ANNUAL REPORT LITHUANIA

Annual report 2015 to achieve a sustainable balance between fishing capacity and fishing opportunities

31/ May 2016

Introduction

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 summaries 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.

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 length <12 m and main engine power ≤ 110 kW. Mostly perch, bream, roach, salmon, pike, cod, flat fish, smelt, pike perch and eels are fished.

The second fisheries fleet part operates in the Baltic Sea and 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. Main targeted species – cod, herring, sprat and salmon.

The third fisheries fleet part operates mainly in waters of NAFO, NEAFC, SPRFMO, Mauritanian EEZ, Moroccan EEZ as well as in Norwegian waters and 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 2015. Four Lithuanian fishing vessels were fishing Moroccan EEZ. Two Lithuanian vessels were involved in pelagic fishery in Angolan EEZ in 2015. One Lithuanian vessel was involved in fishery in CECAF waters and one Lithuanian fishing vessel operated in the Argentine sea,

During 2015 five Lithuanian vessels were involved in fishery in NEAFC regulatory area. The quotas in NEAFC were exchanged into NAFO quotas.

One fishing vessel was involved in the shrimp's fishery in Svalbard area (Norwegian Exclusive Economic Zone).

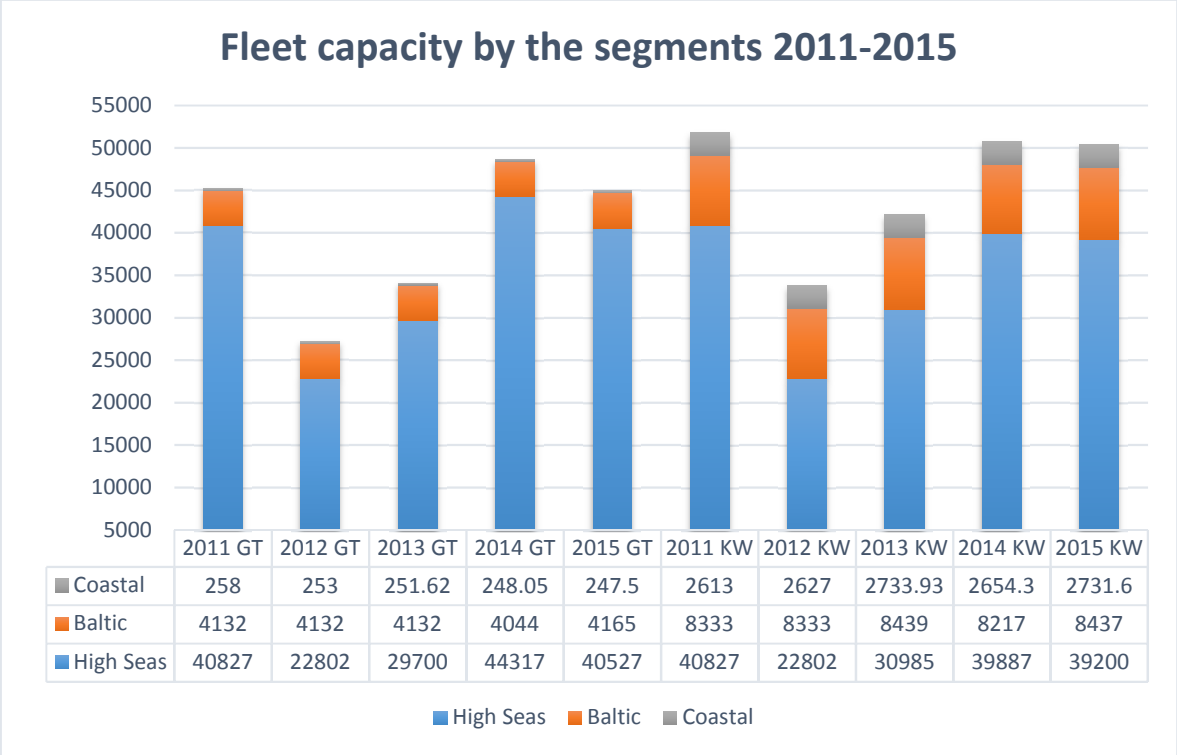
During 2015 one fishing vessel was fishing in SPRFMO regulatory area. And one fishing vessel operated in European Union waters (including North Sea).

1.2 Development of fishing capacity

By the end of the year 2015 Lithuanian fishing fleet consisted of 145 vessels. In total 44 939 GT and 50 368 kW.

Comparing to 2014 the total capacity was reduced by 3 670 GT (7 %) and 390 kW (1 %) (Figure 1). Capacity does not exceed the ceilings set by the Council Regulation (EC) No 1380/2013.

Figure 1. Fishing fleet capacity by the segments 2011 – 2015.



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 2015, the same like for 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 2015-12-31

	Lithuania	**GT**		**kW**	
1	Capacity of the fleet on 01/05/2004	**GTFR**	76 738	**kWFR**	80 702

2	Capacity level for the application of the entry-exit regime	**GT 04**	77 282	**kW 04**	82 102
3	Entries of vessels of more than 100 GT financed with public aid	**GT10 0**	0	**kW 100**	0
4	Other entries or capacity increases (not included in 3 & 5)		117 862		120 020
5	Increases in tonnage GT for reasons of safety	**GTS**	0		
6	**Total entries (3 + 4 + 5)**		117 862		120 020
7	Exits before 1/1/2007 financed with public aid	**GTa1**	1 616	**kWa**	3 135
8	Exits after 1/1/2007 financed with public aid	**GTa2**	2 334		5 482
9	Other exits (not included in 7 and 8)		145 708		141 737
10	**Total exits (7 + 8 + 9)**		149 661		150 354
11	Power of engines replaced with public aid conditional to power reduction		0	**kWr**	0
12	**Capacity of the fleet on 31/12/2015 (1+6-10)**	**GTt**	44 939	**kWt**	50 368
13	**Fleet ceiling on 31/12/2015**		73 489		73 516

