

2020 ANNUAL REPORT LITHUANIA

On sustainable balance between fishing capacity and fishing opportunities May 2022

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 outside the Baltic Sea coastal area with vessels of 12 meters in length and more (Baltic fleet) which dominant main engine power is 165 – 220 kW.

The third fishing fleet group operates mainly in waters of Eastern Arctic, NorthWestern waters, 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 2021 Lithuanian fishing fleet consisted of 131 (6 vessels – Distant fleet, 22 – Baltic fleet and 103 – Coastal fleet) vessels with total capacity of 35438 GT and 40821 kW.

During the reporting period there were no changes in total fishing capacity, neither changes in total number of the Distant fleet. However, 7 fishing vessels were registered out from the Baltic fleet. As a result, capacity reduced by 823 GT and 1544 kW. Although the Coastal fleet doesn't change in numbers (3 vessels have been registered out and 3 vessels have been registered in), however the fishing capacity has slightly increased by 3 GT and 551 kW.

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 2021 there were no fishing effort reduction schemes introduced either for Lithuanian fisheries fleet or in the waters of jurisdiction of Republic of Lithuania.

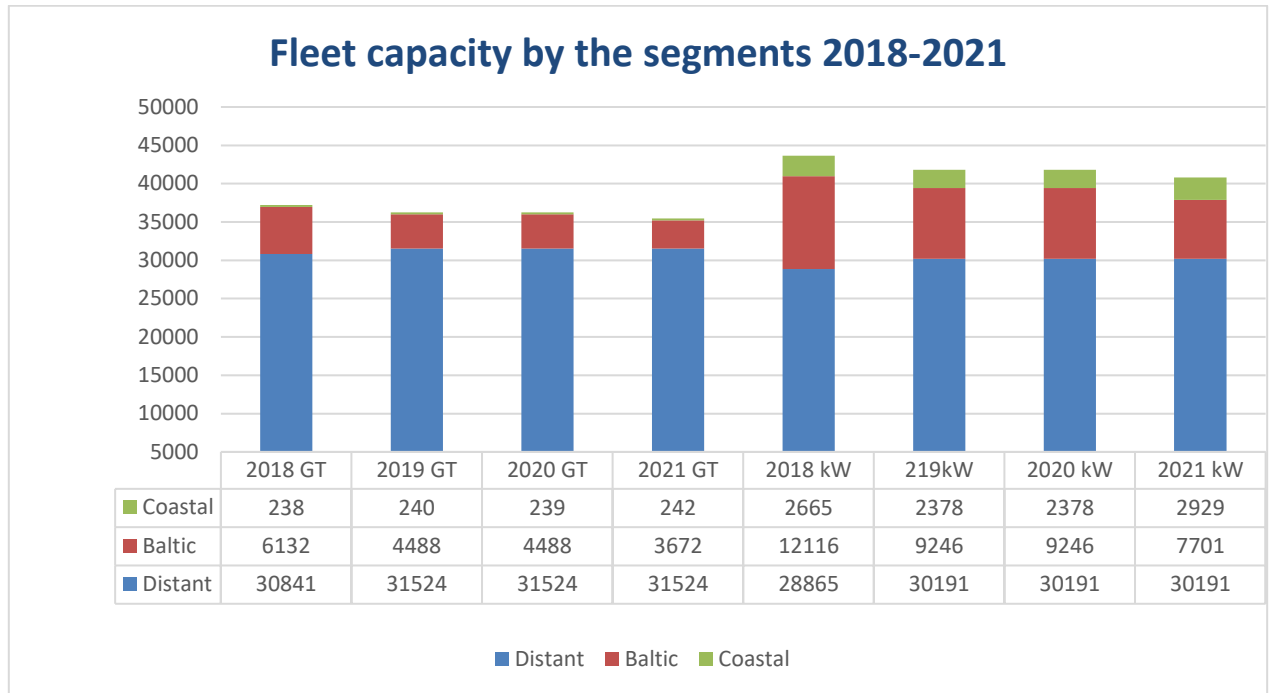


Figure 1. Fishing fleet capacity by fishing grounds 2018 – 2021.

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

Lithuania applies entry/exit scheme as defined in Regulation (EC) No 1380/2013 Article 23. In 2021, as in the previous years, no public aid was granted or entry of new capacity into the fleet was registered.

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

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

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 2020 consisted of 6 segments as defined in the Fleet economic data call as follow: PG VL0010, DFN VL1012, TM VL1824, DFN VL2440, TM VL2440, 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 TM VL1824, TM VL2440 and TM VL40XX in 2020 (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 2020.

Fleet segment	SHI value
TM VL1824	1.814
TM VL2440	1.499
TM VL40XX	1.395

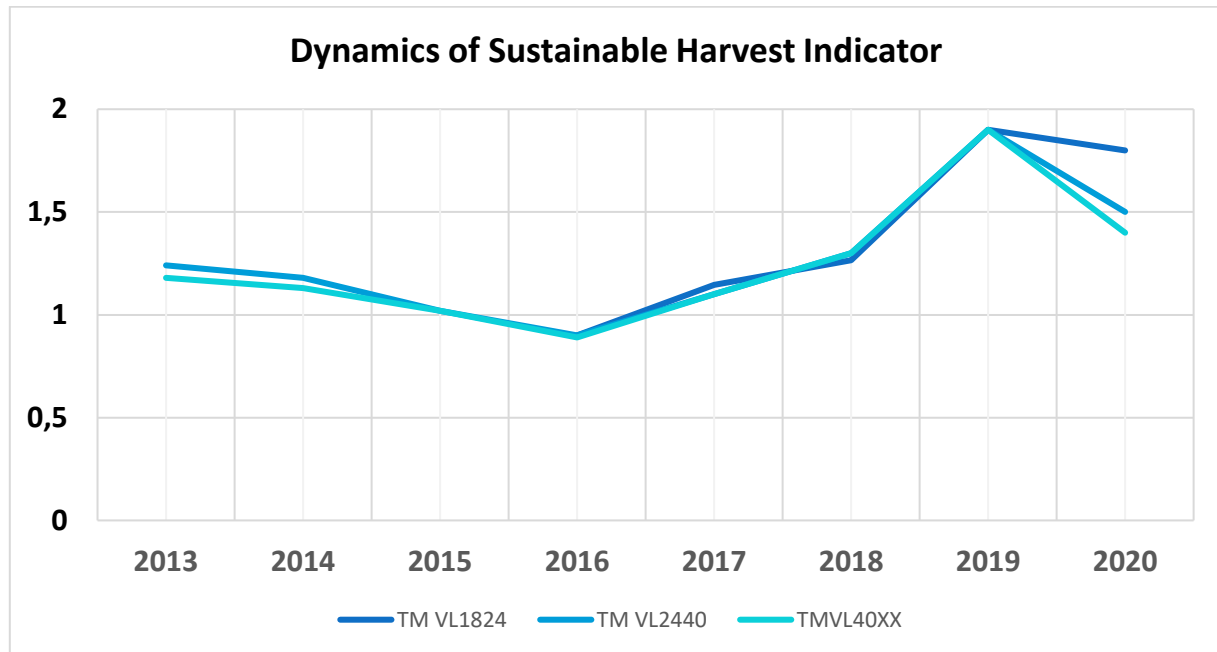


Figure 2. Dynamics of SHI values in 2013-2020.

