ANNUAL REPORT OF LITHUANIA

On sustainable balance

Between fishing capacity and fishing opportunities

May 2021

Introduction

This Report is prepared in accordance with Regulation (EU) No 1380/2013 of the Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy (hereinafter – Regulation (EC) No 1380/2013) and with 2014 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.

The report presents the current state of Lithuanian national fisheries fleet management measures and actions to achieve sustainable balance between fishing capacity and fishing opportunities.

1. General information

1.1 Description of fishing fleet

Lithuanian fisheries fleet is divided in three basic groups based on fishing grounds.

The first group of Lithuanian fishing fleet operates in the coastal area of the Baltic Sea (Coastal fleet). Coastal fleet is composed of fishing boats in length less than 12 meters and the main engine power of 110 kW or less.

The second group of Lithuanian fishing fleet operates in the all Baltic Sea area with vessels of 12 meters in length and more (Baltic fleet) and dominant main engine power of 165 – 220 kW.

The third fishing fleet group operates mainly in waters of CECAF, SPRFMO, NAFO and NEAFC (Distant fleet). This group is composed of fishing vessels with length more than 40 meters.

1.2 Development of fishing capacity

By the end of 2020 Lithuanian fishing fleet consisted of 138 (6 vessels – Distant fleet, 29 – Baltic fleet and 103 – Coastal fleet) vessels with total capacity of 36251 GT and 42175 kW.

During the reporting period there were no changes in total fishing capacity neither changes in total number of Lithuanian fisheries fleet.

The distribution of total fleet capacity by the three basic segments is shown in Figure 1.

1.3 Impact of fishing effort reduction schemes

During the year of 2020 there were no fishing effort reduction schemes introduced either for Lithuanian fisheries fleet or in the waters of jurisdiction of Republic of Lithuania.
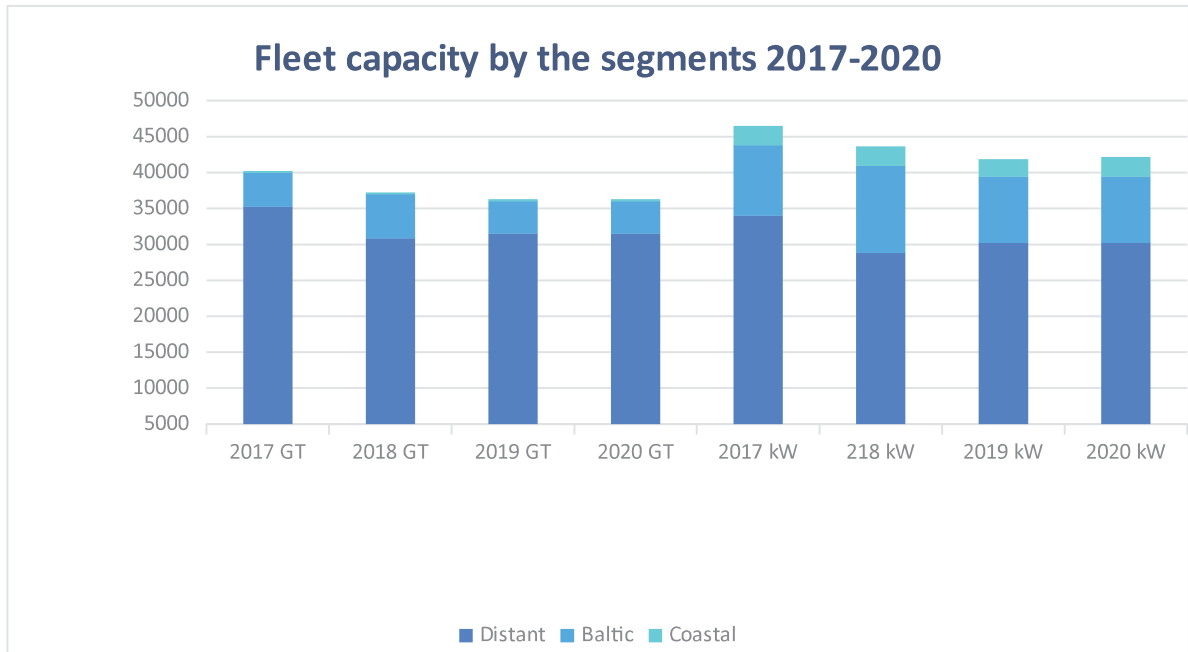
Figure 1. Fishing fleet capacity by fishing grounds 2017 – 2020.

1.4 Compliance with entry/exit scheme and with level of reference

Lithuania applies entry/exits scheme as defined in Regulation (EC) No 1380/2013 Article 23. For 2020 the same like for the previous years, no public aid was granted or entry of new capacity into the fleet was compensated by the withdrawal of e x i s t i n g capacity.

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

2. Biological Indicators

2.2. Sustainable harvest indicator (SHI)

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

The SHI indicator, Festimated/Ftarget , is 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.

SHI values that were calculated and observed 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 and SHI indicator values cannot be used meaningfully to assess the balance or imbalance.

SHI values calculated only for those fleet segments where the coverage ratio of the assessed stocks targeted by Lithuanian fleet was greater than 40%.

The Lithuanian Baltic Sea fishing fleet in 2019 consisted of 9 segments as defined in the Fleet economic data call as follow: PG VL0010, DFN VL1012, DTS VL1824, TM VL1824, DFN VL2440, DTS VL2440, TM VL2440, DTS VL40XX, TM VL40XX. Two segments PG VL0010 and DFN VL1012 are exclusively operating in the coastal area. The most recent ICES stocks assessment parameters for fleet segment operating in the Baltic Sea and other ICES areas were used as data sources. Cod has been removed from the SHI calculations and only SHI values were computed for DTS VL1824, TM VL1824, TM VL2440 and TM VL40XX in 2019 (Table 1). Due to eastern cod values removing from SHI indicator calculation, SHI values have been unlike since 2013. Dynamics of SHI values provided in Figure 2.

Table 1. Calculated SHI values for Baltic sea (NAO) segments in 2019.

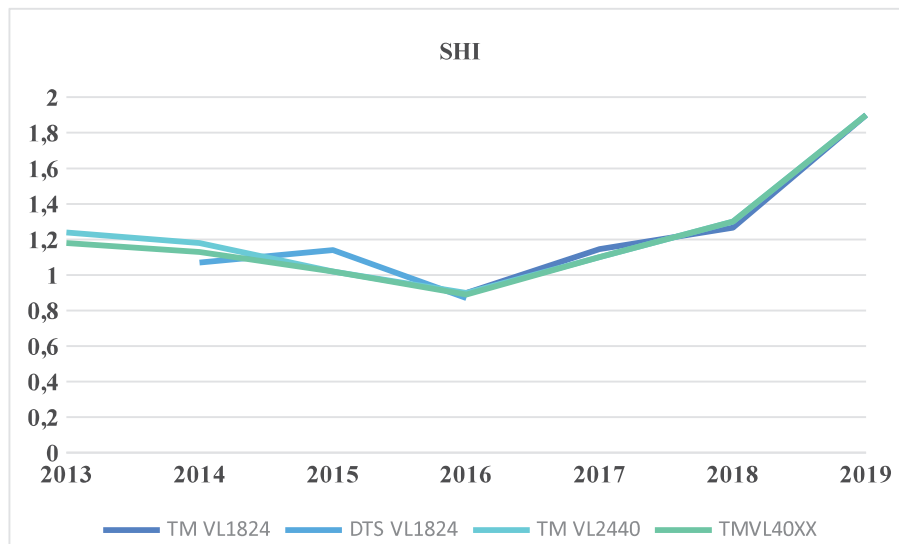| Fleet segment	SHI value
DTS VL1824	1.877
TM VL1824	1.780
TM VL2440	1.877
TM VL40XX	1,892

Figure 2. Dynamics of SHI values in 2013-2019.

Dynamics of SHI values show increasing trend for segments DTS VL1824, TM VL1824, TM VL2440 and TM VL40XX in the Baltic Sea. All fleet segment takes less than 10% of its catches from a pelagical fish stock. The important non-quota fish stocks exploited by the Lithuania fishing fleet include gobies nei, perch, smell, turbot and flounder. ICES has not provided analysed data for these fish stocks.

It should be highlighted that Baltic eastern cod stock is in a critical state. Lithuanian fishing quota for the Baltic eastern cod decreased from 3710 tonnes to 1580 tonnes from 2014 to 2019. For 2019 the Commission proposed and the Council adopted a TAC corresponding to a 15% reduction

compared to the 2018 Baltic eastern cod stock TAC. Lithuanian fleet segments strongly (more than 50 percent of income is gaining from the cod fisheries) depending on cod landings are DFN VL1012, DFN VL2440, DTS VL2440. As regards the eastern Baltic cod stock, since 2019, ICES has been able to base its precautionary advice on a more data-rich assessment than was previously possible. ICES estimates that the biomass of eastern Baltic cod was below Blim in 2019 and has decreased further since then. However, ICES has not been in a position to determine the values of the fishing mortality ranges.

When the biological indicator is unavailable due to the lack of values of F and Fmsy for more than 60% of the stocks which constitute the catch, the sustainable harvest indicator cannot be used meaningfully to assess the balance or imbalance of a fleet segment. The Lithuanian fishing fleet's catch of fish species subject to a quota which set by the Council of the European Union.

2.3 Stocks-at-risk indicator

In 2019 According to scientific advice from the International Council for the Exploration of the Sea (ICES), the eastern Baltic cod (Gadus morhua) stock suffers from an unsustainably low biomass due to a combination of declining recruitment, environmental factors and changes in the ecosystem leading to a high natural mortality and an excessive fishing mortality given the status of the stock. The stock is distressed and is expected to have reduced reproductive potential. Moreover, ICES estimates that the biomass will remain below the sustainability reference point in the mid-term even with no fishing at all.

The stocks at risk indicator (SRI) aims to determine the catch taken by a given fleet segment from stocks with heavily reduced biomass and in a condition such that recruitment may be greatly diminished. In accordance with the Commission's guidelines and based by ICES advice reports a cod stock in the Baltic Sea subdivisions 24–32 and Beaked redfish in subareas 5, 12, and 14 (Iceland and Faroe grounds, North of Azores, East of Greenland) and in NAFO subareas 1 and 2 (deep pelagic stock > 500 m) at risk was indicated as assessed as being below the B_{lim} biological level.