1.4 Impact of fishing effort reduction schemes.

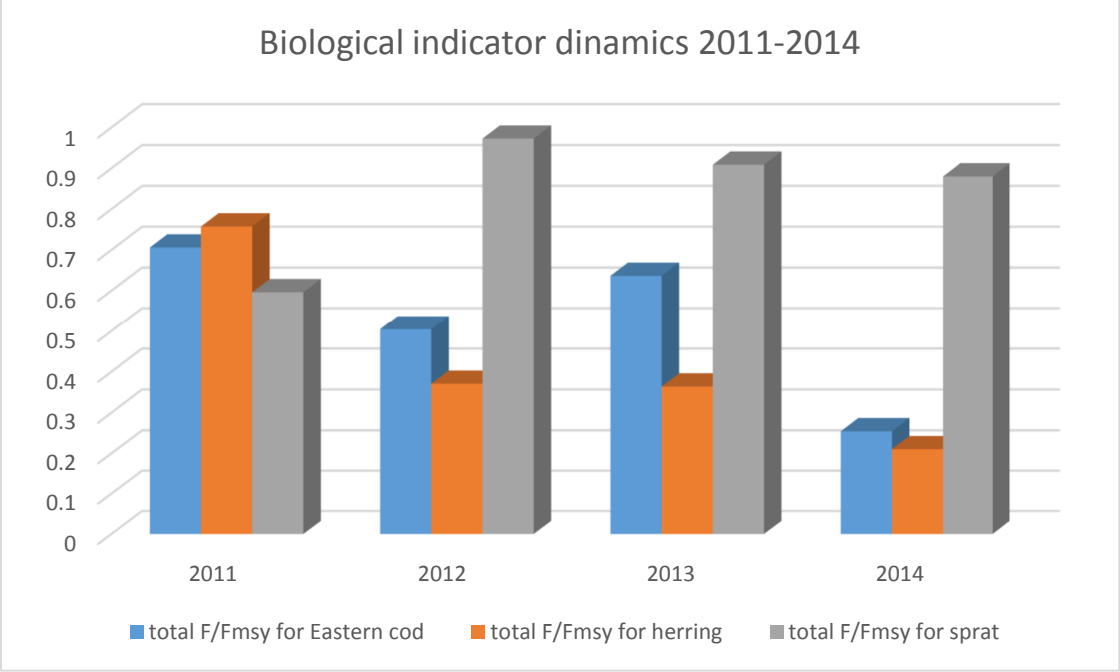
Lithuania's fishing fleet in the Baltic sea was significantly reduced before the multiannual cod management plan for the Baltic Sea (Council Regulation (EC) No 1098/2007 of 18 September 2007 establishing a multiannual plan for the cod stocks in the Baltic Sea and the fisheries exploiting those stocks, 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 Baltic Sea fleet was reduced by 2 711 GT and 4821 kW and by 37,5 % and 35,3 %. Lithuania takes a note that fleet reduction after 2007 occurred due to the withdrawal of high sea's vessels from the fleet (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 – 2014 provided in Figure 2. Apparent negative trend for herring is observed. Also F/Fmsy indicator decreases for last three year for sprat. 2014 year indicators are comparing lower than in previous years. F/Fmsy 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/Fmsy 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 coastal and Baltic fleet segments.

Figure 2. Biological indicator dynamics for years 2011 – 2014



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 is not included in analyses for biological indicators.

Analysis of the national current (F) and targeted (Ft=Fmsy) fishing mortality has shown that the ratio was less than 1 for all three stocks (cod, herring sprat) in 2014 (Figure 3):

- total F/Fmsy for Eastern cod - 0,254623006,
- total F/Fmsy for herring - 0,210582846,
- total F/Fmsy for sprat - 0,880101203.

Thus, the biological indicators have revealed that the capacity of the Lithuanian Baltic fishing fleet is in balance for the two Baltic stocks but theoretical risk of imbalance can be seen for sprat (F/Fmsy value 0,880101203). The distribution of mortality rates by all Lithuanian cod fishing segments (Figure 3) has shown that cod fishing with bottom trawls, herring and sprat fishing with pelagic trawls had the biggest impact on mortality rate.

Biological indicators (based on 2014 ICES and national data) have shown that the Lithuanian Baltic Sea fishing fleet engaged in the Baltic fishery especially cod, herring is in balance with the fish stocks. Due to unexpected sprat quota decrease (during 2011-2015), high level of F/Fmsy, fierce fights of fishing companies for the sprat quota, the risk of imbalance was seen for sprat fishing fleet. However negative trend could be observed during three last years which stipulates that risk of imbalance decreasing.

Conclusions

Analysis showed that Lithuanian fishing fleet engaged in the Baltic is in balance with current cod and herring and sprat stock size. F/Fmsy for most stock reduces (negative trends) with recent years. Risk of imbalance is not observed for any fishing fleet.

Figure 3. Calculations of biological indicators.

Based on 2014 data	Baltic Sea		
	Cod 25-32	Herring 25-32	Sprat
Catch per segment (100 tonnes):			
LTU DTS VL2440	8,0549	6,464749	17,08524
LTU PG VL0010	0,86846	0,68459	
LTU DFN VL1012	2,61519	0,14209	
LTU TM VL2440	0,42881	14,2425	79,70706
Total EU catch (100 tonnes)			
Total EU catch acc. To ICES stock assessments (100 t	385,4	1330	2440
Curent F (ICES stock assessments)	0,36	0,158	0,407
Curent F applied per fleet segment			
LTU DTS VL2440	0,007524037	0,000767993	0,002849874
LTU PG VL0010	0,000811224	8,13272E-05	0
LTU DFN VL1012	0,002442834	1,68799E-05	0
LTU TM VL2440	0,000400549	0,001691966	0,013295399
Fmsy	0,46	0,22	0,26
Lithuania's quota (100 tonnes)	46,62	32,91	120,1
Lithuania's quota (%)	4,842	2,919	5,0045
Fmsy in relation to Lithuania's quota	0,0222732	0,0064218	0,0130117
F/Fmsy by species in the fleet segment			
LTU DTS VL2440	0,337806753	0,119591507	0,219023959
LTU PG VL0010	0,036421514	0,012664243	
LTU DFN VL1012	0,109675954	0,002628525	
LTU TM VL2440	0,017983453	0,263472261	1,021803373
Catch composition in the segment (%)			
LTU DTS VL2440	67,30724237	30,02122372	17,65144541
LTU PG VL0010	7,256905449	3,179122584	0
LTU DFN VL1012	21,85268931	0,659842428	0
LTU TM VL2440	3,58316287	66,13981127	82,34855459
F/Ft weighted by catche composition for segment			
LTU DTS VL2440	0,22736841	0,035902834	0,038660895
LTU PG VL0010	0,002643075	0,000402612	0
LTU DFN VL1012	0,023967145	1,73441E-05	0
LTU TM VL2440	0,000644376	0,174260056	0,841440308
Total of all weighted F/Ft (SHI single species)	**0,254623006**	**0,210582846**	**0,880101203**
Percentage of fleet segment catch used for F/Fcalc	100	100	100

Conclusions

Analysis showed that Lithuanian fishing fleet engaged in the Baltic is in balance with current cod, herring and sprat stock size. Risk of imbalance in any of national fishing fleet segment is not observed.

2.2. Sustainable harvest indicator (SHI)

The 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 Fmsy goes to Lithuanian quota. Atfer, 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).