Dynamics of SHI values show decreasing trend for segments TM VL1824, TM VL2440 and TM VL40XX in the Baltic Sea in 2020. 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 113 tonnes from 2014 to 2020. For 2020 the Commission proposed and the Council adopted a TAC corresponding to a 92 % reduction compared to the 2019 Baltic eastern cod stock TAC, which was exclusively for by-catches. No directed fisheries are permitted under this quota. Lithuanian fleet segments strongly (more than 50 percent of income was gaining from the cod fisheries) depended on cod landings DFN VL1012 and DTS VL2440 focused on mixed or pelagic species fishing as DFN VL2440 changed activities to salmon fishing. ICES advises that when the precautionary approach is applied, there should be zero catch in 2022. This advice applies to all catches from the stock in subdivisions (SDs) 24–32. ICES

assesses that spawning-stock size is below Blim and Bpa in 2020 No reference points for fishing pressure have been defined for this stock.

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

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 low growth, poor condition, and high natural mortality of cod are related to changes in the ecosystem that include: i) poor oxygen conditions that can affect cod both directly through altering their metabolism and indirectly through a shortage of benthic prey, as well as the survival of offspring; ii) reduced availability of fish prey in the main distribution area of cod. Sprat and herring have had a more northerly distribution in recent years, and there is less overlap with the distribution of the cod stock. It is, however, unclear whether the small remaining cod stock would be impacted by this shift of distribution. iii) high levels of parasite infestations; these coincide with an increased abundance of grey seals. It is unknown whether the parasite infection is the cause or an effect of the poor condition of cod.

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:

$(1 \text{ where } (C_i > 0.1 C_t) \text{ or } (C_i > 0.1 T_i); \text{ otherwise } 0),$

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.

Fleet segments	SRI indicator by years for cod.27.24-32 stock		
	2018	2019	2020
VL0010 PG NAO	0	0	0
VL1012 DFN NAO	1	1	0
VL1824 DTS NAO	1	1	n/a
VL1824 TM NAO	0	0	0
VL2440 DFN NAO	1	1	0
VL2440 DTS NAO	1	1	n/a
VL2440 TM NAO	0	1	0

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

Since 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. Since 2020 the Eastern Baltic cod stock was fished exclusively for by-catches. No directed fisheries were permitted under this quota. As such, catch from the cod considered at risk was less than 10% of the fleet segment's catch in 2020. Moreover, segments VL1824 DTS NAO and VL2440 DTS NAO were not longer existed since 2020 as fisheries were reduced and partly switched on pelagic species. ICES cannot assess the stock Beaked redfish (reb.2127dp) stock and exploitation status relative to the maximum sustainable yield (MSY) and precautionary approach (PA) reference points because the reference points are undefined; however, the stock is considered to be below any potential reference point.

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 when insufficient number of enterprises represents segment.

Fleet segments:

OFR TM-40XX – segment consists of Distant fleet vessels operating predominantly in CECAF. Depending on allocated fishing opportunities, segment has also effort 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, economic data 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 may also contain vessels using demersal trawler as second gear, but dominant effort is with pelagic trawlers. *In 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 – Till 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 has included vessels using pelagic trawler as second gear but having dominant effort with demersal gear. In 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. From 2020 NAO DTS 24-40 is not operating.

NAO DFN 10-12 – Due to confidentiality reasons this segment is clustered from passive gear coastal vessels 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 considering 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 with 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.

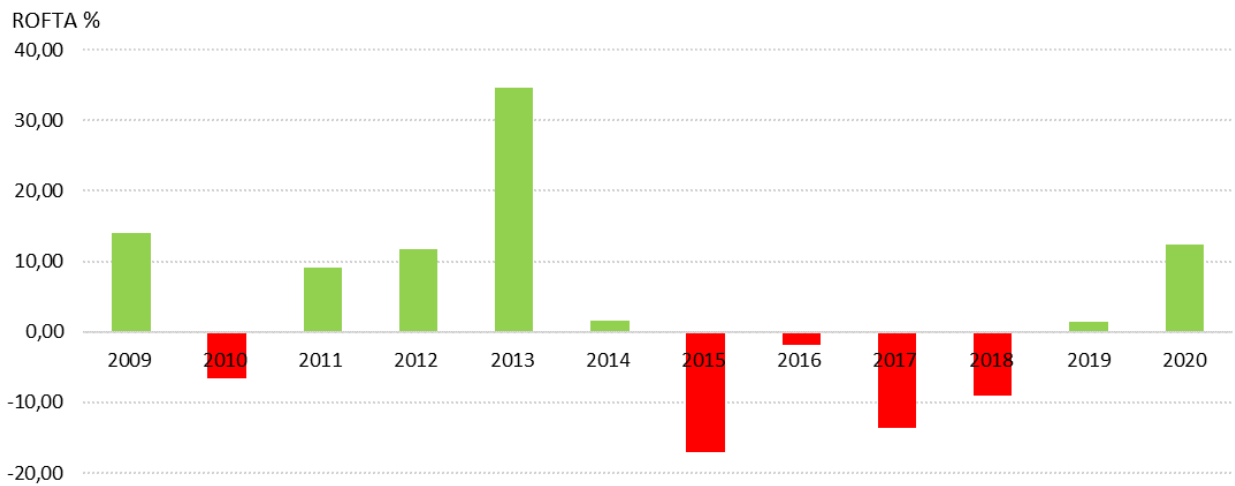
During 2015-2018 long distance fleet ROFTA indicated potential overcapacity as capital productivity indicators were continuously negative. However, starting in 2019 long distance fisheries increased profitability and improved capital productivity to 12,4% in 2020. Fishing effort and weight of landings in long distance fleet decreased by 10% and 13% respectively compare to 2019. Decline in effort and landings was an impact from COVID19 constraints, however efficient management of some variable costs resulted in generating net profit and increased capital productivity. In 2020 long distance fleet shows balanced capitalization (table 3.2.1).

