-707 on 4th August of 2010. Institution, responsible for economic and social data collection, processing and dissemination is the State Enterprise Agricultural Information and Rural Business Centre (AIRBC). Fleet economic and social data collection is included in the annual Official Statistic data collection Program and therefore quality is ensured by application of principles of European Code of Practice. The data collection processes in AIRBC complies with 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 in terms of the 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's recommendation, harmonized 5 year average long-term interest rates for convergence assessment calculated by the European Central Bank were used.

ROFTA for fleet is presented as the net profit (profit after capital stock depreciation) of the fleet divided by total capital asset value of the fleet. Data on direct income subsidies was excluded from the calculation. For the estimation of the fleet capital asset value, 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 calculations. As required in guidelines, data on direct income subsidies was excluded from the calculation.

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

#### 4. Vessel Use Indicators

##### 4.1 Inactive fleet indicator

The vessel “Inactive fleet” indicator was calculated for the period 2011-2016 aggregated by vessel length segments\*. Figure 8 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).

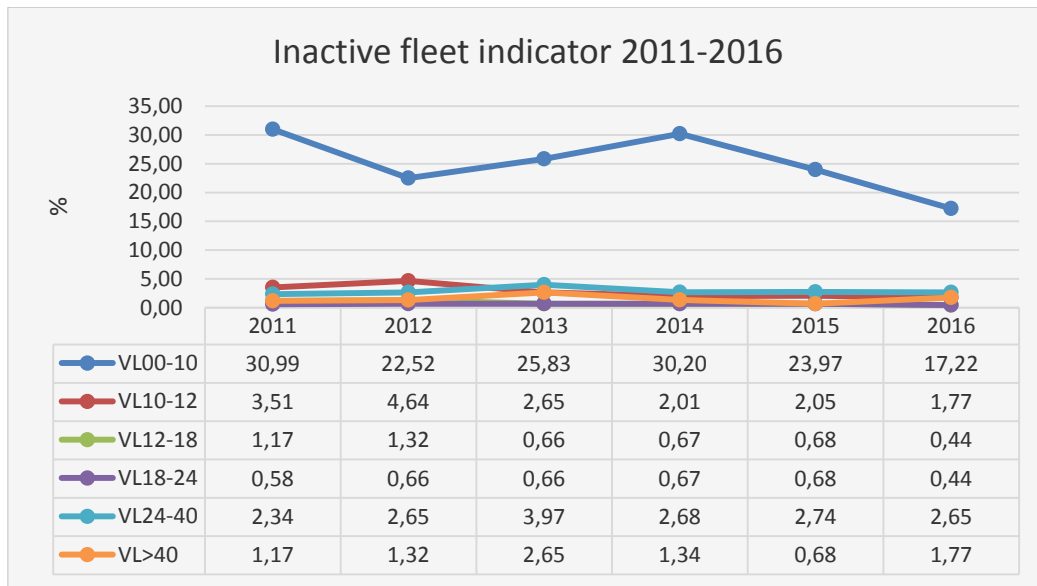


Figure 8. Inactive fleet indicator 2011-2016 by vessels number share from all fleet.