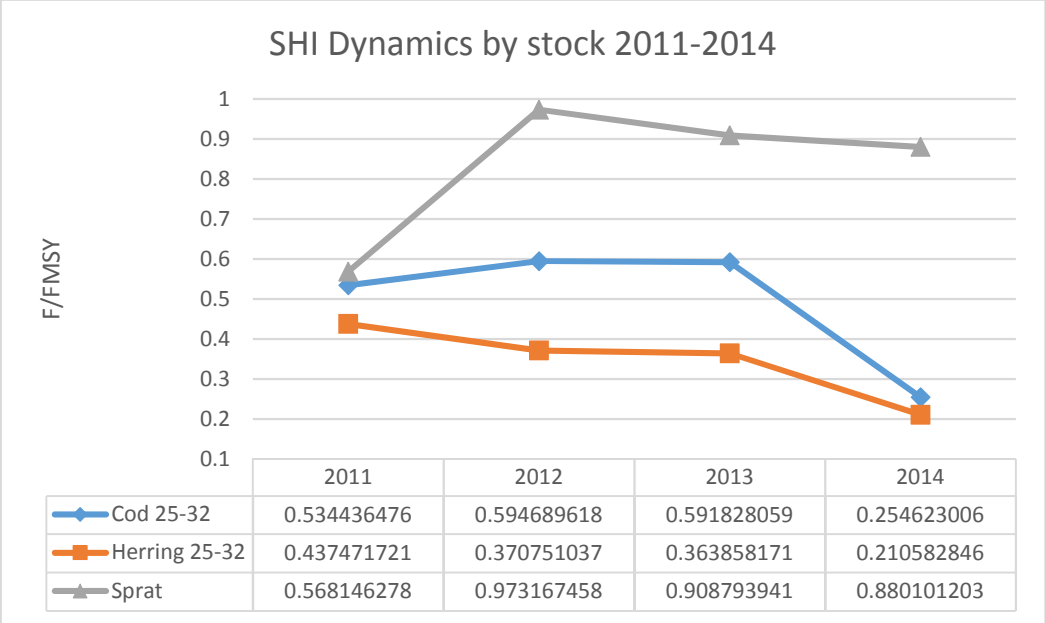
For multi-stock case (SHI was calculated using two methods): Figure 5 uses F and Fmsy values which derive from Lithuanian catches and quota proportions from EU F and Fmsy (ICES assesment) values. This estimations reflects the extent to which Lithuanian fleet segment is dependent on overfished stocks and actual impact of Lithuanian fleet segments to the stocks.

In Figure 4 calculations are based on EU F and Fmsy values. This estimation reflects to which extent Lithuanian fleet segment is dependent on overfished stocks in compare to EU stock mortality caused by whole EU fleet segments. It shows what Lithuanian fleet segments fished for stocks which are possibly “overfished” by whole EU fishing fleet segments.

For both cases landed products value was used as weighted average.

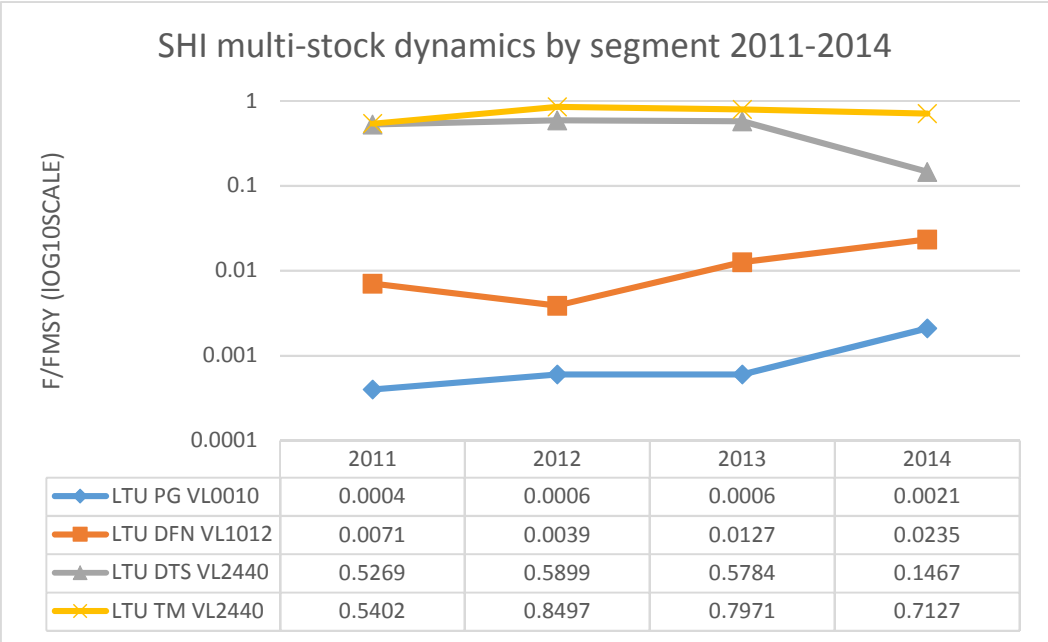
SHI (sustainable harvest indicator) have not been calculated for the fleet segment TM 40XX because the areas (FAO 34) where this fishery has been carried out are outside ICES areas (FAO 27). Also there are no assessment reports for CECAF pelagic stocks F/Fmsy that could fully substitute ICES advice with 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 – 8.



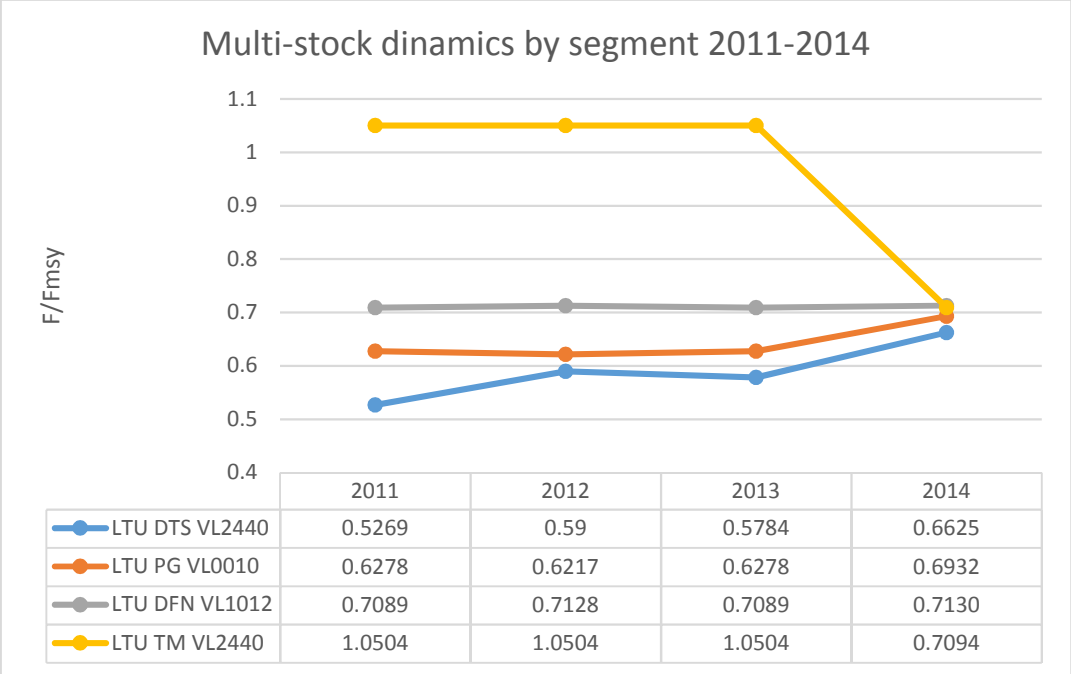
	2011	2012	2013	2014
Cod 25-32	0.534436476	0.594689618	0.591828059	0.254623006
Herring 25-32	0.437471721	0.370751037	0.363858171	0.210582846
Sprat	0.568146278	0.973167458	0.908793941	0.880101203