3.2.1. ROFTA and ROI for the fleet segment OFR TM- 40XX (Distant fleet)

Values	2016	2017	2018	2019	2020
Net profit (thousand €)	-1 924,9	-12 019,1	-7 322,5	1 518,4	12 303,9
Fleet tangible asset value (replacement) (thousand €)	104 949,2	87 954,6	81 033,6	108 156,4	99 344,4
Estimated value of fishing rights (thousand €)	-	45 855,5	46 670,3	46 407,4	47 229,9
ROFTA= Net profit / Vessel replacement value (%)	-1,8	-13,7	-9,0	1,4	12,4
ROFTA minus risk free long-term interest rate* (%)	-4,58	-15,51	-10,17	0,8	12,0
ROI = Net profit / Capital asset value (%)	-	-9,0	-5,7	1,0	8,4
ROI minus risk free long-term interest rate* (%)	-	-10,8	-6,9	0,3	8,9

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)

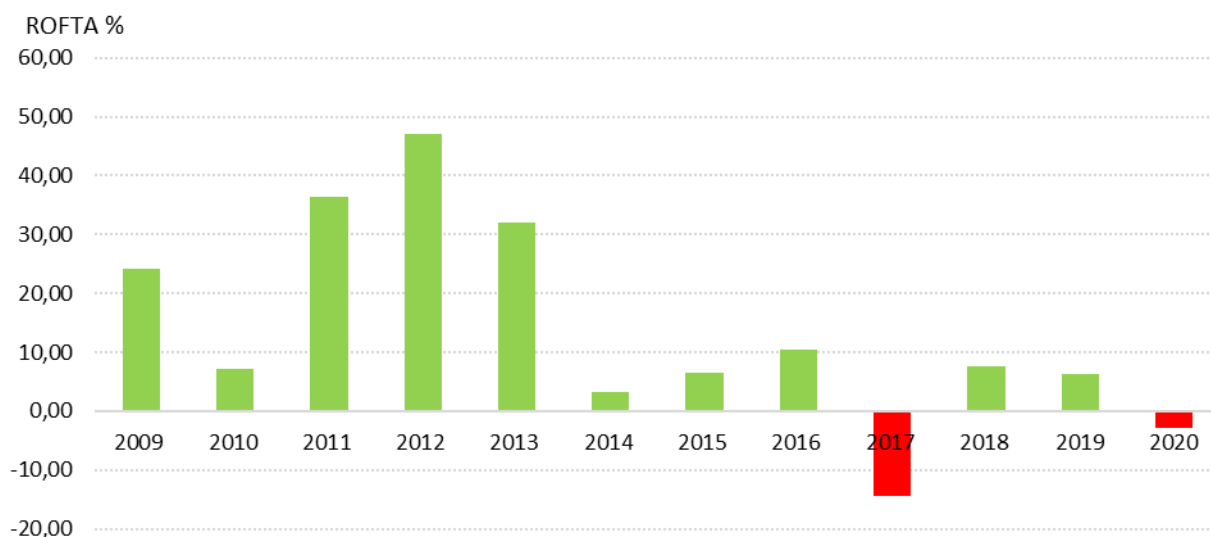
In 2020 pelagic trawler segment obtained losses turning ROFTA to -2,9%. Decline in profitability and capital productivity was related to the recent transformation of fisheries in Baltic Sea after closure of Eastern cod catches. Part of capacity from demersal fleet segment was transferred to the pelagic fisheries, whereas fishing opportunities for pelagic species has a decreasing trend. In 2020 sprat and Baltic herring quotas decreased by 22% and 10% respectively, compare to 2019. Economic performance was also damped by COVID19 measures which hampered various stages of fishery business, from lockdown and availability of employees to the sales of production. For example, revenues in pelagic trawler segment decreased by 20% compare to 2019, whereas non-variable costs increased by 19%. Large scale pelagic fleet (NAO TM 24-40 segment) operating in Baltic Sea has first indications of possible overcapacity of capital (table 3.2.2).

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

Values	2016	2017	2018	2019	2020
Net profit (thousand €)	459,2	-680,7	350,8	274,3	-99,6
Fleet tangible asset value (replacement) (thousand €)	4 435,5	4 703,2	4 578,2	4 346,5	3 391,9
Estimated value of fishing rights (thousand €)	-	2 641,0	3 392,8	3 828,1	3 936,1
ROFTA= Net profit / Vessel replacement value (%)	10,4	-14,5	7,7	6,3	-2,9
ROFTA minus risk free long-term interest rate* (%)	7,6	-16,3	6,5	5,7	-3,4
ROI = Net profit / Capital asset value (%)	-	-9,3	4,4	3,4	-1,4
ROI minus risk free long-term interest rate* (%)	-	-11,1	3,3	2,7	-1,8

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)

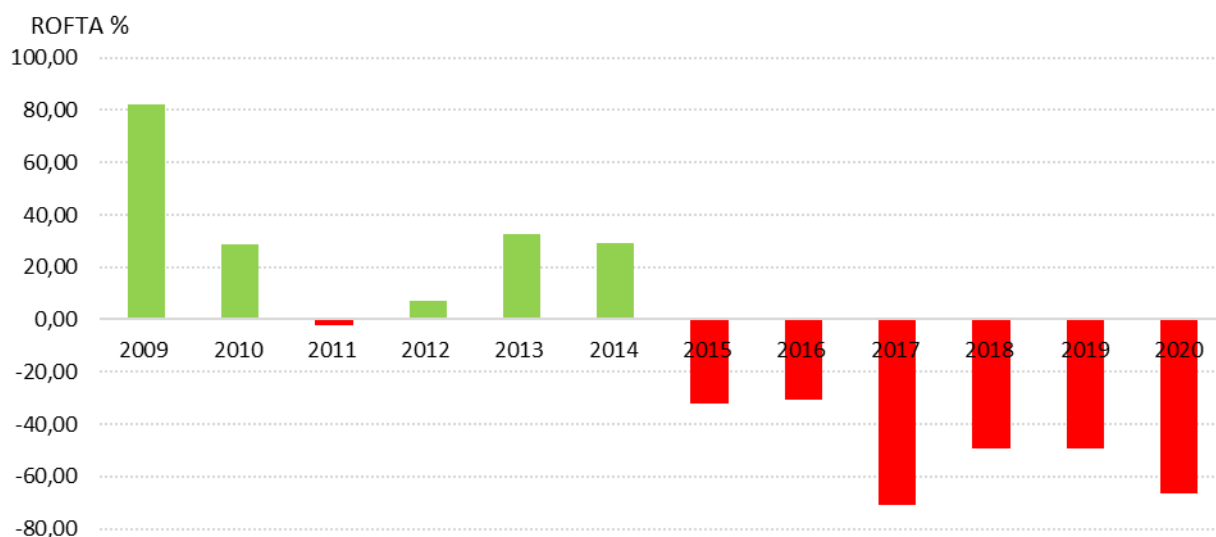
From Eastern cod stocks dependent NAO DFN 10-12 segment has constantly negative capital productivity since 2015. In 2020 ROFTA further decreased to almost the lowest level -66,7% indicating unbalanced fleet segment with overcapacity (table 3.2.3).