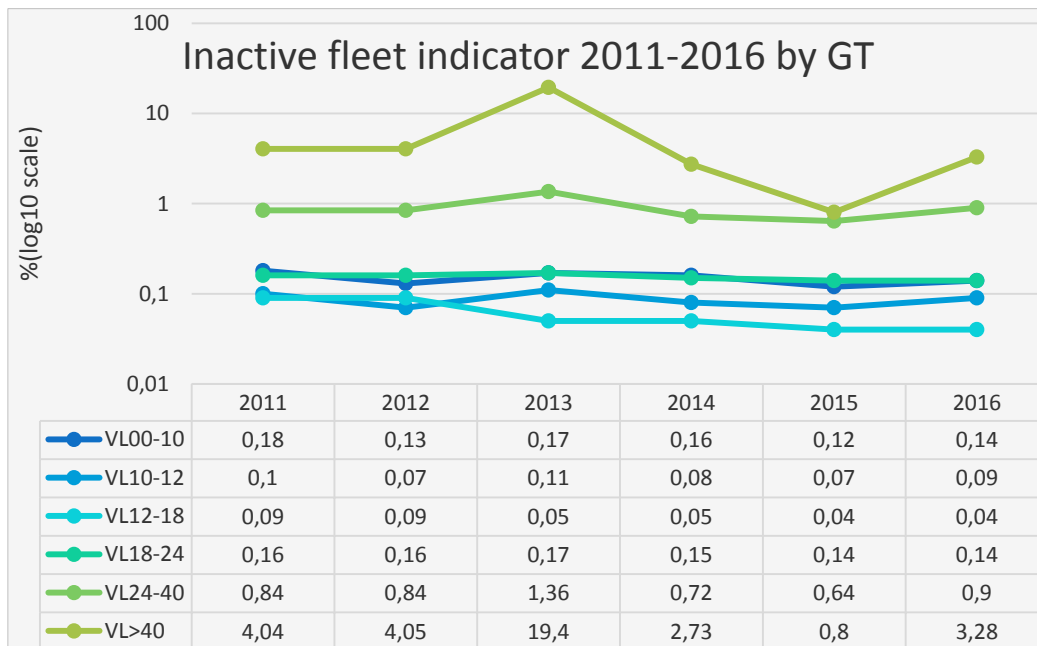


Figure 9. Inactive fleet indicator 2011-2016 by vessels GT share from all fleet.



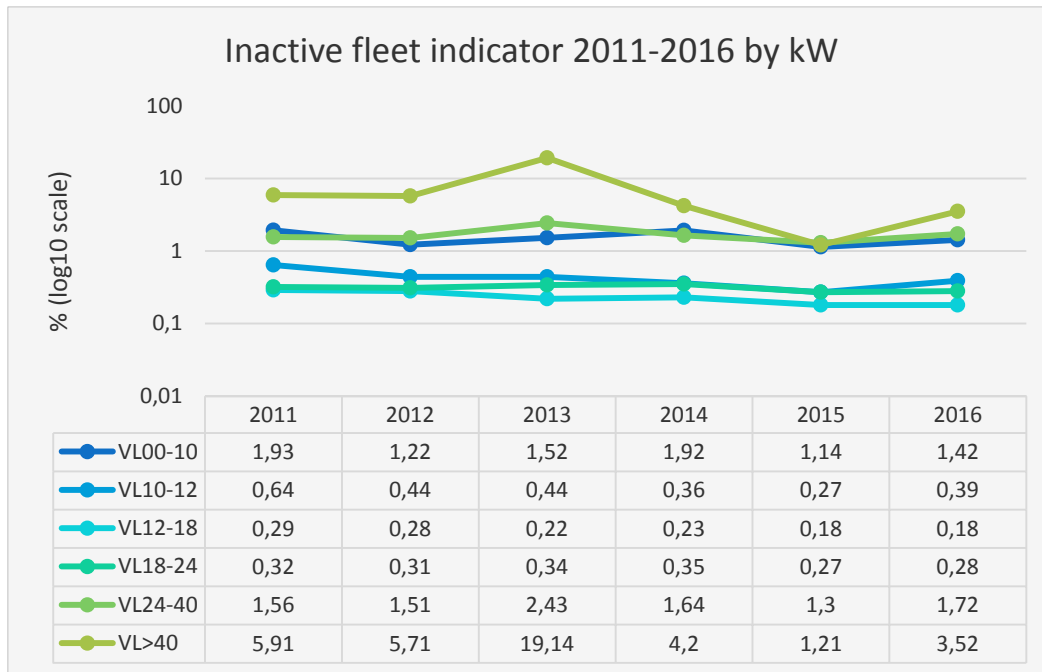


Figure 10. Inactive fleet indicator 2011-2016 by vessels kW share from all fleet.

Inactive fleet indicator analysis shows that all fleet has increased in 2016, comparing to 2015. Figures 9 and 10 do not show any tangible trends.

#### 4.2. The vessel utilisation indicator

In the Table 2 the vessel utilisation fleet indicator was calculated for each fleet segment for the period 2011-2016 aggregated by year and fishing gear. The calculated technical indicator is based on observed technical activity.

Table 2. Vessel utilisation indicator 2011-2016

<i>Length</i>	<i>Gear</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>
VL0-10	PG	0,65	0,63	0,65	0,63	0,66	0,65
VL10-12	DFN	0,81	0,78	0,8	0,8	0,7	0,73
VL24-40							
	DTS	0,78	0,78	0,79	0,76	0,77	0,75
	TM	0,77	0,75	0,89	0,71	0,74	0,72
VL40XX							
	TM	0,7	0,7	0,68	0,66	0,63	0,61
	DTS					0,77	0,81
	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 kWdays divided by maximum kWdays values to get vessel utilisation indicator result.

Table 2 dynamics do not reveal any significant trends in all the segment and all seem to be within balance limits (0,7<), except PG 0-10 (~0,65) and TM 40XX (~0,61) and PCR 40XX (~0,53) 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 3 shows traffic light data for the year 2015.