Figure 4. SHI dynamics by stock 2011-2014



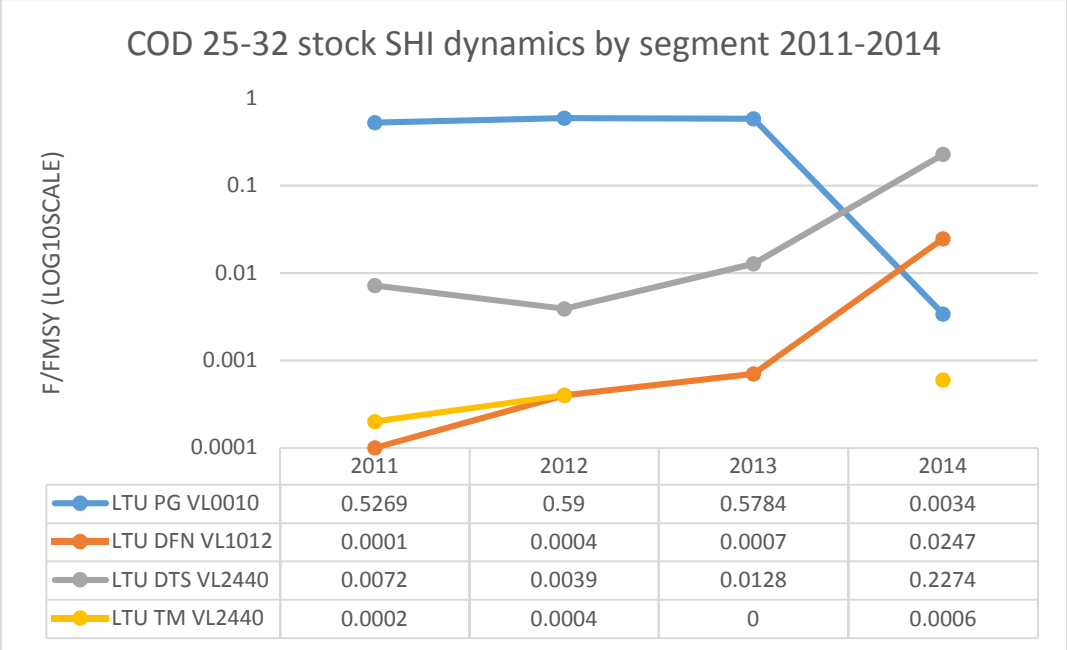
	2011	2012	2013	2014
LTU PG VL0010	0.0004	0.0006	0.0006	0.0021
LTU DFN VL1012	0.0071	0.0039	0.0127	0.0235
LTU DTS VL2440	0.5269	0.5899	0.5784	0.1467
LTU TM VL2440	0.5402	0.8497	0.7971	0.7127

Figure 5. SHI multi-stock dynamics by segment 2011-2014 (multiple stocks) F and Fmsy Lithuanian proportions.



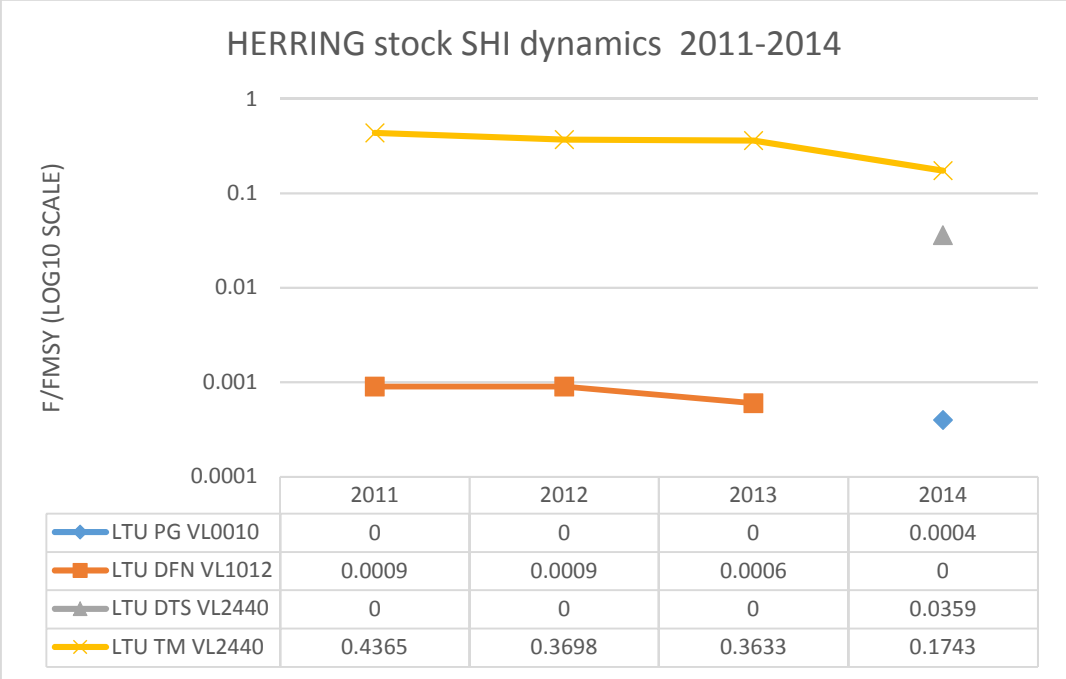
	2011	2012	2013	2014
LTU DTS VL2440	0.5269	0.59	0.5784	0.6625
LTU PG VL0010	0.6278	0.6217	0.6278	0.6932
LTU DFN VL1012	0.7089	0.7128	0.7089	0.7130
LTU TM VL2440	1.0504	1.0504	1.0504	0.7094

Figure 5a. SHI multi-stock dynamics by segment 2011-2014 (multiple stocks) F and Fmsy EU values (ICES assessment).



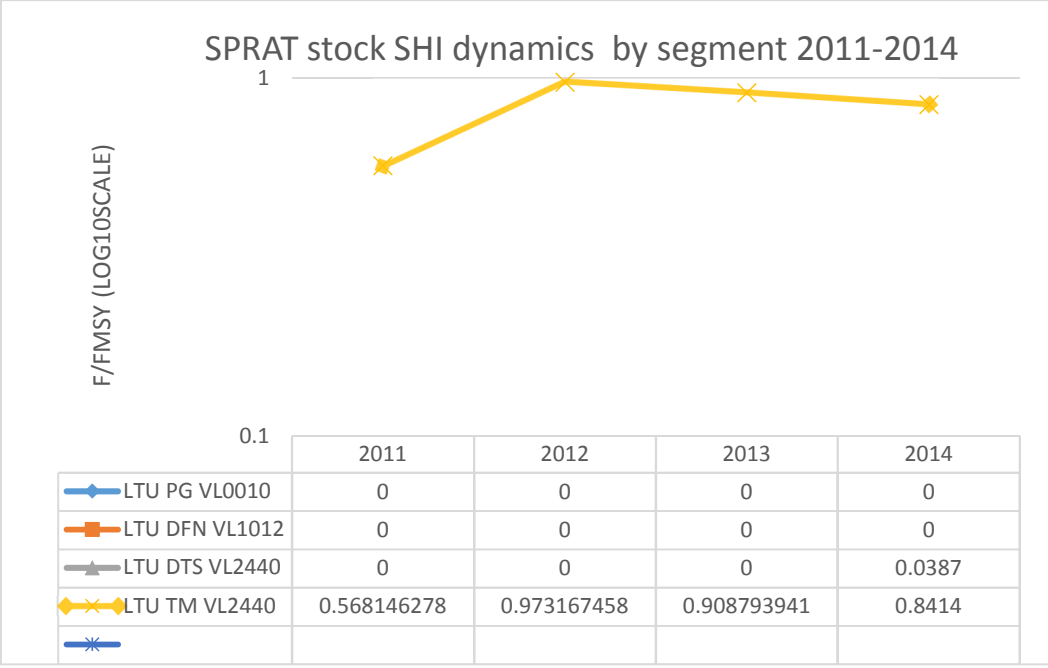
	2011	2012	2013	2014
LTU PG VL0010	0.5269	0.59	0.5784	0.0034
LTU DFN VL1012	0.0001	0.0004	0.0007	0.0247
LTU DTS VL2440	0.0072	0.0039	0.0128	0.2274
LTU TM VL2440	0.0002	0.0004	0	0.0006

Figure 6. Cod 25-32 stock SHI dynamics by segment 2011-2014.