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

Values	2016	2017	2018	2019	2020
Net profit (thousand €)	-104,1	-134,2	-159,1	-132,2	-113,9
Fleet tangible asset value (replacement) (thousand €)	340,6	189,6	323,8	267,0	170,8
Estimated value of fishing rights (thousand €)	-	233,1	191,1	101,6	71,8
ROFTA= Net profit / Vessel replacement value (%)	-30,6	-70,8	-49,1	-49,5	-66,7
ROFTA minus risk free long-term interest rate* (%)	-33,3	-72,6	-50,3	-50,1	-67,1
ROI = Net profit / Capital asset value (%)	-	-31,7	-30,9	-35,9	-47,0
ROI minus risk free long-term interest rate* (%)	-	-33,6	-32,0	-36,5	-47,4

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 DFN 10-12 (Baltic Sea (24-40 m) and coastal area (10-12 m))

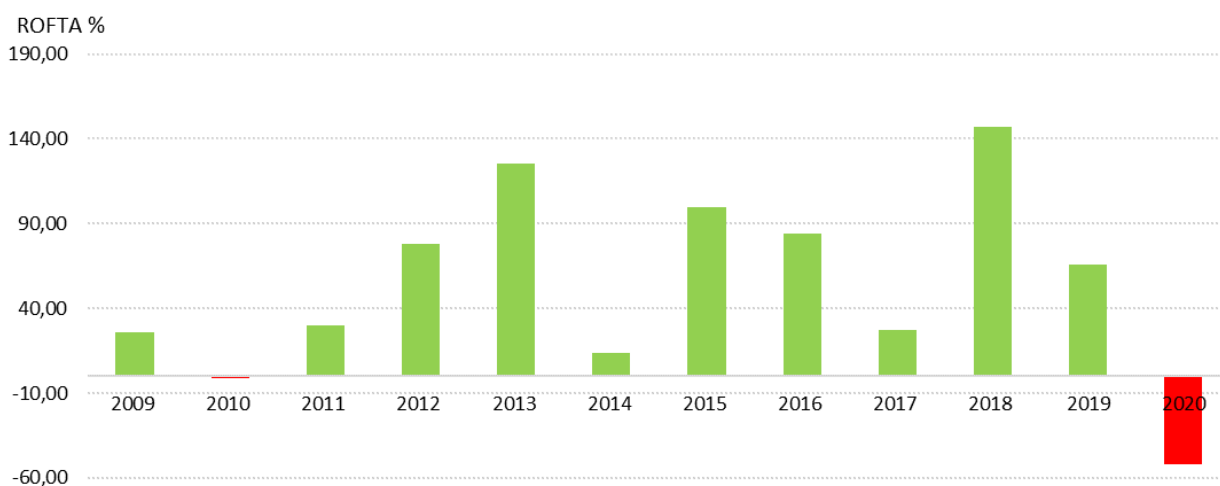
In 2020 small scale fleet was strongly affected by the decline of economic performance, related to the COVID19 lockdown and other strict measures to control pandemics. Compare to 2019, fishing effort in NAO PG 00-10 segment declined by 18%, weight of landings by 24% and revenues by 27% resulting in negative profitability indicators first time since 2011. ROFTA decreased to -52% level. Considering that external drivers turning down fleet profitability in 2020 could be treated as Force major, therefore short term decline of capital productivity is premature to be considered as a sign of overcapitalization (table 3.2.4).

3.2.4. ROFTA and ROI for the fleet segment NAO PG 00-10 (coastal area)

Values	2016	2017	2018	2019	2020
Net profit (thousand €)	101,6	75,4	207,8	101,4	-77,4
Fleet tangible asset value (replacement) (thousand €)	121,2	275,5	141,6	153,3	149,9
Estimated value of fishing rights (thousand €)	-	810,1	616,1	448,9	340,0
ROFTA= Net profit / Vessel replacement value (%)	83,9	27,4	146,7	66,1	-51,6
ROFTA minus risk free long-term interest rate* (%)	81,1	25,5	145,6	65,5	-52,0
ROI = Net profit / Capital asset value (%)	-	6,9	27,4	16,8	-15,8
ROI minus risk free long-term interest rate* (%)	-	5,1	26,3	16,2	-16,2

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 PG 00-10 (coastal area)