The indicator is calculated as the number of stocks exploited by a given segment which meet the following conditions: catch from the stocks considered at risk makes up more than 10% of the fleet segment's catch. The calculation formula is as follows:

(1 where ($C_i > 0.1 C_t$) or ($C_i > 0.1 T_i$); otherwise 0),

where C_i – catch from stock i, C_t – total catch of all stocks taken by the fleet segment, T_i – total catch of stock i taken by all segments.

The SRI values calculated for the segments of the Lithuanian fleet which were analysed are presented in Table 2 below.

Feet segments	SRI indicator by years for cod.27.24-32 stock		
	2017	2018	2019
VL0010 PG NAO	0	0	0
VL1012 DFN NAO	1	1	1
VL1824 DTS NAO	1	1	1
VL1824 TM NAO	0	0	0
VL2440 DFN NAO	1	1	1
VL2440 DTS NAO	1	1	1
VL2440 TM NAO	0	0	1

VL40XX TM NAO	0	0	0
SRI indicator by years for reb.2127dp stock			
VL40XX DTS OFR	0	0	0
VL40XX TM OFR	1	1	1

Table 2. The SRI values

In 2018, Western and Eastern Baltic cod became a stock at risk. Due to the significance of this stock in terms of the catch taken by the fleet, four segments (VL1012 DFN, VL1824 DTS, VL2440 DTS, VL2440 DFN) met the first condition regarding reliance on catch from stocks at risk. However, the Lithuanian fleet takes less than 5 % of the catches of the stock. Moreover, segments VL0010 PG, VL1824TM, VL2440TM and VL40XX TM caught a limited amount of stocks at risk (SRI = 0). ICES assesses that fishing pressure on the stock Beaked redfish (reb.2127dp) is above FMSY, Fpa, and Flim, and that spawning stock size is below MSY Btrigger, Bpa, and Blim and indicated species at risk. The Beaked redfish quota is allocated to segment based on swaps with Netherlands. No regular fisheries on that species can be ensured for segment.

3. Economic indicators

3.1. Fleet segment description

Lithuanian fishing fleet is subdivided by fleet segments based on Commission Delegated Decision (EU) 2019/110 establishing the multiannual Union program for the collection and management of biological, environmental, technical and socioeconomic data in the fisheries and aquaculture sectors. 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 Distant fleet 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 are not detailed by fishing techniques. This clustered segment contains vessels using TM, DTS and FPO techniques. Almost all vessels are larger than 40m.

NAO TM 24-40 – clustered segment includes pelagic trawlers 18-24 m, 24-40 m and over 40 m, which are operating in Baltic Sea and targeting HER and SPR. Segment also contains vessels using demersal trawler as second gear, but dominant effort is with pelagic trawlers. *From 2019 due to confidentiality reasons (economic data from two companies, four vessels) segment includes demersal trawler vessels from NAO DTS 24-40.*

NAO DTS 24-40 – since 2019 segment consisted of 18-24 m and 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 however with less effort than demersal trawler. *From 2019 after cessation of cod fisheries in Baltic Sea, due to confidentiality reasons (data from two fishing companies from demersal segment) is clustered with NAO TM 24-40.*

NAO 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 netters.

NAO PG 00-10 – small scale fleet segment under 10 m in length which operates only in coastal area of Baltic Sea.

3.2 Return on Fixed Tangible Assets (ROFTA)

Return on capital was evaluated by two indicators - Return on Fixed Tangible Assets (ROFTA) and Return on investments (ROI). ROFTA was estimated not taking into account intangibles assets, since transferable fishing rights were available from the December 2016. Therefore, since 2017 when legislation approved fishing rights to be transferrable and traded, ROI indicator was additionally introduced to the report.

Capital productivity could also be assessed comparing ROFTA and ROI to the long term interest rate. Comparison is provided in each table of capital productivity. If ROFTA and ROI are 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 and ROI for the fleet segment OFR TM- 40XX (Distant fleet)

Values	2015	2016	2017	2018	2019
Net profit (thousand €)	-21 365,1	-1 924,9	-12 019,1	-7 322,5	1 518,4
Fleet tangible asset value (replacement) (thousand €)	124 804,8	104 949,2	87 954,6	81 033,6	108 156,4
Estimated value of fishing rights (thousand €)	-	-	45 855,5	46 670,3	46 407,4
ROFTA= Net profit / Vessel replacement value (%)	-17,1	-1,8	-13,7	-9,0	1,4
ROFTA minus risk free long-term interest rate* (%)	-20,72	-4,58	-15,51	-10,17	0,8
ROI = Net profit / Capital asset value (%)	-	-	-9,0	-5,7	1,0
ROI minus risk free long-term interest rate* (%)	-	-	-10,8	-6,9	0,3

Data source: AIRBC, ECB

* - arithmetic average of long-term interest rate for the previous 5 years in relation to reference year.
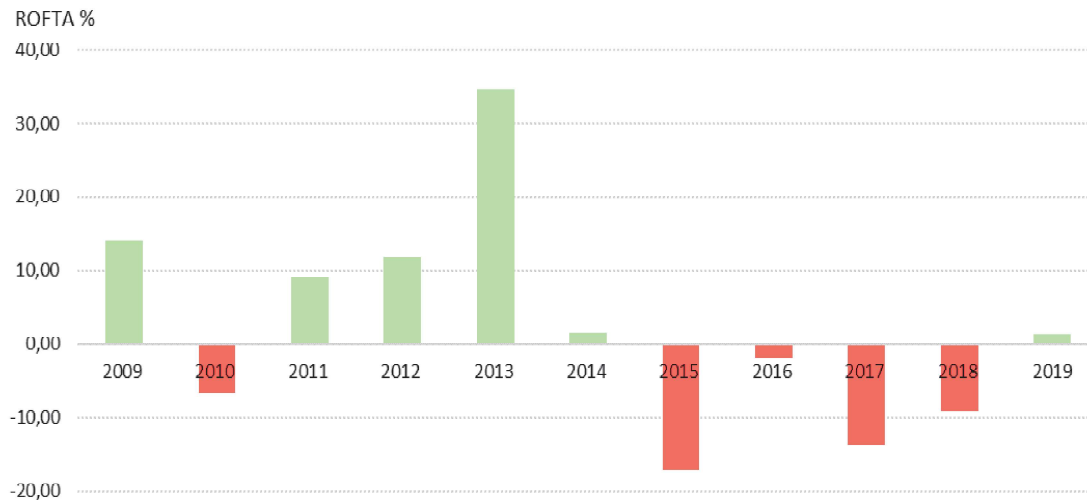
ROFTA for the fleet segment OFR TM- 40XX (Distant fleet)

During 2015-2018 long distance fleet ROFTA indicated potential overcapacity as capital productivity indicators were continuously negative. However, in 2019 long distance fisheries turned to profitable ROFTA with 1,4% of capital productivity. Improved profitability was due to the increased fishing effort and landings by 37% and 33% respectively with lower energy costs and decreased expenditures on the repairment and maintenance. In 2019 long distance fleet indicate balanced capitalization in 2019.

3.2.2 ROFTA and ROI for the fleet clustered segment NAO TM 24-40 (Baltic Sea)

Values	2015	2016	2017	2018	2019
Net profit (thousand €)	163,4	459,2	-680,7	350,8	274,3
Fleet tangible asset value (replacement) (thousand €)	2 496,9	4 435,5	4 703,2	4 578,2	4 346,5
Estimated value of fishing rights (thousand €)	-	-	2 641,0	3 392,8	3 828,1
ROFTA= Net profit / Vessel replacement value (%)	6,5	10,4	-14,5	7,7	6,3
ROFTA minus risk free long-term interest rate* (%)	3,0	7,6	-16,3	6,5	5,7
ROI = Net profit / Capital asset value (%)	-	-	-9,3	4,4	3,4
ROI minus risk free long-term interest rate* (%)	-	-	-11,1	3,3	2,7

Data source: AIRBC, ECB

* - arithmetic average of long-term interest rate for the previous 5 years in relation to reference year.
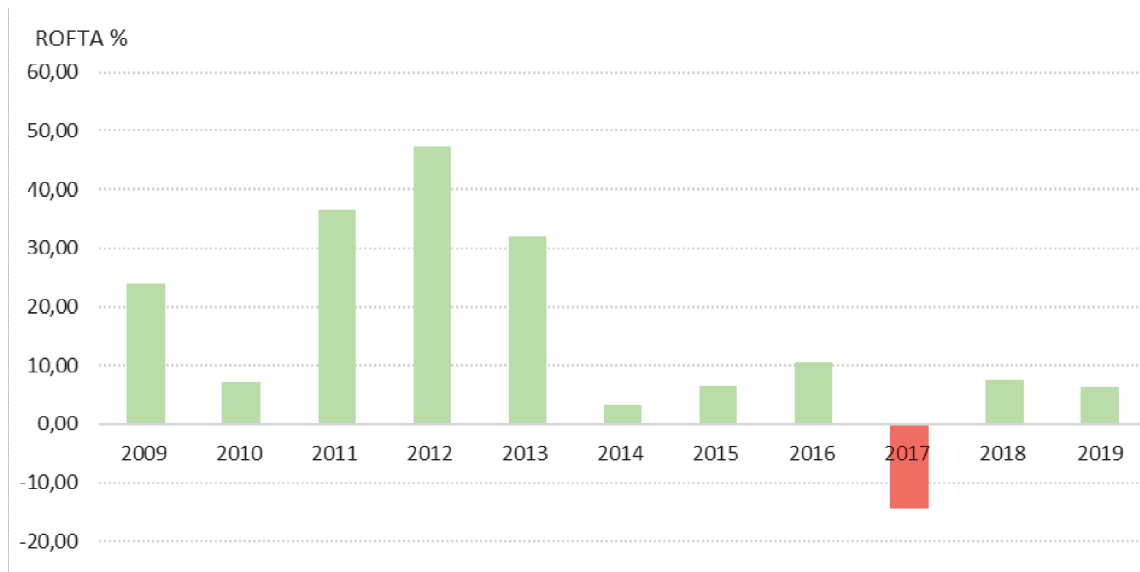
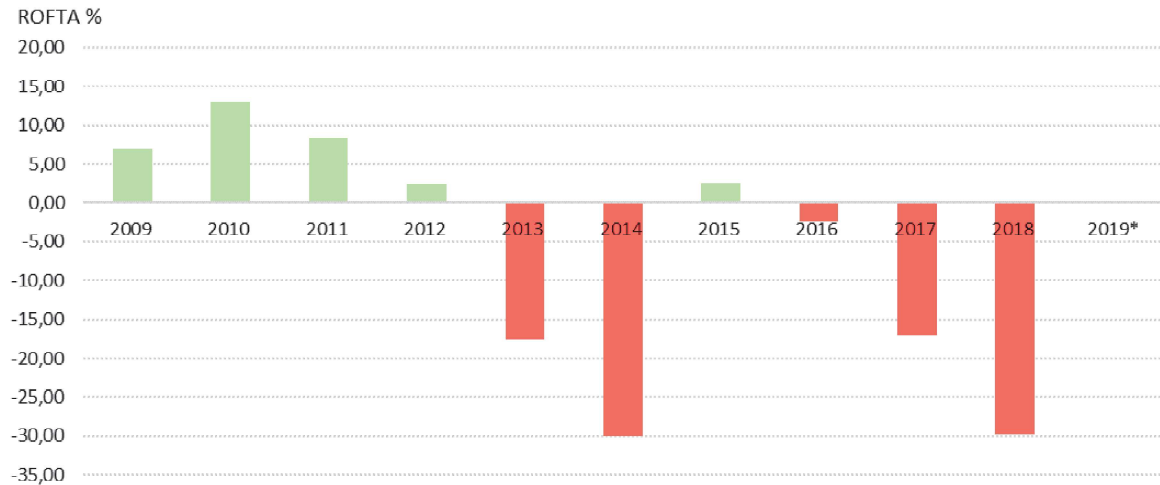ROFTA for the fleet segment NAO TM 24-40 (Baltic Sea)