	2011	2012	2013	2014
LTU PG VL0010	0	0	0	0.0004
LTU DFN VL1012	0.0009	0.0009	0.0006	0
LTU DTS VL2440	0	0	0	0.0359
LTU TM VL2440	0.4365	0.3698	0.3633	0.1743

Figure 7. Herring 25-32 stock SHI dynamics by segment 2011-2014. In PG 00-10 and DTS 24-40 segments no catches were made



	2011	2012	2013	2014
LTU PG VL0010	0	0	0	0
LTU DFN VL1012	0	0	0	0
LTU DTS VL2440	0	0	0	0.0387
LTU TM VL2440	0.568146278	0.973167458	0.908793941	0.8414

Figure 8. Sprat stock SHI dynamics by segment 2011-2014. During 2011-2013 in fleet segment PG 00-10, DFN 10-12 and DTS 24-40 segments no catches were made.

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

SHI analysis for multi-stock cases provides two different results in TM 24-40 segment when using two different methodologies. Figure 5a uses EU F and Fmsy values and shows possible imbalance

(SHI 0,71 in 2014) for the fleet segment TM 24-40 which averagely weighted catch composition consists mainly from sprat (for sprat stock EU global F value is higher than Fmsy value, estimated by ICES). Yet this LTU fleet segment which carries out mainly sprat fishery is relatively small (only 7 vessels) and its impact is not tangible considering the proportion of Lithuania fleet size (Lithuanian TM 24-40 segment represents around 3 percent of the respective segment of EU Baltic Sea fleet) quota and catches (Lithuanian share in EU quota 5 percent) made by this Lithuania fleet segment. This perception could be affirmed by estimation in Figure 5 which shows actual Lithuanian fleet impact (SHI ~0,71 in 2014) and results the conclusion that this fleet segment is balanced in contex of SHI analysis.

SHI multi-stock values for other fleet segments do not exceed 1 (using both methodologies Figures 5 and 5a) 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.

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.

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 solely in coastal area of Baltic Sea. Main species are European smelt and Baltic cod.

In terms of landings volume pelagic trawlers TM 24-40 and demersal trawlers DTS 24-40 are interrelated by the share of cod, sprat and herring quotas. For instance a considerable part of DTS 24-

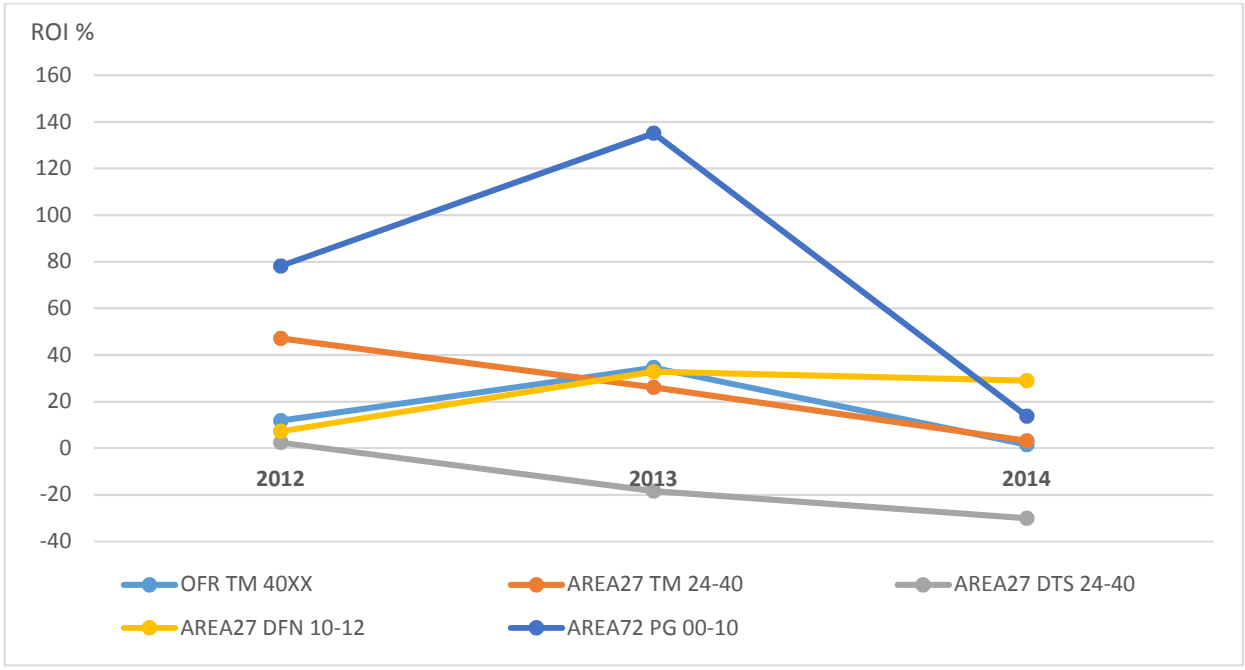
40 fleet use a second gear for pelagic species and therefore during the year can shift between segments depending on effort for each gear.

3.2 Return on investment (ROI)

Return on Investment compares the long-term profitability of the fishing fleet segment to other available investments. If this value is smaller than the low-risk long term interest rates available elsewhere, then this suggests that the fleet segment may be overcapitalized and if ROI is 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.

Despite the relatively high economic efficiency and undercapitalization for some fleet segments in 2013, annual decrease of ROI in 2014 for all fleet segments was observed. Continuous downtrend of profit for major fleet segments operating in Baltic Sea indicate a warning signal for future ROI expectations. Demersal trawlers had a negative ROI for two years in row and demonstrates a significant imbalance between profitability and value of invested capital, whereas pelagic trawlers has a tendency to approach overcapitalization. Detailed information of ROI and economic parameters for each segment is presented in figure and tables below.

ROI of Lithuanian fleet presented by segments



Data source: AIRBC

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

Values for calendar year (€000)	**2012**	**2013**	**2014**
Income from landings + other income	35890,9	59374,2	96480,1
Crew costs + unpaid labor costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs	29127,3	47806,0	90643,3
Capital costs (depreciation + interest payments	1917,4	1421,9	4507,6
Net profit	4846,2	10146,4	1329,2
Fleet capital asset value (vessel replacement value + estimated value of fishing rights)	41056,8	29339,4	86887,3
ROI = Net profit / capital asset value (%)	11,80	34,58	1,53
ROI – risk free long term interest rate*	4,82	27,55	-4,39

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 2014 Lithuanian fleet significantly increased investments to new long distance vessels, as a result capital value for this segment was raised almost three times compare to 2013. Therefore, such growth in capital value substantially increased capital costs and despite the higher income, profitability in short term was decreased. Lower profits in relation to enlarged capital value has led to the decline of ROI and it might be considered as short term correction of profitability rather than potential overcapitalization.