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

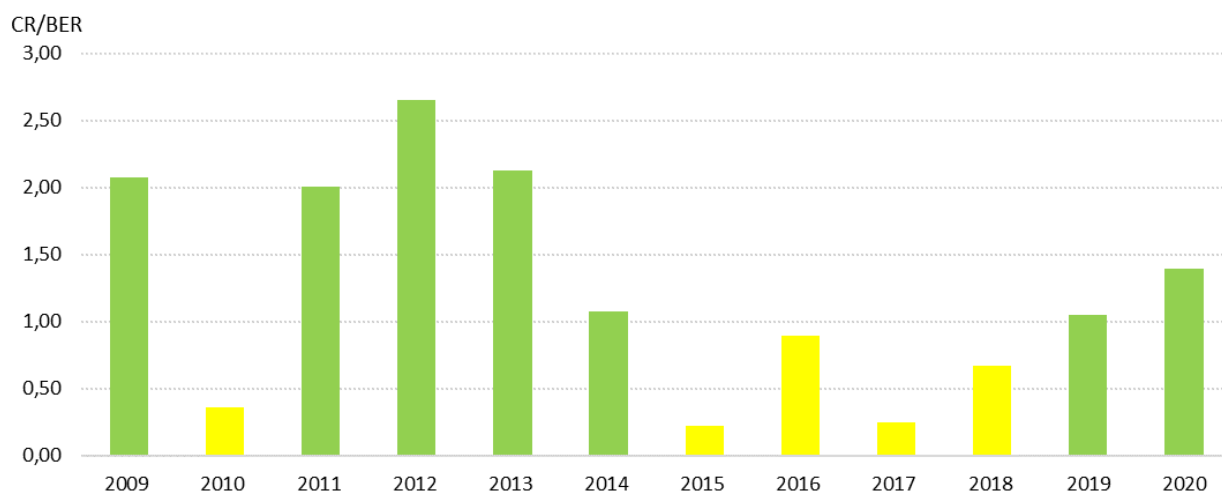
The ratio between CR and BER shows a financial viability of fleet and indicate how close the current revenue is to the income required to break even in the short term. According to the methodology, if the ratio is greater than 1, then enough income is generated to cover variable, fixed and capital costs, 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.

Distant fleet in 2020 generated CR/BER indicator above 1, indicating a balanced economic capability (table 3.3.1).

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

Values	2016	2017	2018	2019	2020
Current revenue (CR) (thousand €)	64 459,5	54 474,9	58 916,3	79 249,7	82 483,3
Break-even revenue (BER) (thousand €)	72 347,1	219 798,3	87 751,2	75 696,8	59 441,2
CR/BER	0,9	0,3	0,7	1,0	1,4

Data source: AIRBC



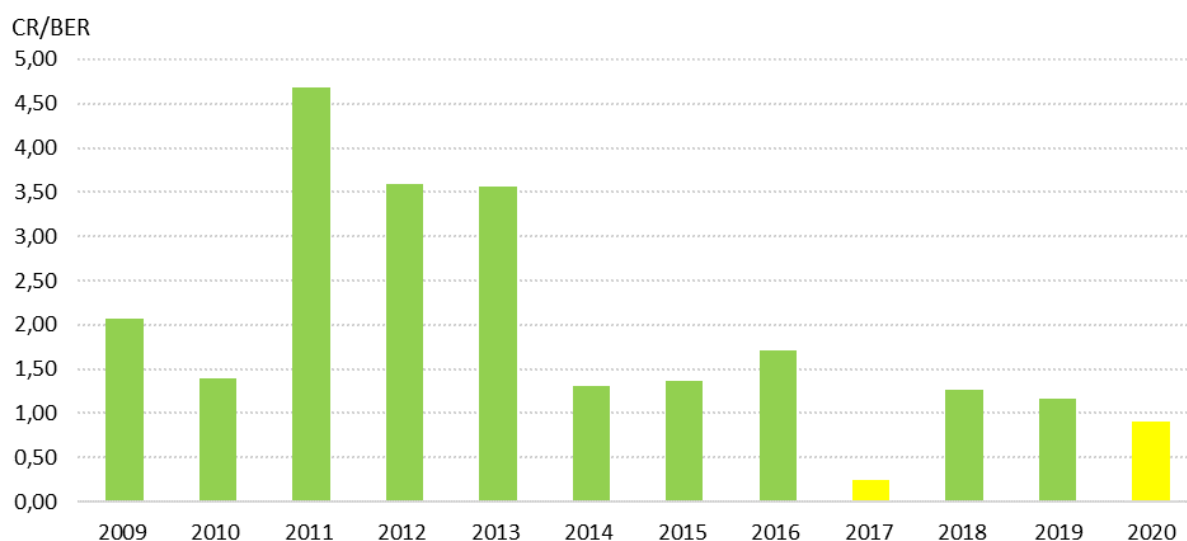
Ratio between CR and BER for the segment OFR TM- 40XX (Distant fleet)

For pelagic trawlers, operating in Baltic Sea CR/BER ratio in 2020 decreased to 0,9 indicating that segment has a decrease of economic capability. However, short term shakedown from the pandemic control measures and decrease of profitability in pelagic trawler segment is not an indication of overcapacity in 2020 (table 3.3.2).

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

Values	2016	2017	2018	2019	2020
Current revenue (CR) (thousand €)	3 377,3	3 162,5	4 973,5	5 037,7	4 896,6
Break-even revenue (BER) (thousand €)	1 967,0	13 171,2	3 937,2	4 327,1	5 157,6
CR/BER	1,7	0,2	1,3	1,16	0,9

Data source: AIRBC



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

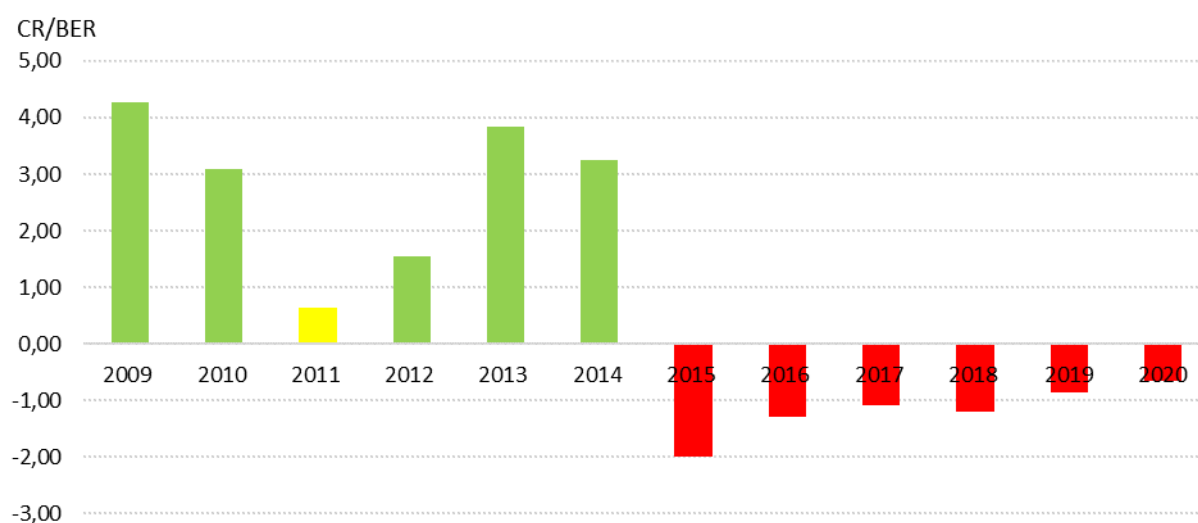
* - in 2019 includes economic data from two fishing companies from NAO DTS 24-40 segment

In 2020 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 (table 3.3.3).