In 2019 pelagic trawlers operating in Baltic Sea maintained positive capital productivity with 6,3% of ROFTA, slightly decreased from 2018. Due to the decline of cod fisheries in Baltic sea, additional capacity from demersal fleet segment was transferred to the pelagic fisheries. Increase in the working capital on the limited pelagic stocks fishing opportunities resulted in the decline of capital productivity. However, large scale pelagic fleet (NAO TM 24-40 segment) operating in Baltic Sea indicate balanced capitalization in 2019.

3.2.3. ROFTA and ROI for the fleet segment NAO DTS 24-40 (Baltic Sea)

Values	2015	2016	2017	2018	2019
Net profit (thousand €)	58,6	-55,9	-398,1	-442,7	Confidential
Fleet tangible asset value (replacement) (thousand €)	2 224,2	2 448,2	2 346,0	1 487,6	Confidential
Estimated value of fishing rights (thousand €)	-	-	981,2	1 114,8	Confidential
ROFTA= Net profit / Vessel replacement value (%)	2,6	-2,3	-17,0	-29,8	Confidential
ROFTA minus risk free long-term interest rate* (%)	-0,96	-5,0	-18,8	-30,9	Confidential
ROI = Net profit / Capital asset value (%)	-	-	-12,0	-17,0	Confidential
ROI minus risk free long-term interest rate* (%)	-	-	-13,8	-18,1	Confidential

Data source: AIRBC, ECB

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

2009-2019 ROFTA for the fleet segment NAO DTS 24-40 (Baltic Sea)

* - due to confidentiality, in 2019 economic data from two fishing companies from NAO DTS 24-40 is not provided.

Decline of fishing opportunities in cod fisheries due to the scarce cod stock status, resulted in the very low fishing effort of demersal trawlers targeting Eastern cod in 2019 and consequently led to withdrawal of NAO DTS 24-40 segment from analysis due to confidentiality issues. Based on fishing effort data in 2019 only four vessels, belonging to two fishing companies, were assigned to NAO DTS 24-40 segment. Due to the confidentiality of sensible economic data, NAO DTS 24-40 data were not provided in 3.2.3 table for analysis. Significant decline of profitability of NAO DTS 24-40 from 2013 to 2018 lead to the evident unbalanced overcapacity, with only minor part of demersal fleet having fishing operations in demersal trawler segment. Decline in ROFTA was observed from 2010 till 2014 and then fleet management measures were applied in 2015. Measures were related to restructuring quota allocation rules allowing better distribution of pelagic species quota to other large scale fleet segments. Measures improved profitability results for short term (2.64% ROFTA in 2015) but constant and steep decline of eastern cod stocks in Baltic Sea, and increase the costs per effort unit, reversed profitability indicators to negative ROFTA values in 2016. New measures were applied introducing Transferable fishing rights system from 2017 (legislation approved at the end of 2016). However, considerably poor Eastern cod stocks and following temporary termination of cod landings in 2019 plunged profitability to new lows. Large scale pelagic fleet (NAO DTS 24-40 segment) operating in Baltic Sea in 2019 remains unbalanced with overcapacity of capitalization.
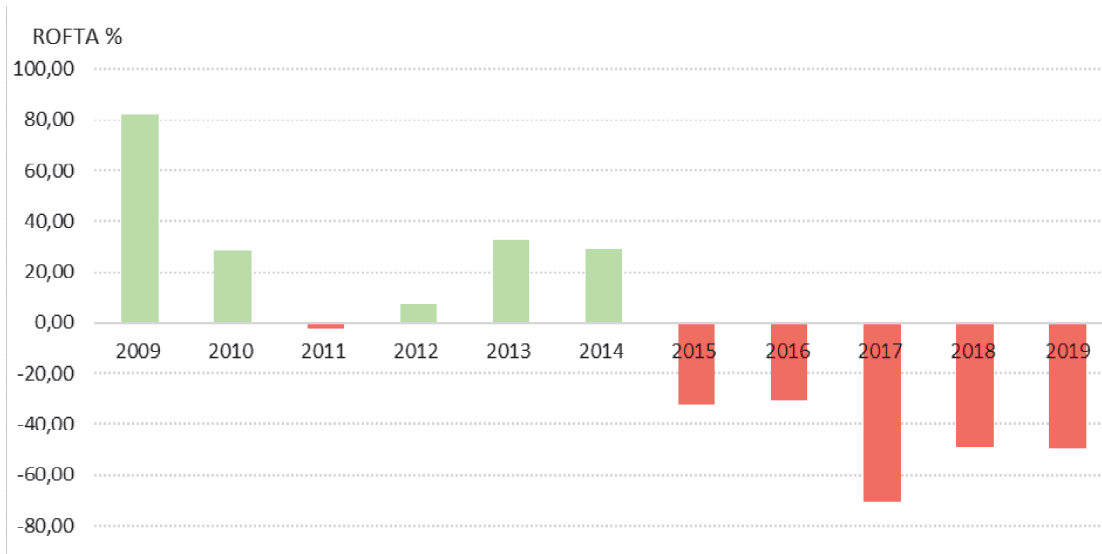
3.2.4. ROFTA and ROI for the fleet segment NAO DFN 10-12 (Baltic Sea (24-40 m) and coastal area (10-12 m))

Values	2015	2016	2017	2018	2019
Net profit (thousand €)	-117,7	-104,1	-134,2	-159,1	-132,2
Fleet tangible asset value (replacement) (thousand €)	365,8	340,6	189,6	323,8	267,0
Estimated value of fishing rights (thousand €)	-	-	233,1	191,1	101,6
ROFTA= Net profit / Vessel replacement value (%)	-32,2	-30,6	-70,8	-49,1	-49,5
ROFTA minus risk free long-term interest rate* (%)	-35,8	-33,3	-72,6	-50,3	-50,1
ROI = Net profit / Capital asset	-	-	-31,7	-30,9	-35,9

value (%)					
ROI minus risk free long-term interest rate* (%)	-	-	-33,6	-32,0	-36,5

<div align="right">Data source: AIRBC, ECB</div>

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

2009-19 ROFTA for the fleet segment NAO DFN 10-12 (Baltic Sea (24-40 m) and coastal area (10-12 m))

From Eastern cod stocks dependent NAO DFN 10-12 segment has a significantly low capital productivity values in 2019, accounting for -49,5% ROFTA. Due to confidentiality, fleet segment is composed from two different segments – NAO DFN 10-12 small scale coastal vessels and NAO DFN 24-40 large scale netters, operating in Baltic Sea. Clustered fleet segment has a continuously negative ROFTA from 2015 indicating evidently unbalanced fleet with overcapacity. Both segments have a strong dependency on Eastern cod stocks, therefore current situation of stock status is the one of the main drivers for imbalance. NAO DFN 10-12 segment operating in Baltic Sea and coastal area remains unbalanced with overcapacity of capitalization in 2019.
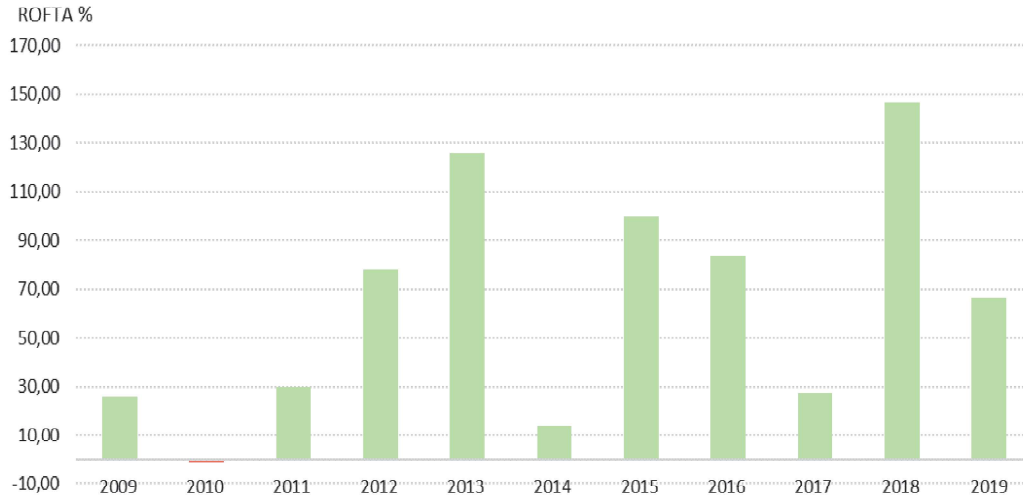
3.2.5. ROFTA and ROI for the fleet segment NAO PG 00-10 (coastal area)

Values	2015	2016	2017	2018	2019
Net profit (thousand €)	90,0	101,6	75,4	207,8	101,4
Fleet tangible asset value (replacement) (thousand €)	90,3	121,2	275,5	141,6	153,3
Estimated value of fishing rights (thousand €)	-	-	810,1	616,1	448,9
ROFTA= Net profit / Vessel replacement value (%)	99,7	83,9	27,4	146,7	66,1
ROFTA minus risk free long-term interest rate* (%)	96,1	81,1	25,5	145,6	65,5
ROI = Net profit / Capital asset value (%)	-	-	6,9	27,4	16,8
ROI minus risk free long-term	-	-	5,1	26,3	16,2

interest rate* (%)					

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

2009-2019 ROFTA for the fleet segment NAO PG 00-10 (coastal area)

Capital productivity indicators show the well-balanced capacity and fishing opportunities in small scale fleet segment with vessels 00-10 m overall length operating in coastal area of Baltic Sea. ROFTA is positive from 2011. High ROFTA value in small scale fleet segment is resulted from the relatively low capital value required to generate revenues compare to large scale fleet. NAO PG 00-10 segment operating in coastal area indicate balanced capitalization in 2019.