ROI for the fleet segment AREA27 TM 24-40 (Baltic Sea)

Values for calendar year (€000)	**2012**	**2013**	**2014**
Income from landings + other income	3106,0	3404,1	2362,0
Crew costs + unpaid labor costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs	1809,1	2463,6	2251,6
Capital costs (depreciation + interest payments	94,6	135,8	49,3
Net profit	1202,2	804,7	61,0
Fleet capital asset value (vessel replacement value + estimated value of fishing rights)	2548,8	3073,8	1908,6
ROI = Net profit / capital asset value (%)	47,17	26,18	3,20
ROI – risk free long term interest rate*	40,19	19,15	-2,72

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.

Significant decline in ROI was observed in pelagic trawler segment, fishing in Baltic Sea. Annual decrease of net profit in 2014 was influenced by significantly lower effort and insufficient exploitation of sprat quota during 2014. It was rather more related to administrative issues of quota allocation than unfavorable situation of market for sprat. Recent decline in ROI for pelagic trawlers might be an indication of potential overcapitalization, however other factors which contributed to mentioned profitability decline have to be taken into account.

ROI for the fleet segment AREA27 DTS 24-40 (Baltic Sea)

Values for calendar year (€000)	**2012**	**2013**	**2014**
Income from landings + other income	3770,6	3348,5	1644,2
Crew costs + unpaid labor costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs	3483,1	3861,2	2475,1
Capital costs (depreciation + interest payments	196,2	191,7	135,7
Net profit	91,2	-704,4	-966,6
Fleet capital asset value (vessel replacement value + estimated value of fishing rights)	3721,1	3844,6	3220,3
ROI = Net profit / capital asset value (%)	2,45	-18,32	-30,02
ROI – risk free long term interest rate*	-4,53	-25,35	-35,94

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.

Permanent decline of ROI for demersal trawlers, fishing in Baltic Sea runs into a clear imbalance between profitability and value of invested capital indicating continuous overcapitalization of this segment.

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

Values for calendar year (€000)	**2012**	**2013**	**2014**
Income from landings + other income	303,0	259,2	279,8
Crew costs + unpaid labor costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs	262,4	169,8	199,6
Capital costs (depreciation + interest payments	16,7	12,6	10,7
Net profit	23,9	76,8	69,5
Fleet capital asset value (vessel replacement value + estimated value of fishing rights)	328,6	233,9	239,0

ROI = Net profit / capital asset value (%)	7,26	32,82	29,08
ROI – risk free long term interest rate*	0,28	25,79	23,16

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.

During 2013-2014 passive gear vessels, longer than 10 m operating in Baltic Sea and coastal area demonstrates quite stable returns on investments indicating efficient use of capital. Although small scale coastal fisheries, fishing with vessels under 10 m had a decreased ROI in 2014, but for long term period demonstrates undercapitalization.

ROI for the fleet segment AREA72 PG 00-10 (coastal area)

Values for calendar year (€000)	**2012**	**2013**	**2014**
Income from landings + other income	358,1	323,1	259,3
Crew costs + unpaid labor costs + fuel costs + repair & maintenance costs + other variable costs + non variable costs	223,9	212,2	244,0
Capital costs (depreciation + interest payments	8,7	5,3	4,5
Net profit	125,6	105,7	10,9
Fleet capital asset value (vessel replacement value + estimated value of fishing rights)	160,5	78,2	79,2
ROI = Net profit / capital asset value (%)	78,22	135,11	13,71
ROI – risk free long term interest rate*	71,24	128,08	7,79

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.

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 2014 all Lithuanian fleet segments decreased ratio between current revenue and break even revenue required to cover production and capital costs. In general, only passive gear fleet segments were able to perform in higher than 1 ratio in term of both, long term and short term perspectives. Segments covering pelagic trawlers, in short term outlook had the undercapitalization, whereas long term perspective indicates the approach to the overcapitalization. Only demersal trawlers operating in Baltic Sea changed position from potential overcapitalization in 2013 to the evident overcapitalization in 2014 with negative value of CR/BER.

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

	Values for a calendar year (€'000) Use Segments total figures	**2012**	**2013**	**2014**
I	Current revenue (CR) = Income from landings + other income	35890,9	59374,2	96480,1
II	Fixed costs = Non variable costs + depreciation + opportunity cost of capital	5804,8	11059,5	22875,6
III	Variable costs = Crew costs + Unpaid labor costs + Energy costs + Repair & maintenance costs + Other variable costs	28105,7	40230,9	77419,0
IV	BER = II / (1 - [III / I])	26760,8	34301,7	115787,6
V	CR / BER = I / IV (Short term view)	2,6	2,1	1,1
VI	CR / BER = I / IV (Long term view)*	1,34	1,7	0,8

Data source: AIRBC

* - Opportunity costs included to fixed costs.

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

	Values for a calendar year (€'000) Use Segments total figures	**2012**	**2013**	**2014**
I	Current revenue (CR) = Income from landings + other income	3106,0	3404,1	2362,0
II	Fixed costs = Non variable costs + depreciation + opportunity cost of capital	642,0	566,0	310,7
III	Variable costs = Crew costs + Unpaid labor costs + Energy costs + Repair & maintenance costs + Other variable costs	1439,7	2249,5	2103,2
IV	BER = II / (1 - [III / I])	1196,7	1668,7	2836,2

V	CR / BER = I / IV (Short term view)	3,6	3,3	1,3
VI	CR / BER = I / IV (Long term view)*	2,6	2,0	0,8

Data source: AIRBC

* - Opportunity costs included to fixed costs.

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

	Values for a calendar year (€'000) Use Segments total figures	**2012**	**2013**	**2014**
I	Current revenue (CR) = Income from landings + other income	3770,6	3348,5	1644,2
II	Fixed costs = Non variable costs + depreciation + opportunity cost of capital	830,8	1033,4	871,1
III	Variable costs = Crew costs + Unpaid labor costs + Energy costs + Repair & maintenance costs + Other variable costs	3108,3	3289,7	1930,4
IV	BER = II / (1 - [III / I])	4730,0	58927,8	-5004,7
V	CR / BER = I / IV (Short term view)	1,2	0,1	-0,4
VI	CR / BER = I / IV (Long term view)*	0,80	0,1	-0,3

Data source: AIRBC

* - Opportunity costs included to fixed costs.

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

	Values for a calendar year (€'000) Use Segments total figures	**2012**	**2013**	**2014**
I	Current revenue (CR) = Income from landings + other income	303,0	259,2	279,8
II	Fixed costs = Non variable costs + depreciation + opportunity cost of capital	67,1	43,6	45,2
III	Variable costs = Crew costs + Unpaid labor costs + Energy costs + Repair & maintenance costs + Other variable costs	234,9	155,3	179,3
IV	BER = II / (1 - [III / I])	298,8	108,7	125,8
V	CR / BER = I / IV (Short term view)	1,5	3,8	3,2
VI	CR / BER = I / IV (Long term view)*	1,01	2,4	2,2

Data source: AIRBC

* - Opportunity costs included to fixed costs.