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

Values	2016	2017	2018	2019	2020
Current revenue (CR) (thousand €)	239,6	192,4	149,6	39,8	34,9
Break-even revenue (BER) (thousand €)	-185,0	-176,3	-123,4	-46,8	-53,8
CR/BER	-1,3	-1,1	-1,2	-0,9	-0,6

Data source: AIRBC



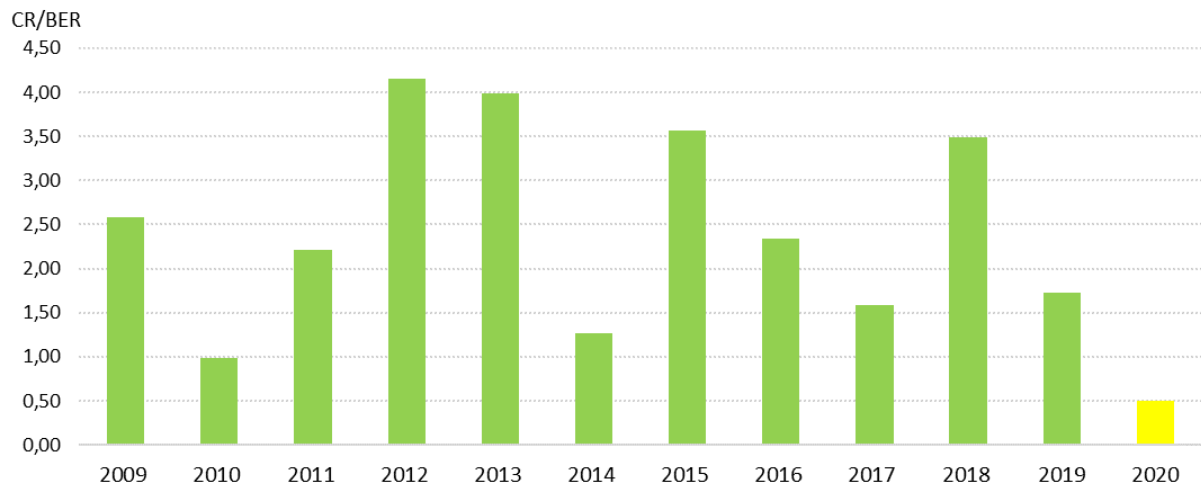
Ratio between CR and BER for the segment NAO DFN 10-12 (Baltic Sea (24-40 m) and coastal area (10-12 m))

Small scale fleet segment NAO PG 00-10 operating in coastal area decreased CR/BER ratio to 0,5 indicating a decline of economic capability in 2020. However, impact from COVID19 measures shall be taken into consideration as short-term driver affecting decline of sector economic efficiency instead of indicating potential overcapacity (table 3.3.4).

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

Values	2016	2017	2018	2019	2020
Current revenue (CR) (thousand €)	450,3	486,2	637,6	575,4	427,9
Break-even revenue (BER) (thousand €)	192,3	307,0	182,6	333,4	794,8
CR/BER	2,3	1,6	3,5	1,7	0,5

Data source: AIRBC



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

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 Ministry of Agriculture of the Republic of Lithuania No 3D-707 on 4-th August of 2010. Economic data of fishing fleet is collected by State enterprise Agricultural Information and Rural Business Centre (AIRBC). Data collection quality is ensured by application of principles of European Code of Practice as processes comply with the ISO 9001 requirements.

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 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 long-term trend of indicators is showed in graphs.

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 is used from European Central Bank data base.

Average long-term interest rates for 5-year period are provided in the table below:

Period	Average interest rate %
2012-2016	2,75
2013-2017	1,84
2014-2018	1,14
2015-2019	0,64
2016-2020	0,41

Data source: ECB

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

Calculation of indicators:

$ROFTA = \text{Net profit} / \text{Vessel replacement value}$

Where: $\text{Net profit} = (\text{Income from landings} + \text{other income}) - (\text{crew costs} + \text{unpaid labour} + \text{energy costs} + \text{repair and maintenance costs} + \text{other variable costs} + \text{non variable costs} + \text{depreciation})$

For the estimation of *Vessel replacement value*, Perpetual Inventory Method (PIM) was used according to the advice from the PGECON¹ working group on best practices for calculating fleet depreciated replacement values.

$$ROI = \text{Net profit} / \text{Capital asset value}$$

$$\text{Capital asset value} = \text{Vessel replacement value} + \text{estimated value of fishing rights}$$

For the estimation of *Value of fishing rights*, Discounted cash flow (profitability) method (DCM) was used according to the advice from the PGECON² working group.

Data on direct income subsidies was excluded from the calculation.

$$CR = \text{income from landings} + \text{other income}$$

$$BER = (\text{Fixed Costs}) / (1 - [\text{Variable costs} / \text{Current Revenue}])$$

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 2015-2021 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 data collection programme. Figure 4 and Figure 5 demonstrates of inactive fleet share of specific segment by GT and kW respectively.