3.3. The ratio between 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. If the ratio is less than 1, means that insufficient income is generated to cover variable, fixed and capital costs, indicating that the segment is unprofitable, with potential overcapitalization. In the case of negative CR/BER values variable costs alone exceed current revenue, indicating that the more revenue is generated, the greater the losses will be achieved.

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

| Values	2015	2016	2017	2018	2019
Current revenue (CR) (thousand €)	53 583,2	64 459,5	54 474,9	58 916,3	79 249,7
Break-even revenue (BER) (thousand €)	241 885,2	72 347,1	219 798,3	87 751,2	75 696,8
CR/BER	0,2	0,9	0,3	0,7	1,0
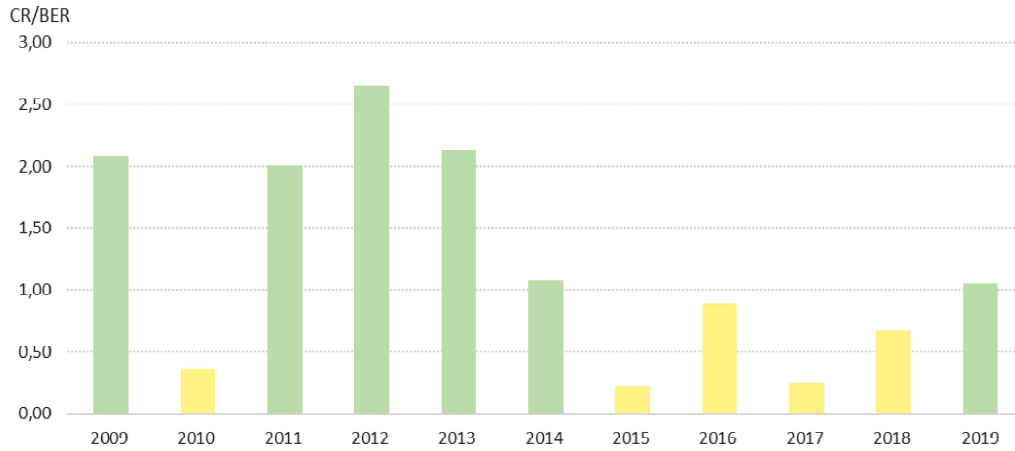
CR/BER

2009-2019 Ratio between CR and BER for the segment OFR TM- 40XX (Distant fleet)

Distant fleet in 2019 generated CR/BER indicator above 1, indicating a recovery to balanced economic capability.

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

Values	2015	2016	2017	2018	2019
Current revenue (CR) (thousand €)	2 930,8	3 377,3	3 162,5	4 973,5	5 037,7
Break-even revenue (BER) (thousand €)	2 147,6	1 967,0	13 171,2	3 937,2	4 327,1
CR/BER	1,4	1,7	0,2	1,3	1,16

Data source: AIRBC
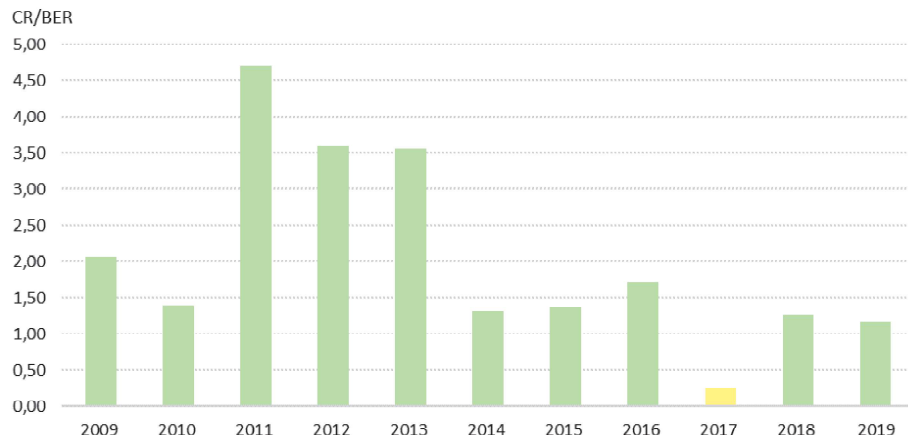
CR/BER

2009-2019 Ratio between CR and BER for the segment NAO TM 24-40 (Baltic Sea)

* - in 2019 includes economic data from two fishing companies from NAO DTS 24-40 segment

For pelagic trawlers, operating in Baltic Sea CR/BER ratio in 2019 was above 1, indicating that segment has a balanced economic capability. Such tendency was observed in the long term.

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

Values	2015	2016	2017	2018	2019*
Current revenue (CR) (thousand €)	1 702,8	1 848,8	1 710,0	910,4	Confidential
Break-even revenue (BER) (thousand €)	1 493,0	2 074,2	3 252,8	-4 948,8	Confidential
CR/BER	1,1	0,9	0,5	-0,2	Confidential

Data source: AIRBC
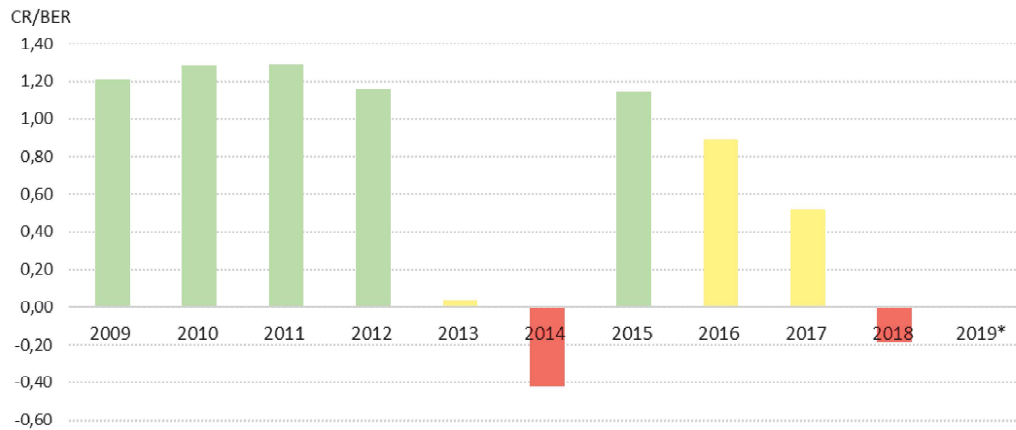
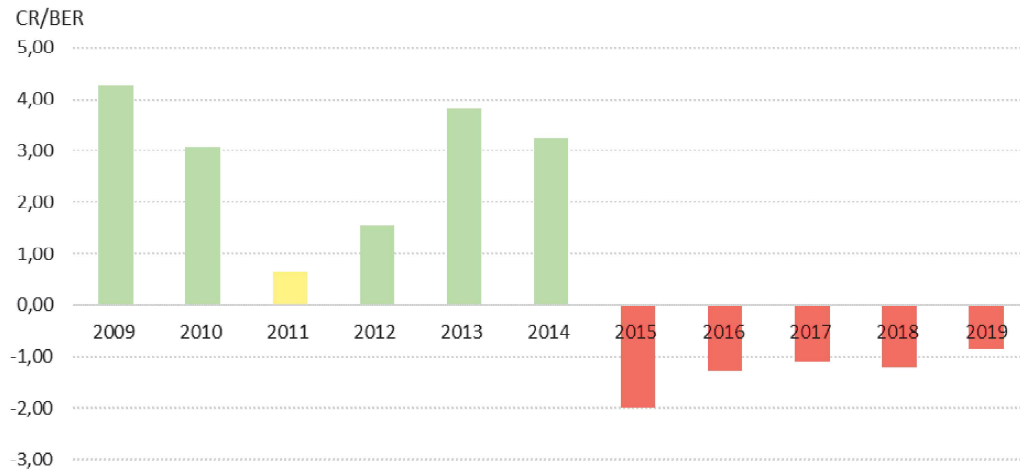2009-2019 Ratio between CR and BER for the segment NAO DTS 24-40 (Baltic Sea)

* - due to confidentiality data from NAO DTS 24-40 segment is not provided.

Break-even point analysis shows that demersal trawler segment from 2018 turned to the unbalanced status, generating negative CR/BER value.