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

	Values for a calendar year (€'000) Use Segments total figures	**2012**	**2013**	**2014**
I	Current revenue (CR) = Income from landings + other income	358,1	323,1	259,3
II	Fixed costs = Non variable costs + depreciation + opportunity cost of capital	51,1	40,9	46,2
III	Variable costs = Crew costs + Unpaid labor costs + Energy costs + Repair & maintenance costs + Other variable costs	192,7	182,0	206,9
IV	BER = II / (1 - [III / I])	110,6	93,7	228,8
V	CR / BER = I / IV (Short term view)	4,1	4,0	1,3
VI	CR / BER = I / IV (Long term view)*	3,24	3,41	1,1

Data source: AIRBC

* - Opportunity costs included to 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 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). 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 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, the return on investment (ROI) as well as break even revenue (BER) and current revenue (CR) 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 (http://www.ecb.int/stats/money/long/html/index.en.html).

The return on investment (ROI) for a 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

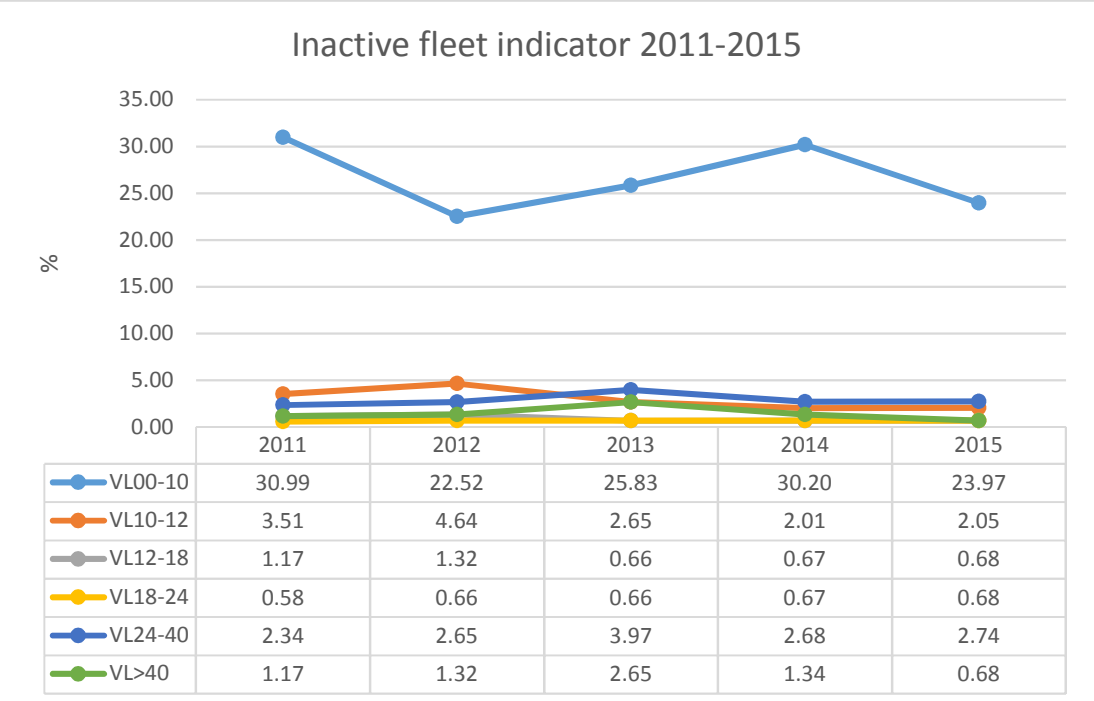
subsidies was excluded from the calculation. For the estimation of the fleet capital asset value, Perpetual Inventory Method (PIM) was used according to the advice from the PGECON[1] working group on best practices for calculating fleet depreciated replacement values.

Data for the breakeven revenue (BER) and current revenue (CR) calculation, except for opportunity costs, was obtained from DCF data. As required in guidelines, data on direct income subsidies was excluded from the calculation. CR/BER ratio is reported separately in short term and long term perspectives.

4. Vessel Use Indicators

4.1 Inactive fleet indicator

The vessel Inactive fleet indicator was calculated for the period 2011-2015 aggregated by vessel length segments*. Figure 9 shows the proportion of inactive vessels aggregated by year and lenght segments of the total fleet (%). Source data taken from date collection programme (economic scientific data).

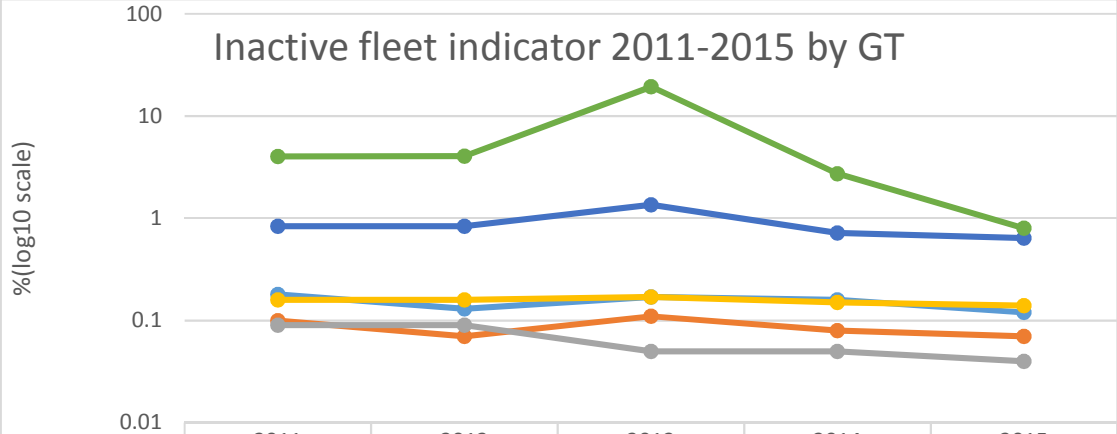


	2011	2012	2013	2014	2015
VL00-10	30.99	22.52	25.83	30.20	23.97
VL10-12	3.51	4.64	2.65	2.01	2.05
VL12-18	1.17	1.32	0.66	0.67	0.68
VL18-24	0.58	0.66	0.66	0.67	0.68
VL24-40	2.34	2.65	3.97	2.68	2.74
VL>40	1.17	1.32	2.65	1.34	0.68

Figure 9. Inactive fleet indicator 2011-2015 by vessels number share from all fleet.