Table 3. Traffic light for balance indicators (2015 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	99,67	3,39	0,00004*	-	17,22	0,65	
2.	10-12 m	DFN	-32,19	-1,67	0,000001*	-	1,77	0,73	
3.	12-18 m	-	-	-	-	-	0,44	-	
4.	18-24 m	-	-	-	-	-	0,44	-	
5.	24-40 m	DTS	3,56	1,07	0,038606*	-	2,65	0,75	
6.	24-40 m	TM	5,87	1,20	0,538721*	-			
7.	>40 m	TM	-17,12	0,20		-	1,77	0,61	
	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	-	10-20	<0,7	

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

Table 3. Calculation for segments No 2 and No 7 DFN 10-12 m and TM >40 m could show possible imbalance. For long distance fleet TM >40 ROFTA decreased. Presumably this occurred due to poor catches in the CECAF area (Mauritania mainly) meanwhile the fleet size and its maintenance was treated at the same level. Three vessels in this segment did not carry out any fishing activities (due to suspended snow crab fisheries in NEAFC and Svalbard areas), which compose about 30 % of the fleet. This make influence in the long distance fleet to have lower balance indicators. Overall conclusion on balance from the Table 3 for the Lithuanian fishing fleet is “GREEN”.

Information on segmentation composition is presented in Table 4: 1. Passive gear vessels under 10 m fishing in coastal line of the Baltic Sea (Area 27). Small scale fleet. 2. Clustered segment, covering 10-12 m long lines and fixed netters fishing in coastal line of Baltic Sea (Area 27) and fixed netters, 24 m fishing in the Baltic Sea (Area 27). 3. Inactive vessels. 4. Inactive vessels. 5. Demersal trawlers, 24-40 m fishing in the Baltic Sea (Area 27). 6. Clustered segment, covering 24-40 m and above 40 m pelagic trawlers fishing in the Baltic Sea (Area 27); majority is 24-40 m, only one vessel is above 40 m. 7. Clustered segment, covering vessels over 40 m using mainly pelagic trawlers fishing in CECAF and SPRFMO regions and demersal trawlers fishing in NAFO and NEAFC regions. Majority, pelagic trawlers in CECAF. Long distance fleet.

## **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).

The main species caught in the Baltic Sea: cod, herring, sprat, flat fishes. In the high seas pelagic fish are the main target.

In 2015 recovery of return on fixed tangible assets was observed in pelagic and demersal trawlers, fishing in Baltic Sea and representing large scale fisheries segment. Current trends of large scale fleet fisheries in the Baltic Sea show a tendency that unprofitable cod fisheries allocate capacity to pelagic fisheries in the Baltic Sea and targeting sprat and Baltic herring. Mixed fisheries in demersal trawler segment had a significant impact on the improvement of balance indicators with positive returns on capital. Slightly similar tendency was seen in small scale fisheries, when decreased ROFTA in 2014 was improved in 2015 with highest indicator value among all fleet segments, mostly because PG 00-10 segment has low capital value and relation to even moderate profitability results in high ROFTA. Continuous downtrend of profit for major fleet segment

operating in long distance waters indicate a warning signal for future ROFTA expectations. Decline of net profit in long distance fleet was strongly influenced by very high depreciation of capital and other costs related to capital. Reduced income comparing to increased costs lowered profitability and significantly increased value of assets brought down ROFTA. For long distance fleet CR/BER ratio in 2015 was the lowest value from 2010. The lowest balance indicators were observed in fleet segment AREA27 DFN 10-12, which represents drift netting vessels, operating in coastal area (10-12 m length) and larger vessels operating in the Baltic Sea. CR/BER and ROFTA in this segment had a tendency to decrease, mostly influenced by larger vessels.

**Strengths:**

IT systems are widely used in a fleet management. Constant monitoring of fleet capacity ceiling by the segment and quota utilization are carried out using crosschecks along with fishing authorizations, first sales information, data from VMS (vessels monitoring system). This approach ensures efficient fisheries control and fleet management.

Biological analysis showed Lithuanian fishing fleet engaged in the Baltic fisheries is balanced in herring and sprat fisheries.  $F/F_{msy}$  for the most stock reduces (negative trends) within recent years.

SHI analysis for single stock and for multi-stock (does not exceed 1) for Lithuanian fishing fleet which indicate fleet segments are in balance.

Inactive fleet indicator shows that all fleet has decreased in 2016 comparing to the previous years.

**Weaknesses:**

Due to poor catches in CECAF area extended imbalance of capital and decreasing economic performance in high seas trawler segment.

**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.