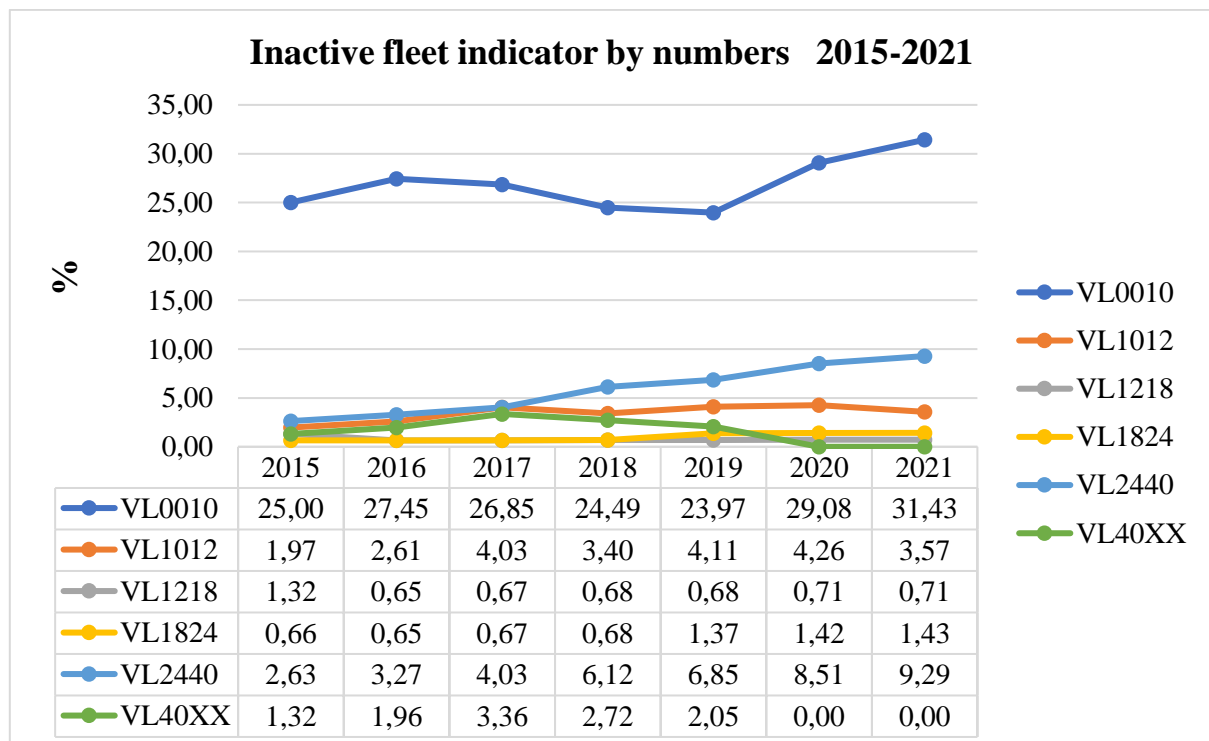


Figure 3. Inactive fleet indicator 2015-2021 by vessels number share from all fleet.

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

²Planning Group on Economic Issues (PGECON 2019), 6th – 10th May 2019, Ljubljana (Slovenia)

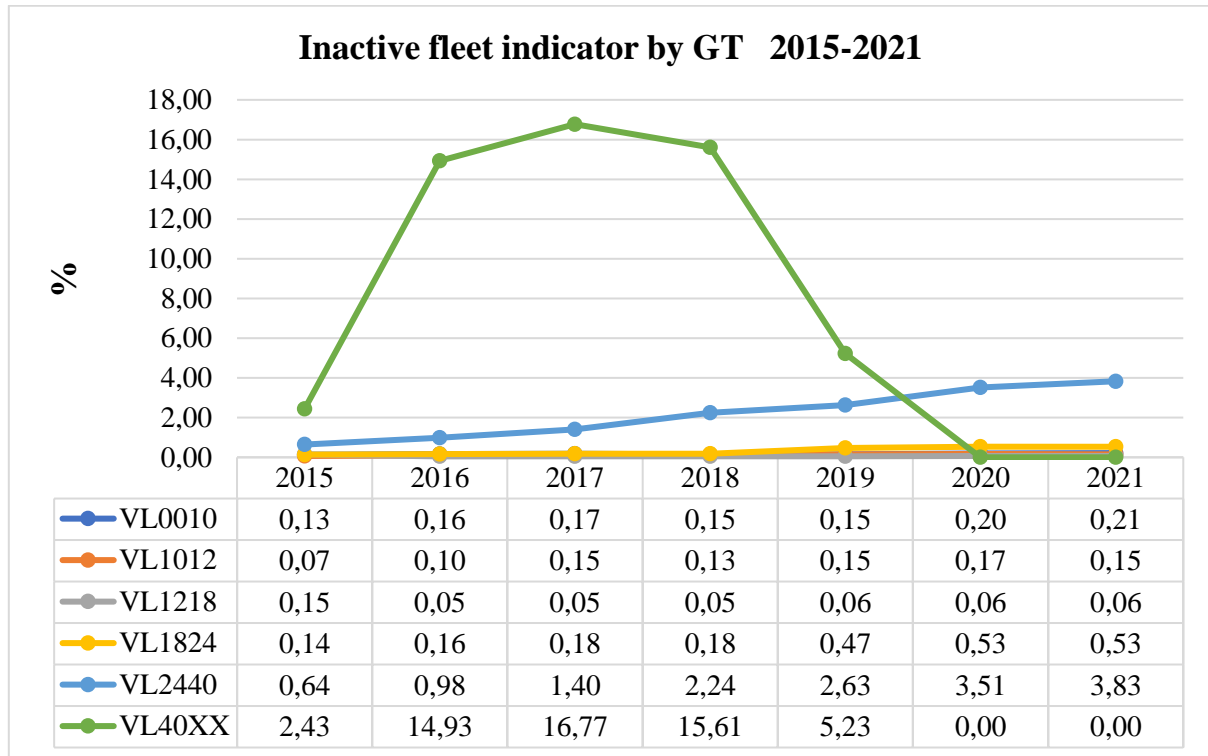


Figure 4. Inactive fleet indicator 2015-2021 by vessels GT share from all fleet.