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

| Values	2015	2016	2017	2018	2019
Current revenue (CR) (thousand €)	255,0	239,6	192,4	149,6	39,8
Break-even revenue (BER) (thousand €)	-128,4	-185,0	-176,3	-123,4	-46,8
CR/BER	-2,0	-1,3	-1,1	-1,2	-0,9

Data source: AIRBC

2009-2019 Ratio between CR and BER for the segment NAO DFN 10-12 (Baltic Sea (24-40 m) and
coastal area (10-12 m))

In 2019 continuously negative CR/BER value was observed in clustered fleet segment NAO
DFN10-12, which composed from two different segments – NAO DFN 10-12 small scale coastal
vessels and NAO DFN 24-40 large scale netters, operating in Baltic Sea. Break-even analysis
shows evident disbalance in economic capability of netters, operating in Baltic Sea. Income
generated from netters, mostly large scale, 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 NAO PG 00-10 (coastal area)

Values	2015	2016	2017	2018	2019
Current revenue (CR) (thousand €)	359,7	450,3	486,2	637,6	575,4
Break-even revenue (BER) (thousand €)	100,9	192,3	307,0	182,6	333,4
CR/BER	3,6	2,3	1,6	3,5	1,7

Data source: AIRBC
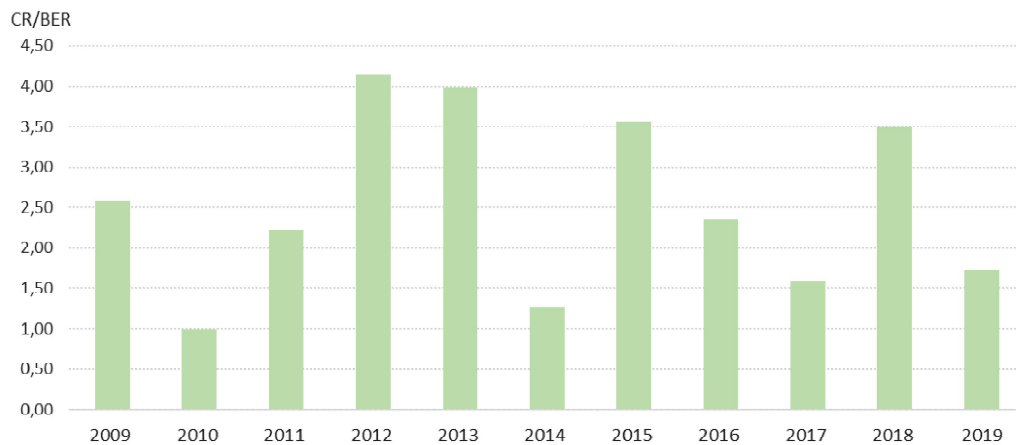
2009-2019 Ratio between CR and BER for the segment NAO PG 00-10 (coastal area)

Small scale fleet segment NAO PG 00-10 operating in coastal area generated sufficient amount of
revenues to cover costs and to earn profits. CR/BER ratio was higher than 1 in the 2019.

3.4. Methodology

Calculations of balance indicators are based on EUMAP data and presented at fleet segment level. Primary data are collected by annual census survey, using questionnaires, 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.

The balance between capacity and fishing opportunities in terms of economic indicators were measured by Return on Fixed Tangible Assets (ROFTA), Return on Investments (ROI) and The ratio between Current Revenue (CR) and Break-even Revenue (BER). As indicated in the guidelines, data is analyzed in long term period. Tables with economic variables for calculation balance indicators are provided in tables for 5 years, whereas trend of indicators is showed in graphs for 11 years period.

ROFTA, ROI and CR/BER for comparison purposes is additionally reduced by harmonized 5 year average long-term interest rates for convergence assessment calculated by the European Central Bank, as it recommended by the Commission. Long term interest rate data for Lithuania was downloaded from European Central Bank data base and it and 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
2013-2017	1,84
2014-2018	1,14
2015-2019	0,64

Data source: ECB

All economic variables *have not been adjusted* for inflation based on Consumer Pirce Index (CPI)!

Calculation of indicators:

ROFTA = Net profit / Vessel replacement value

Where: *Net profit = (Income from landings + other income) − (crew costs + unpaid labour + energy costs + repair and maintenance costs + other variable costs + non variable costs + depreciation)*

For the estimation of *Vessel replacement 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.

ROI = Net profit / Capital asset value

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

Capital asset value = Vessel replacement value + estimated value of fishing rights

For the estimation of *Value of fishing rights*, Discounted cash flow (profitability) method (DCM) was used according to the advice from the PGECON[2] working group.

Data on direct income subsidies was excluded from the calculation.

CR = income from landings + other income

BER = (Fixed Costs) / (1- [Variable costs / Current Revenue])

Where: *Variable costs = Crew costs + Unpaid labour + Energy costs + Repair and Maintenance costs + other variable costs*

And where: *Fixed costs = Non variable costs + depreciation*

Opportunity cost of capital is not included!

4. Vessel Use Indicators

4.1 Inactive fleet indicator

The vessel "Inactive fleet" indicator was calculated for the period 2015-2020 aggregated by vessel length segments. Figure 3 shows the proportion of inactive vessels aggregated by year and length segments of the total fleet (%). Data for calculation is taken from date collection programme. Figure 4 and Figure 5 demonstrates of inactive fleet share of specific segment by GT and kW respectively.
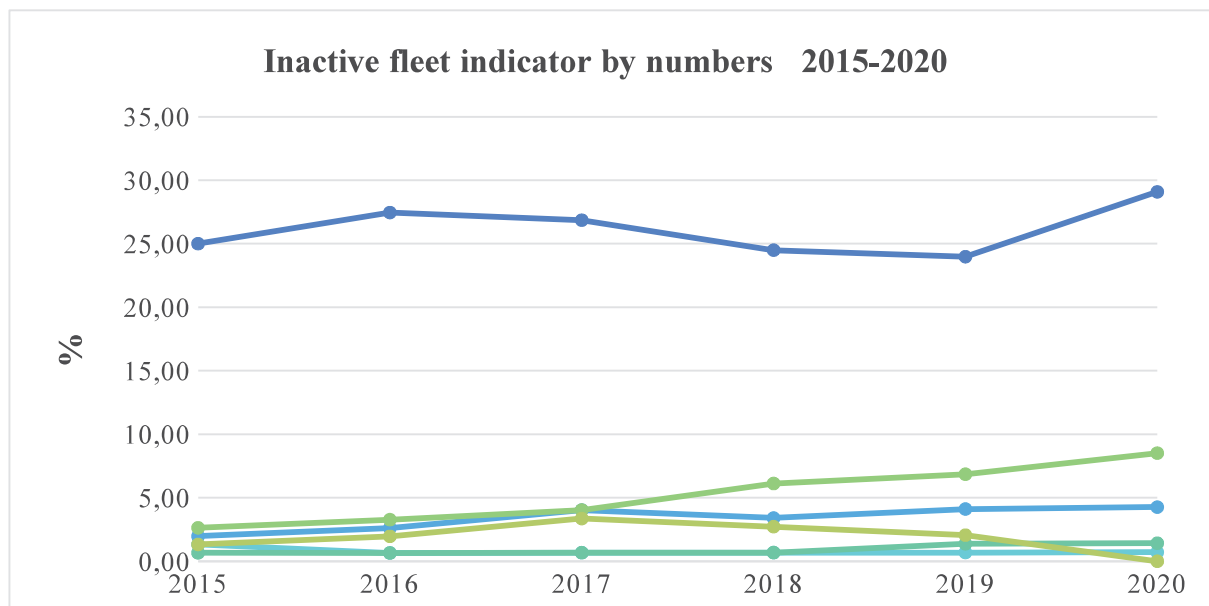

Figure 3. Inactive fleet indicator 2015-2020 by vessels number share from all fleet.

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[2]Planning Group on Economic Issues (PGECON 2019), 6th – 10thMay 2019, Ljubljana (Slovenia)
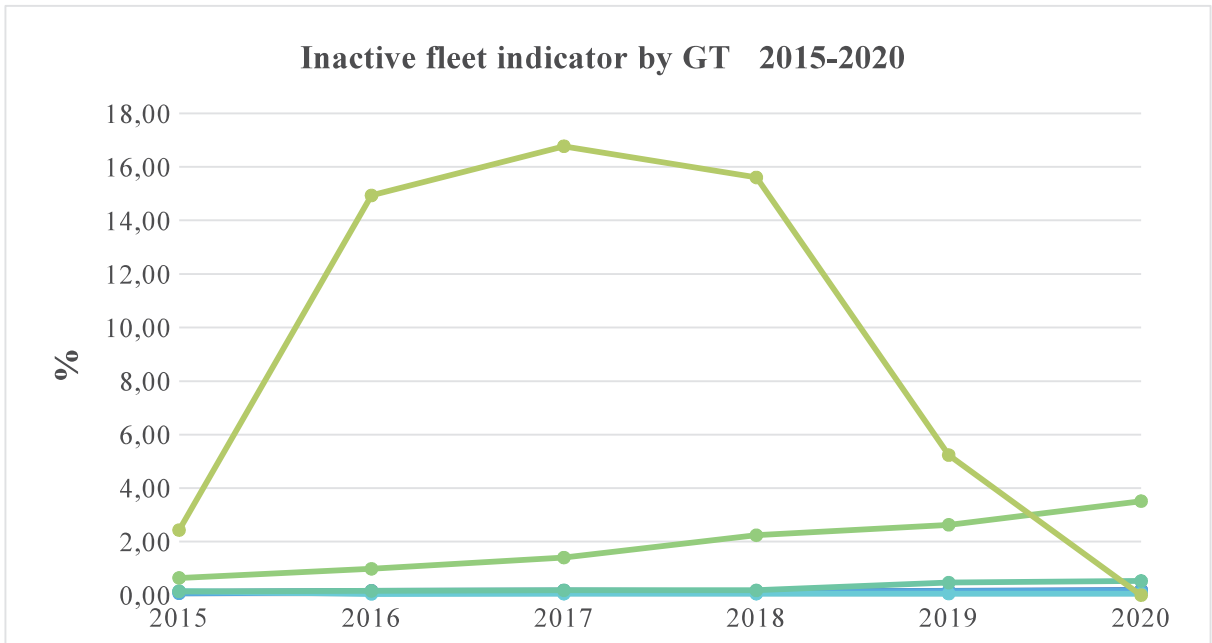
Inactive fleet indicator by GT   2015-2020

Figure 4. Inactive fleet indicator 2015-2020 by vessels GT share from all fleet.