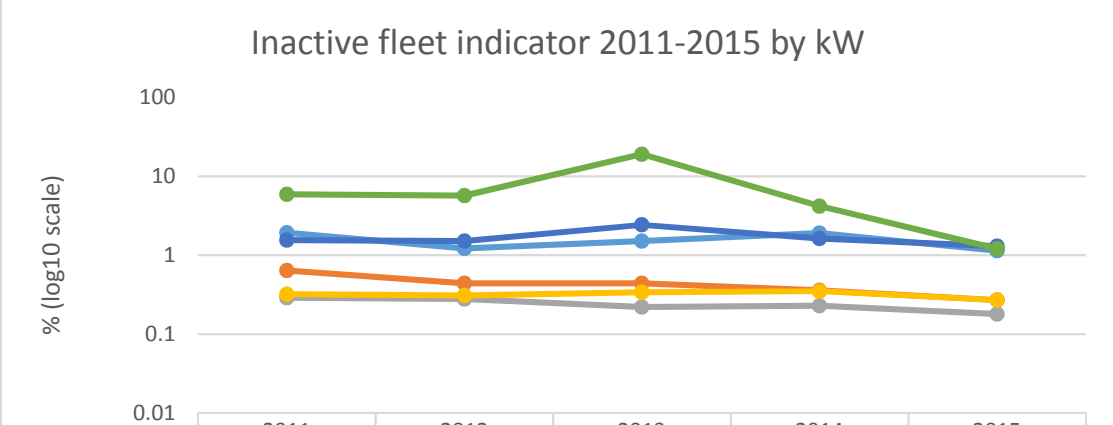
[1] Planning Group on Economic Issues (PGECON), 16th – 19th April 2012, Salerno (Italy)

* - These segments differ by type from the regular fleet segments in this report as no fishing gears are used on inactive vessels.



	2011	2012	2013	2014	2015
VL00-10	0.18	0.13	0.17	0.16	0.12
VL10-12	0.1	0.07	0.11	0.08	0.07
VL12-18	0.09	0.09	0.05	0.05	0.04
VL18-24	0.16	0.16	0.17	0.15	0.14
VL24-40	0.84	0.84	1.36	0.72	0.64
VL>40	4.04	4.05	19.4	2.73	0.8

Figure 10. Inactive fleet indicator 2011-2015 by vessels GT share from all fleet.



	2011	2012	2013	2014	2015
VL00-10	1.93	1.22	1.52	1.92	1.14
VL10-12	0.64	0.44	0.44	0.36	0.27
VL12-18	0.29	0.28	0.22	0.23	0.18
VL18-24	0.32	0.31	0.34	0.35	0.27
VL24-40	1.56	1.51	2.43	1.64	1.3
VL>40	5.91	5.71	19.14	4.2	1.21

Figure 11. Inactive fleet indicator 2011-2015 by vessels kW share from all fleet.

Inactive fleet indicator analysis shows that all fleet is decreasing in 2015, comparing to 2014. Figures 10 and 11 does 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 2011-2015 aggregated by year and fishing gear. The calculated technical indicator is based on observed technical activity.

Table 2. Vessel utilisation indicator 2011-2015

Length	**Gear**	**2011**	**2012**	**2013**	**2014**	**2015**
VL0-10	PG	0,65	0,63	0,65	0,63	0,66
VL10-12	DFN	0,81	0,78	0,8	0,8	0,7
VL24-40						
	DTS	0,78	0,78	0,79	0,76	0,77
	TM	0,77	0,75	0,89	0,71	0,74
VL40XX						
	TM	0,7	0,7	0,68	0,66	0,63
	DTS					0,77
	PCR					0,84

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 does not reveal any significant trends in all the segment and all seem to be within balance limits (0,7<) except PG 0-10 (~0,66) and TM 40XX (~0,63) which is slightly lower.

Table 3. Data for each vessel in the segment in ANNEX I

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 2014.

Table 4. Traffic light for balance indicators (2014 data).

No.	Length	Gear code	ROI	Current/Break even		Sustainable Harvest Indicator	Stocks at Risk indicator	Technical indicators		Over all Conclusion on balance
				Incl. opp.	Excl. opp.			Inactivity	Utilisation	
1.	<10 m	PG	13,71	1,1	1,3	0,00213*	-	30,20	0,63	
2.	10-12 m	DFN	29,08	2,2	3,2	0,02349*	-	2,01	0,8	
3.	12-18 m	-	-	-	-	-	-	0,67	-	
4.	18-24 m	-	-	-	-	-	-	0.67	-	
5.	24-40 m	DTS	-30,02	-0,3	-0,4	0,14665*	-	2.68	0,76	
6.	24-40 m	TM	3,20	0,8	1,3	0,71267*	-		0,71	
7.	>40 m	TM	1,53	0,8	1,1	-		1,34	0,70	
	COM guideline		>0	>1	>1	<0,95	-	0-1	>0,9	
				>0<1	>0<1	0,95-1,05	-	1-10	0,7-0,9	
			<0	<0	<0	>1,05	-	10-20	<0,7	

* Calculation: first figure F and Fmsy Lithuania catch and quota proportions.

Table 4. Calculation for segments No 1 and No 5 PG <10 m. and DTS 24-40 m., could show possible imbalance though in combination with other indicators- segments are balanced. Overall conclusion on balance from Table 4 for Lithuania fishing fleet – “GREEN”.

Information on segmentation composition in Table 4: 1. Passive gear vessels under 10 m fishing in coastal line of 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 Baltic Sea (Area 27). 3. Inactive vessels.4. Inactive vessels.5. Demersal trawlers, 24-40 m fishing in Baltic Sea (Area 27).6. Clustered segment, covering 24-40 m and above 40 m pelagic trawlers fishing in 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 2015, Lithuanian fishing fleet comprised of 145 vessels. Lithuanian fisheries fleet is divided in three larger parts (High Sea, 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 fish. In the High Seas pelagic fishes are main target.

Despite the reduced return on investments in Lithuanian fleet during 2014, only demersal trawlers from Baltic Sea showed evident overcapitalization in terms of short term perspective as well as long term outlook taking into account the average of 5 year long term interest rate. Furthermore,

decreasing trend of CR/BER was observed for demersal trawler segment, thereby supporting this assumption for overcapitalization. Negative CR/BER value in 2014 for DTS 24-40 indicates that variable costs alone exceeds current revenue and if more revenue is genertated, the greater losses will arise.

Decline in economic balance indicators during 2014 for long distance fisheries were associated mainly with significantly increased capital value (investments to new vessels) corresponding to much higher capital costs which influenced short term decline in profitability. Reduction of ROI and CR/BER in pelagic trawler fleet, fishing in Baltic Sea was mainly influenced by significantly lower effort and insufficient exploitation of sprat quota during 2014. It was related to administrative issues of quota allocation. However constant decrease of economic balance indicators for this segment three years in row might be an indication of potential overcapitalization.

Strengths:

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

IT system IZDIS development is still in process. For the year 2015 there was investments in development of IZDIS to improve reliability of the data, to ensure robust and efficient fleet management.

Biological analysis showed Lithuanian fishing fleet engaged in the Baltic is in balance with herring, cod and sprat. F/Fmsy for most stock reduces (negative trends) with recent years.

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

Inactive fleet indicator shows, that all fleet is decreasing in 2015, compare to the previous years.

Increased investments and strengthening of capital in long distance fleet indicates a positive outlook for future expectations.

Weeknesses:

Biological indicators analysis showed that theoretical risk of imbalance can be seen for sprat fishing fleet (pelagic trawlers in the Baltic sea).

Extended imbalance of capital and decreasing economic performance in demersal trawler

segment, operating in Baltic Sea.

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.