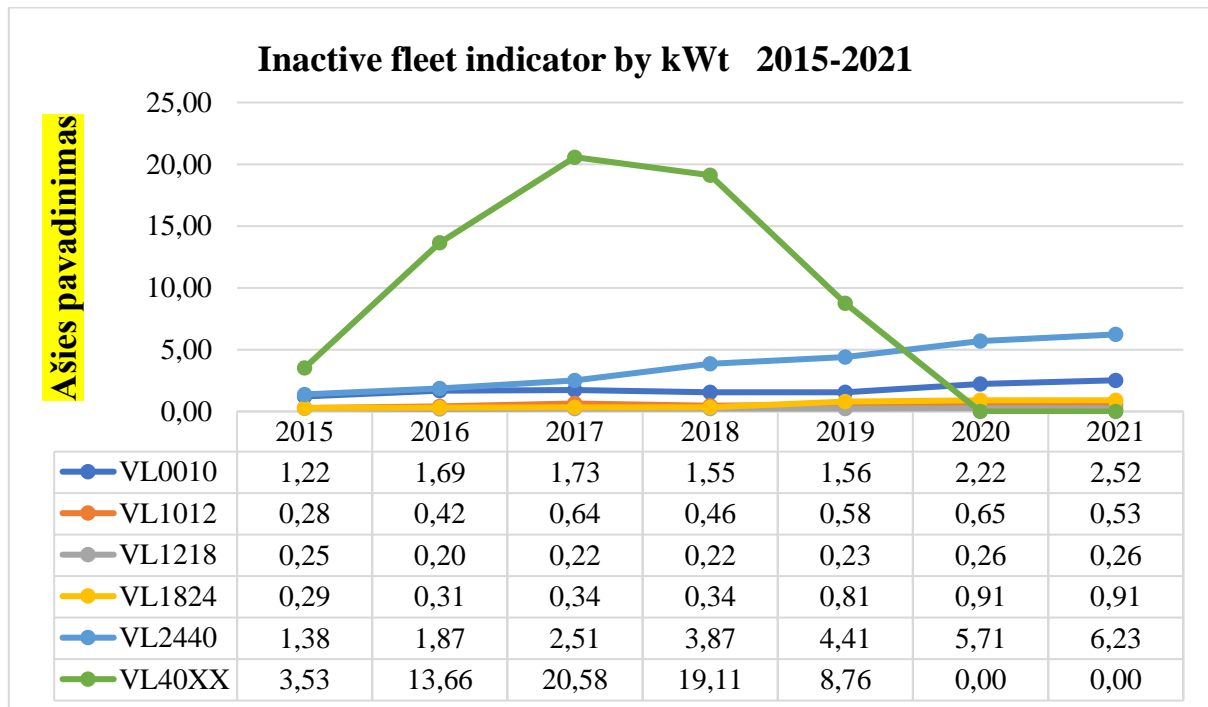


Figure 5. Inactive fleet indicator 2015-2021 by vessels kW share from all fleet.

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 and 2021.

4.2. The vessel utilization indicator

In the Table 3 the vessel utilisation fleet indicator was calculated for each fleet segment for the period 2015-2021 aggregated by year and fishing gear.

Table 3. Vessel utilisation indicator 2015-2021

Vessel segment	2015	2016	2017	2018	2019	2020	2021	Trend (5%) 2017/21
VL0010 PG	0.34	0.29	0.25	0.37	0.47	0.44	0.39	no trend
VL1012 DFN	0.49	0.44	0.34	0.54	0.8	0.74	0.77	increasing
LV2440 DFN	0.91	0.85	0.84	0.86	1	1	1	no trend
LV1824 DTS	0.77	1	0.97	0.83	1		-	-
LV1824 TM		0.98	1	1	1	0.99	0.85	no trend
VL2440 DTS	0.81	0.77	0.64	0.74	1	-	-	-
VL2440 TM*	0.55	0.58	0.69	0.66	0.93	0.73	0.53	no trend
VL40XX TM**	0.55	0.63	0.71	0.77	0.86	0.74	0.81	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 recommended 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 and 2021 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 and VL2240 TM segments. For VL0010 PG segment 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. Additionally, in 2021 were observed reduces in catches of VL0010 PG and VL1012 fleet segments which affected profitability. As such, fishing activities reduced. 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 no directed fisheries of cod were permitted as consequences no demersal fisheries dominate in segments since 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 were affected by abovementioned causes. The main part of vessel utilisation indicators by segments were observed with no trends.

5. Traffic light

Table 4 shows traffic light data for the year 2020.

No.	Length	Gear code	ROFTA	Current/ Break even Incl. opp. costs	Sustainable Harvest Indicator	Stocks at Risk indicator	Technical indicators		Over all Conclusion on balance
							Inactivit y	Utilisation	
1.	<10 m	PG	-51,6	0,5	-	0	29,08	0,44	
2.	10-12 m	DFN	-66,7	-0,6	-	0	4,26	0,74	
3.	12-18 m	-	-	-	-	-	0,71	-	n/a
4.	18-24 m	TM	-2,9	0,9	1.814	0	1,42	0,99	
5	24-40 m	TM			1.499	0	8,51	0,73	
6.	18-24 m	DTS	-	-	-	n/a	1,42	-	n/a
7	24-40 m	DTS			-	n/a	8,51	-	n/a
8	>40 m (OFR)	TM	12,4	1,4	1.395	1	0	0,74	
	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	

*calculated for fleet segment despite the vessel activities area

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

As was mentioned earlier Eastern Baltic cod stock is in a critical state. Lithuanian fishing quota for the Eastern Baltic cod decreased from 3710 tonnes to 113 tonnes from 2014 to 2020. For 2020 the Commission proposed and the Council adopted a TAC corresponding to a 92 % reduction compared to the 2019 Baltic eastern cod stock TAC, which was exclusively for by-catches.

Substantial part of Lithuanian fleet segments strongly (more than 50 percent of income was 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.

Declining Eastern Baltic cod biomass and respectively applied management measures closing demersal fisheries has led to the overcapacity in the fleet segments depending on the demersal fisheries. After closure of cod fisheries in 2020, segment NAO DTS 24-40 terminated demersal fishing activities and part of capacity was reallocated to pelagic fisheries, particularly NAO TM 24-40 segment. Overcapacity of capital in terms of negative ROFTA and CR/BER indicators was observed in the clustered segments NAO DFN 10-12 (consists of NAO DFN 24-40 and NAO DFN 10-12). These segments strongly depend on cod stocks and limited fishing opportunities after closure of cod fisheries in Baltic Sea resulted in constantly deteriorating capital productivity indicators. Despite the issues with stock status in Baltic Sea, COVID19 pandemic has a considerable impact on the fisheries sector in 2020 concerning decrease in fishing effort and decline of profitability. Due to the drivers affecting economic performance in 2020 pelagic fisheries in Baltic Sea (NAO TM 24-40) obtained losses and resulted in negative ROFTA. Having a combined effect

from poor stocks in Baltic Sea and COVID19 lockdown which decreased economic efficiency of pelagic fisheries, the indication of overcapacity in NAO TM 24-40 is not considered at the moment. In 2020 small scale fleet was strongly affected by the decline of economic performance related to the COVID19 lockdown and other strict measures to control pandemics resulting in negative ROFTA first time since 2011. Concerning economic performance of small scale fleet NAO PG 00-10 in 2020, negative profitability was obtained more likely from the COVID19 lockdown rather than from the excessive capacity drivers. In 2020 long distance fleet demonstrated balanced capacity and fishing opportunities generating positive ROFTA and sufficient CR/BER. Distant fleet operates outside EU waters and depends on the conditions and agreements with third countries.

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. According to the existing practice, transferable fishing rights have been found as an effective policy instrument to control the balance between fleet capacity and fishing opportunities.

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 was observed.