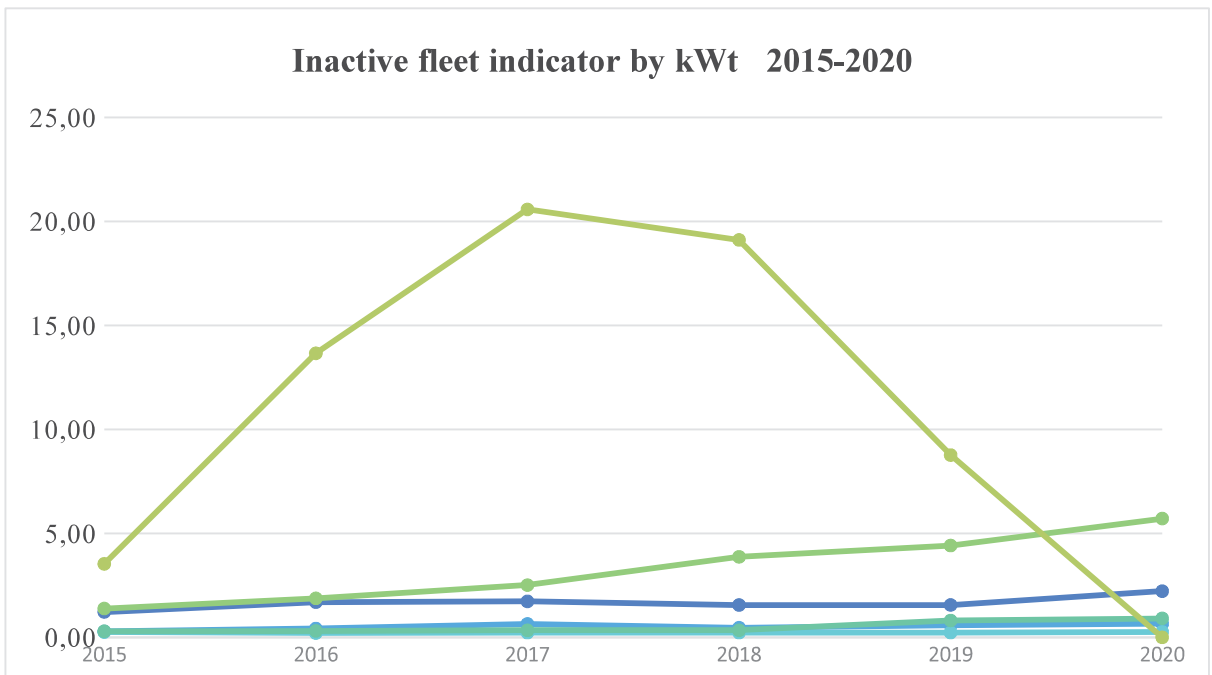**Inactive fleet indicator by kWt   2015-2020**

Figure 5. Inactive fleet indicator 2015-2020 by vessels kW share from all fleet.

   Inactive fleet indicator analysis shows that indicators of VL40XX segments of the fleet have dropped in values, some remain stable, other segments have increased, however data not shows any tangible or substantive trends. There is observed higher inactivity in VL0010 fleet segment. The main reasons: small vessels only operate part time supplemented by other work usually unrelated to fishing and in most cases on a seasonal basis; operators own several boats, some of which are used as stand-by vessels for various reasons. Also, there is a decrease of inactivity in VL40XX segment. The main reasons: the segment is partly contained by vessels registered in the Lithuanian fleet register and operated in the fishing activities on temporal base under charter

agreement. As such, based on the agreement expiry vessels were withdrawn from the Lithuanian fleet register. The slight inactivity increases in all other than VL40XX segments was occurred due to in 2020 the adopted additional remedial measures for cod stocks in the Baltic Sea to ensure the rapid return of the stock to levels above the level capable of producing. Covid-19 is also likely to have an impact on fisheries management. Measures to support the different elements in the supply chain extend through compensations to fish suppliers to ensure the smooth pass of 4-month fishing stop and impact of Covid-19 in 2020.

4.2. The vessel utilization indicator

In the Table 3 the vessel utilisation fleet indicator was calculated for each fleet segment for the period 2015-2020 aggregated by year and fishing gear.

Table 3. Vessel utilisation indicator 2015-2020

Vessel segment	2015	2016	2017	2018	2019	2020	Trend (5%) 2016/20
VL0010 PG	0.34	0.29	0.25	0.37	0.47	0.44	increasing
VL1012 DFN	0.49	0.44	0.34	0.54	0.8	0.74	increasing
LV2440 DFN	0.91	0.85	0.84	0.86	1	1	no trend
LV1824 DTS	0.77	1	0.97	0.83	1		-
LV1824 TM		0.98	1	1	1	0.99	no trend
VL2440 DTS	0.81	0.77	0.64	0.74	1	1	increasing
VL2440 TM**	0.55	0.58	0.69	0.66	0.93	0.73	increasing
VL40XX TM (OFR)*	0.55	0.63	0.71	0.77	0.86	0.74	no trend

* Due to low number of vessels VL40XX DTS and VL40XX TM segments have been clustered.

** Due to low number of vessels VL40XX TM (NAO) segment has been clustered with VL2440 TM (NAO) segment.

The calculated technical indicator is based on 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." Theoretical maximum DAS of 220 days cannot be used due to small scaled fleet segments part time/seasonal fishing activities. The calculation has been done either in kW-days for fleet segments with active gears (TM and DTS) and GT-days for fleet segments with active gears with passive gears (DFN and PG) as recomendated in guidance.

VL0010 and VL1012 fall under polyvalent passive gear segments. Major part of these vessels is not full-time engaged in the fishery. However, it could be noted that for vessel utilisation indicator calculated for 2020 Covid-19 is also likely to have an impact for particular segment differently. Fleet seems to be within balance limits (0,7 and more), except small VL0010 PG coastal fleet segment. This is partly due to statistical bias. In coastal fishing (vessels less than 10 m), commercial fishermen usually own a number of vessels, not all of which are used actively. It is typical in the sector in Lithuania to own one or two reserve vessels. Also, another of activities factor for fleet segments during COVID-19 pandemic period was depending on recruiting the crew and fulfilling all preventions on board which were not so successful for small scale fisheries segments. Due to appropriate remedial measures have been adopted to ensure a rapid return of the Baltic Sea cod stock concerned and as consequences no demersal fisheries dominate in segments

since May 2020. The fishery sectors have been particularly hit by market disruption, as demand has seen a sudden decline as consequences of the coronavirus outbreak. Should be highlighted that the impacts of COVID-19 on the segments are vary. Fish and fish products that are highly dependent on international trade suffered quite early in the development of the pandemic from the restrictions and closures of global markets, whereas fresh fish supply chains were severely impacted by the closure of the food service sectors (e.g. hotels, restaurants and catering facilities, including school and work canteens). Therefore, the trends are affected by abovementioned causes.

5. Traffic light

Table 4 shows traffic light data for the year 2019.

No.	Length	Gear code	ROFTA	Current/ Break even Incl. opp. costs	Sustainable Harvest Indicator	Stocks at Risk indicator	Technical indicators Inactivity	Utilisation	Over all Conclusion on balance
1.	<10 m	PG	66,1	1,7	-	0	23,97	0,47	
2.	10-12 m	DFN	-49,5	-0,9	-	1	4,11	0,8	
3.	12-18 m	-	-	-	-	-	0,68	-	n/a
4.	18-24 m	TM	3,3	1,1	1,780	0	1,37	1	
5	24-40 m	TM			1,877	1	6,85	0,93	
6.	>40 m (NAO)	TM			1,892	0	2,05		
7.	18-24 m	DTS	Confid.	Confid.	1,877	1	1,37	1	
8.	24-40 m	DTS			-	1	6,85	1	
9.	>40 m (OFR)	TM	1,4	1,05	-	1	2,05	0,86	
	COM guideline		>0	>1	<0,95	-	0-10	>0,9	
				>0<1	0,95-1,05	-	10-20	0,7-0,9	
			<0	<0	>1,05	-	>20	<0,7	

6. Summary report on the weaknesses and strength of the fleet management system and general level of compliance with fleet policy instruments

Fishing opportunities of Lithuanian large scale fishing fleet, operating in Baltic Sea are fixed in accordance with the objectives and targets of Multiannual plan for the stocks of cod, herring, salmon and sprat in the Baltic Sea and the fisheries exploiting those stocks, approved by the Regulation (EU) 2016/1139. Implementation of Management plan affects large scale pelagic trawlers, demersal trawlers, netters and with less extent small scale segments under 10 m length. Economic performance of these segments during analyzed period has different trends of developments depending on the target species. Segments mostly exposed to losses are those who depend on cod fisheries.

As it was mentioned earlier Baltic eastern cod stock is in a poor state. Lithuanian fishing quota for the Baltic eastern cod decreased from 3710 tonnes to 1580 tonnes from 2014 to 2019 at the same time substantial part of Lithuanian fleet segments strongly (more than 50 percent of income is gaining from the cod fisheries) depending on cod landings. It is scientifically proved that the eastern Baltic cod stock suffers from an unsustainably low biomass due to a combination of declining recruitment, environmental factors and changes in the ecosystem leading to a high

natural mortality and an excessive fishing mortality given the status of the stock. The stock is distressed and is expected to have reduced reproductive potential; therefore, since 1 June 2019 targeting cod fishery was stopped.

In 2018, Western and Eastern Baltic cod became a stock at risk. Due to the significance of this stock in terms of the catch taken by the fleet, four segments (VL1012 DFN, VL1824 DTS, VL2440 DTS and VL2440 DFN) met the first condition regarding reliance on catch from stocks at risk. The indicator is calculated as the number of stocks exploited by a given segment which meet the following conditions: catch from the stocks considered at risk makes up more than 10% of the fleet segment's catch. However, the Lithuanian fleet takes less than 5 % of the catches of the stock.

Declining cod biomass and respectively applied management measures led to the growth of overcapacity in the fleet segments depending on the demersal fisheries. Decline of capital productivity in terms of ROFTA, for NAO DTS 24-40 segment was observed since 2013 and in the 2019 NAO DTS 24-40 segment deteriorated to the size of two active companies. The same tendency was observed in the clustered segments NAO DFN 10-12 (consists of NAO DFN 24-40 and NAO DFN 10-12). These segments depending on cod stocks show evident overcapacity with negative ROFTA and CR/BER values in 2019 (table "Traffic light"). Historically, in 2015 the fleet management measures were applied with the amendment of quota allocation rules allowing better share of sprat and herring quota among large scale Baltic fleet segments. These measures had a positive short-term outcome, with increased profitability for the entire large scale fleet, especially demersal trawlers which got accessed to the opportunities of more profitable pelagic species. However, it was not sufficient for long-term as cod stock deterioration continued till the current cessation of cod fisheries.

Pelagic large scale fleet in 2019 had a positive balance indicators ROFTA and CR/BER, however, a decline of ROFTA to 6,3% was observed compare to 7,7% in 2018. Decrease in profitability and capital productivity indicators gives a warning signal of emerging overcapacity in the pelagic fleet when additional capacity from NAO DTS 24-40 segment was allocated to the opportunities in pelagic fishery.

Small scale fleet segment NAO PG 00-10, operating in coastal area sustained the balanced capital productivity in terms of ROFTA and balanced economic capability in terms of CR/BER, showing the strengths of applied management measures.

In 2019 long distance fleet turned to the balanced capacity and fishing opportunities generating positive ROFTA and sufficient CR/BER. Distant fleet operates outside EU waters and often depends on the conditions and agreements with third countries. Despite the recovery of fishing efforts and profitability indicators in 2019, during the period of 2014-2018 fleet suffered low fishing efforts, affected by the prolonged procedures of bilateral agreements with third countries for fishing opportunities. Low fishing activity with remaining high fixed costs negatively affected economic viability of long distance fleet segment, following by growing debt. For example, five year average financial position (debt/asset ratio) during 2009-2013 was 50%, whereas in the period of 2014-2018 it increased to 85%.

Inactive fleet indicator analysis shows that indicators of some segments of the fleet have reduced in values, some remain stable, some of them have increased, however data not shows any tangible or substantive trends. There is observed higher inactivity in coastal fleet segment. The main reasons: small vessels only operate part time and often on a seasonal basis; operators own several boats, some of which are used as stand-by vessels for various reasons.

At the end of 2016 and starting at 2017 system of transferable fishing rights was introduced as fleet capacity management system. It is applicable to all fleet, including distant fisheries. Results of implemented system so far are early to assess as it takes time to implement and evaluate properly. However, according to the existing practice, transferable fishing rights have been found

as an effective policy instrument to increase profitability of the fishing industry and reduce overcapacity.

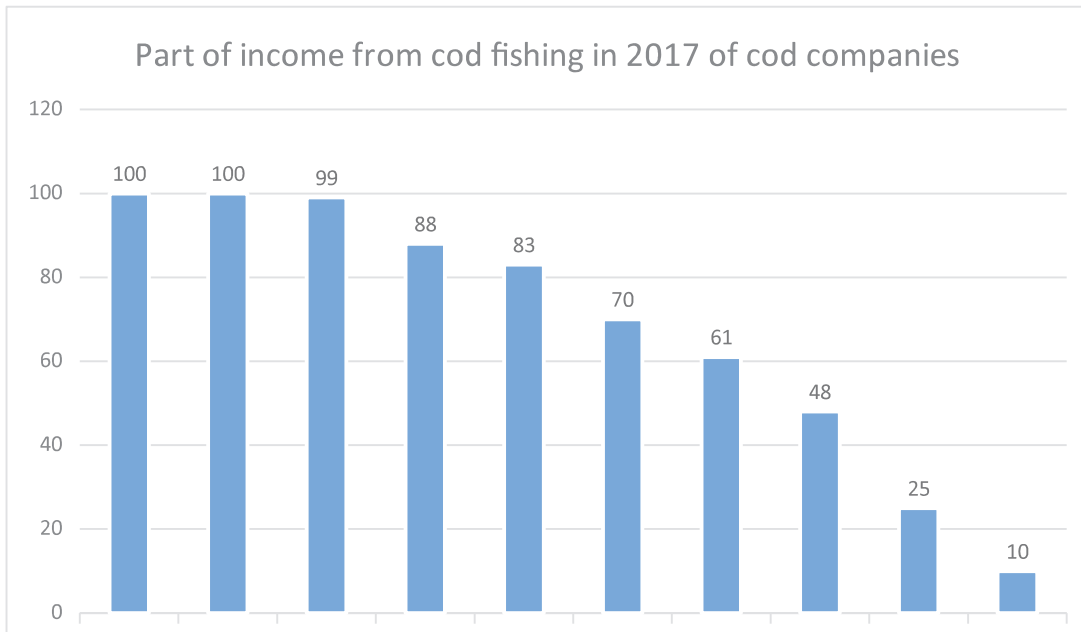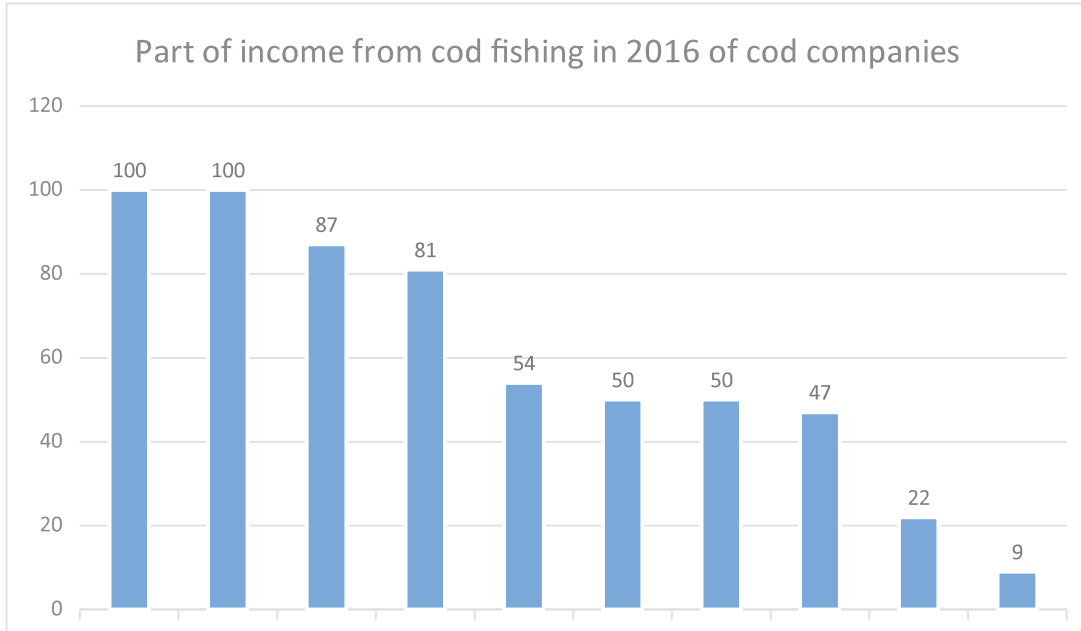## 7. Changes to the administrative procedures relevant to the management of the fleet

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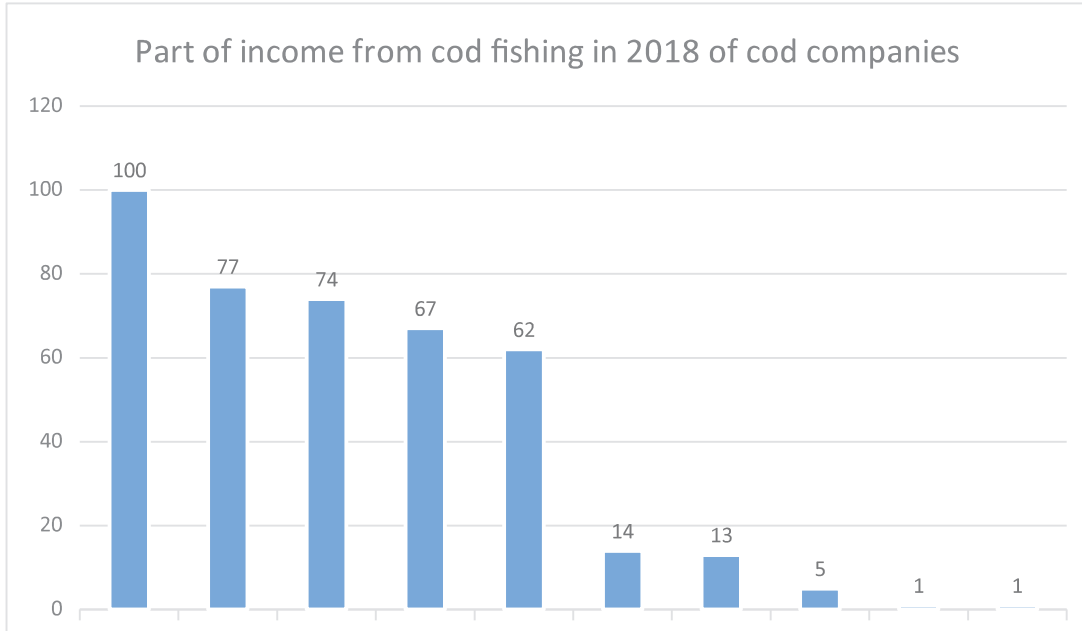
ACTION PLAN

For the fishing fleet segments showing an imbalance between fishing opportunities and fishing capacity

2019 annual report on sustainable balance between fishing capacity and fishing opportunities of Lithuania shows an imbalance in fleet segment NAO DTS 24-40, which consists of 18-24 m and 24-40 m length demersal trawlers fishing in Baltic Sea, and in fleet segment NAO DFN 10-12, which consists of 10-12 m length vessels, fishing by passive gears in Baltic Sea coastal area, and of 24-40 m length vessels, fishing by passive gears (gillnets) in Baltic Sea. The main reason of this imbalance is very poor status of Eastern Baltic cod resources. In 2019 the second half of the year directed fishing for cod was banned. From 2020 the directed cod fishing is prohibited all year long. ICES advice does not provide a promising outlook for this stock in the medium-term even at no fishing, so it is obvious that recovery of the Eastern cod stock will take time.

In Lithuania 14 companies (10 of which are cod fishing companies) are engaged in fishing in the Baltic Sea outside coastal area and 55 small scale fishing companies (most of them fishing cod among other species) – in territorial waters of the Baltic Sea. In 2018 20 vessels had cod catches in the Baltic Sea outside coastal area: 14 fishing vessels were targeting cod (mainly fleet segment DTS 24-40 and a vessel of 18-24 m and 24-40 m length of the segment DFN 10-12), 6 vessels caught cod as by-catch or have relatively small catches of cod (up to 50 tons). The economic viability of 10 companies engaged in cod fishing outside coastal area is already very poor. Economic indicator Return on Investment (ROI) demonstrates decreasing trend. Return on Fixed Tangible Assets (ROFTA) also has a continuously declining tendency. This indicates the risk for the possible overcapitalization or inefficient use of capital in the segments DTS 24-40 and DFN 10-12. These companies are dependent on income from cod fishing and this source of income is diminishing every year. The diagrams below show a part of income (as percentage) from cod fishing of those 10 companies in 2016, 2017 and 2018. We do not include in diagrams the year 2019 because in the second half of this year cod fishing was banned and in order to receive compensations for the temporary cessation of fishing activities from 1 June cod fishing vessels stopped any fishing activity.

Part of income from cod fishing in 2016 of cod companies

Part of income from cod fishing in 2017 of cod companies

Part of income from cod fishing in 2018 of cod companies

Lithuanian cod quota was always fully utilized and only from 2012 the situation of Eastern cod stock changed and catches significantly reduced.

Lithuanian quotas for Baltic cod and their utilisation in tonnes
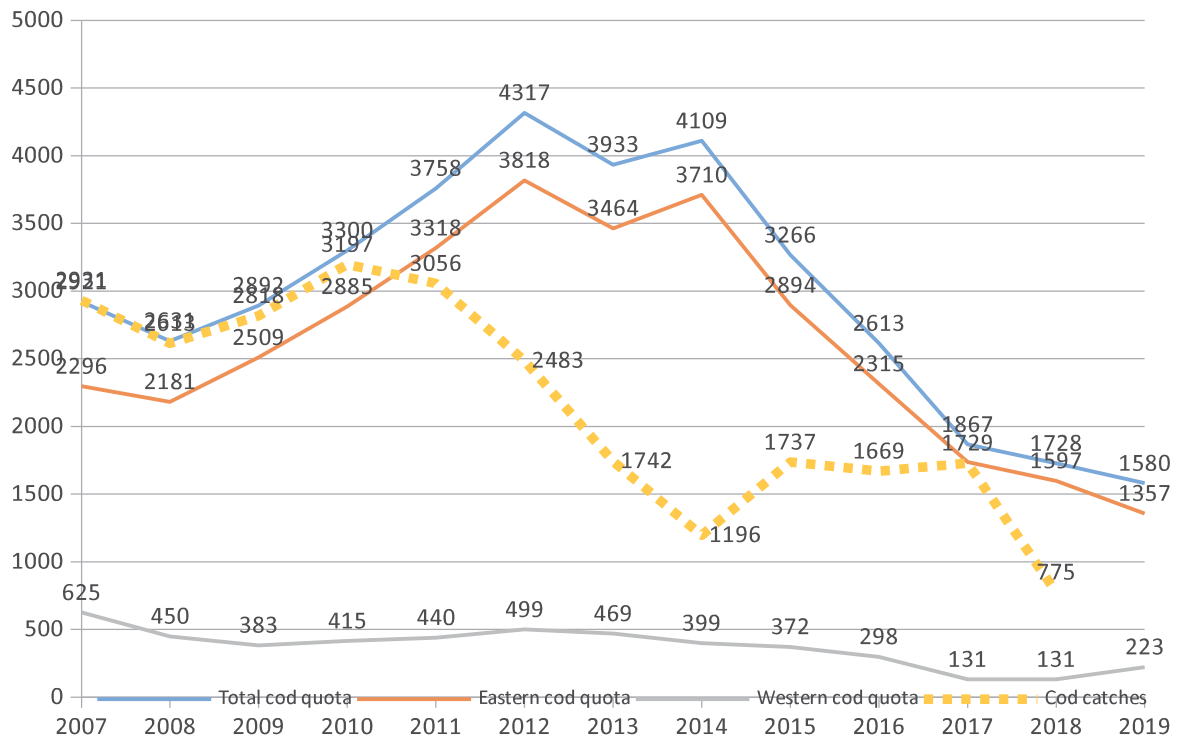
In 2012 utilization of Eastern cod quota was 65 percent, in 2013 – 50 percent and in 2014 – only 32 percent. Since 2012 catches of cod were constantly decreasing: 3056 t in 2011, 2483 t in 2012, 1742 t in 2013 and 1196 t in 2014. In 2015 cod catches increased up to 1737 t and then remained relatively stable until 2018, when significant drop of cod catches was recorded. The drop of cod catches in recent years was noticeable in all Baltic countries and is caused by reasons beyond fishermen's control: cod became very slim (skinny) and small, demand and prices decreased, it's more difficult and less profitable to catch it. Despite this, the first 3 diagrams show that the income from cod fishing is crucial for most Baltic Sea fishing companies, because they do not have at all herring or sprat quota or it is insufficient. Our salmon quota is very small and caught [mainly] in the coastal area, so it is not an alternative for demersal fleet fishing outside coastal zone. The catches of flounder are limited and cannot ensure the sufficient level of income.

Two companies for historical reasons have more when 60 % of Lithuanian sprat and herring quotas. The rest 12 companies were targeting mainly cod and thus have only about 25-30 % of Lithuanian sprat and herring quotas. The change of quota allocation method to allocate a larger share of pelagic quota to 12 cod fishing companies is not a viable solution both from legal perspective, as it could undermine the principle of legal certainty, and from economic point of view, as it would affect negatively pelagic fishing companies.

Possible tools to achieve the balance

International experience indicates that a system of transferable fishing concessions (TFC) can be an effective tool to address overcapacity. In Lithuania the TFC system was introduced in 2016. The allocation key of TFC is based on historic catch levels, partly taking into account the economic and environmental criteria. In 2019 TFCs were allocated for the fishing companies and they are valid till 2034 (for 15 years). In Lithuania TFC can be allocated only for the holder of a fishing licence and it's not linked with a vessel, so the operator can decide himself how many vessels he needs to utilise his quota. In this way the operator can optimise his business, reduce expenses and that helps to balance active fishing capacity.

Two Lithuanian fleet segments have capacity ceilings: capacity ceiling for small scale coastal fishing vessels below 12 m length and capacity ceiling for all other vessels fishing in Baltic Sea. The capacity ceiling for the Baltic fishing fleet (vessels of more than 12 m length) will be reduced till the level of the capacity of active vessels. Such an action would ensure that no further new entries will be allowed in the Baltic fishing fleet segment.

The tools to address overcapacity mentioned above are not sufficiently efficient and proportional in such circumstances of cod fishing crises. The reduction of the capacity ceiling can only help to keep the capacity from increase. TFCs of cod have lost their value due to the ban of directed cod fishing and very small by-catch quota, so fishermen do not want to leave business without any reward. The profitability of cod fishing fleet segment is negative, several companies went bankrupt during last years, others are in the desperate situation and will bankrupt soon without any help. The most efficient, socially fair tool to reduce overcapacity would be scraping scheme with public compensation for permanent cessation of fishing. This solution would be acceptable by stakeholders.

Relevant amendment of Regulation (EU) No. 508/2014 allowing vessel scraping schemes was adopted only in the end of 2020 year. Monitoring Committee of the Lithuanian Fisheries Sector Operational Program 2014–2020 on 29th of April 2021 approved special eligibility selection criteria for projects of the first Union priority measure "Permanent cessation of fishing activities". Amendments to the Operational Program, where this measure is included, was formally submitted to the European Commission on 27 May 2021.

2020 annual report on sustainable balance between fishing capacity and fishing opportunities of Lithuania shows an imbalance in same fleet segment: NAO DTS 24-40, which consists of 18-24 m and 24-40 m length demersal trawlers fishing in Baltic Sea, and in fleet segment NAO DFN 10-12, which consists of 10-12 m length vessels, fishing by passive gears in Baltic Sea coastal area, and of 24-40 m length vessels, fishing by passive gears (gillnets) in Baltic Sea. Therefore, the results of the measure and the ambition remain the same as in 2020. Our target for 2021-2023 would be to reduce the tonnage of Baltic Sea vessels by 22 percent and the power by 20 percent. This target would be achieved by scrapping of 10 vessels (one of them 10-12 m length vessel, fishing by passive gears in Baltic Sea coastal area), which correspond to minimum requirements as set out in the amended Regulation (EU) No. 508/2014.

DETALŪS METADUOMENYS	
Dokumento sudarytojas (-ai)	Lietuvos Respublikos žemės ūkio ministerija, Gedimino pr. 19, LT-01103 Vilnius, Lietuva (2021-05-31 17:19:59)
Dokumento pavadinimas (antraštė)	ANNUAL REPORT ON THE BALANCE BETWEEN THE FISHING CAPACITY OF FLEETS AND THEIR FISHING OPPORTUNITIES
Dokumento registracijos data ir numeris	2021-05-31 Nr. 2D-1561 (24.2)
Dokumento gavimo data ir dokumento gavimo registracijos numeris	-
Dokumento specifikacijos identifikavimo žymuo	ADOC-V1.0
Parašo paskirtis	Pasirašymas
Parašą sukūrusio asmens vardas, pavardė ir pareigos	Donatas Dudutis, Viceministras
Parašo sukūrimo data ir laikas	2021-05-31 16:56:57 (GMT+03:00)
Parašo formatas	XAdES-T
Laiko žymoje nurodytas laikas	2021-05-31 16:57:27 (GMT+03:00)
Informacija apie sertifikavimo paslaugos teikėją	ADIC CA-A,Asmens dokumentu israsymo centras prie LR VRM,2.5.4.97=#16093138383737338333135,LT
Sertifikato galiojimo laikas	2021-02-18 09:47:55–2024-02-18 09:47:55
Parašo paskirtis	Registravimas
Parašą sukūrusio asmens vardas, pavardė ir pareigos	Lietuvos Respublikos Žemės ūkio ministerija, -
Parašo sukūrimo data ir laikas	2021-05-31 17:13:12 (GMT+03:00)
Parašo formatas	XAdES-EPES
Laiko žymoje nurodytas laikas	-
Informacija apie sertifikavimo paslaugos teikėją	RCSC IssuingCA,VI Registru centras - i.k. 124110246,RCSC,LT
Sertifikato galiojimo laikas	2019-08-01 12:49:41–2022-07-31 12:49:41
Informacija apie būdus, naudotus metaduomenų vientisumui užtikrinti	"Dokumento registravimas" paskirties metaduomenų vientisumas užtikrintas naudojant CN=Lietuvos Respublikos žemės ūkio ministerija, O=Lietuvos Respublikos žemės ūkio ministerija į.k.188675190, L=Vilnius, S=Lithuania, C=LT sertifikatą, sertifkatas galioja 2019-08-01 12:49:41–2022-07-31 12:49:41
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Pagrindinio dokumento pridedamų dokumentų skaičius	-
Programinės įrangos, kuria naudojantis sudarytas elektroninis dokumentas, pavadinimas	DocLogix v12.8.0.0
Informacija apie elektroninio dokumento ir elektroninio (-ių) parašo (-ų) tikrinimą (tikrinimo data)	Tikrinant dokumentą nenustatyta jokių klaidų (2021-05-31 17:19:59)
Elektroninio dokumento nuorašo atspausdinimo data ir ją atspausdinęs darbuotojas	2021-05-31 17:19:59 atspausdino Nijolė Nevienė
Paieškos nuoroda	-
Papildomi metaduomenys	-