



REPUBLIC OF CYPRUS

**MINISTRY OF AGRICULTURE
NATURAL RESOURCES
AND ENVIRONMENT**



**DEPARTMENT OF FISHERIES
AND MARINE RESEARCH
1416 NICOSIA**

**CYPRUS ANNUAL REPORT ON
EFFORTS DURING 2022 TO ACHIEVE A SUSTAINABLE BALANCE BETWEEN
FISHING CAPACITY AND FISHING OPPORTUNITIES**

Nicosia, May 2023

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Introduction

Article 22 of Regulation (EU) No. 1380/2013 provides for the submission of an annual report by the Member States on their effort during the previous year to achieve a sustainable balance between fishing capacity and fishing opportunities. The structure of the report is in accordance with the current Guidelines¹ developed by the Commission.

The relevant findings and advice of STECF (most updated STECF-22-15) have also been taken into account for the preparation of the report.

A. Description of the fishing fleets in relation to fisheries: developments during the previous year, including fisheries covered by multiannual management or recovery plans

A.(i) Description of fleets

The Cyprus fishing fleet included in the Fleet Register on the 31st of December 2022 was composed of 847 fishing vessels (source: data submitted under 2023 Fleet Economic Data Call). **Table 1** provides general information on the Cyprus fishing fleet over the period 2018-2022, while **Table 2** provides information on the evolution of the fleet segments for the period 2012-2022.

Table 1. General description of the Cyprus fishing fleet (2018-2022)

	2018	2019	2020	2021	2022
No. of vessels	794	858	864	853	847
of which inactive	25	84	78	66	60
Tonnage (GT)	3667	3812	3918	3894	3881
Engine power (kW)	38622	40802	40976	40552	40294

It should be noted that there are restrictions on the number of licenses provided each year in the different fleet segments, and that the Fleet Register includes a number of vessels that are not licensed. It is clarified that each license may have been given or suspended at any time during the year; therefore, the total number of licenses at any given time may differ from the total number of licenses issued during the year. It is further clarified that a vessel may receive more than one license; the assignment of such vessels to a fleet segment is based on the predominant fishing gear.

The terms (obligations and restrictions) for each fishing license category are provided online at the following link (in greek):

¹ COM(2014)545 final – Communication from the Commission to the European Parliament and the Council Guidelines for the analysis of the balance between fishing capacity and fishing opportunities according to Art 22 of Regulation (EU) No 1380/2013 of the European Parliament and the Council on the Common Fisheries Policy

Table 2. Description and development of Cyprus fishing fleet segments.

Fishing technique		Vessel length	2022			2021			2011			Change in 2022 - 2011		
Description	Code		No.	GT	kW	No.	GT	kW	No.	GT	kW	No.(%)	GT (%)	kW (%)
Vessels using Polyvalent 'passive' gears only	PG	0-<6m	27	31	1250	27	31	1250	44	45	1547	-39	-31	-19
Vessels using Polyvalent 'passive' gears only	PG	6-<12m	290	1089	15825	297	1117	16406	456	1565	21869	-36	-30	-28
Vessels using Polyvalent 'passive' gears only (category C)	PGO	0-<6m	341	335	9350	342	345	9396	323	328	8443	6	2	11
Vessels using Polyvalent 'passive' gears only (category C)	PGO	6-<12m	87	249	2447	80	229	2302	108	306	3615	-19	-19	-32
Vessels using Polyvalent 'passive' gears only	PGP	12-<18m	37	1389	6787	36	1380	6545	19	498	2919	95	179	133
Purse seiners	PS	18-<24m	1	105	294	1	105	294	0	0	0	0	0	0
Demersal trawlers and/or demersal seiners	DTS	24-<40m	4	408	1382	4	408	1382	7	714	2402	-43	-43	-42
INACTIVE		0-<6m	33	39	850	31	34	828	53	48	1340	-38	-18	-37
INACTIVE		6-<12m	24	77	1411	32	95	1367	64	180	2445	-63	-57	-42
INACTIVE		12-<18m	2	31	205	2	23	288	1	18	68	100	73	200
INACTIVE		18-<24m	0	0	0	0	0	0	3	250	814	-100	-100	-100
INACTIVE		24-<40m	1	128	493	1	128	493	1	149	419	0	-14	18
TOTAL			847	3881	40294	853	3894	40552	1079	4101	45881	-22	-5	-12

The vessels using *Polyvalent passive gears with length 0-< 6m and 6-< 12m* compose the small-scale inshore fleet and operate mainly with bottom set nets and bottom longlines, targeting demersal species. The relevant fleet operates only in Cyprus waters (GSA25). As it is shown in Table 2, they represent the large majority of the fishing vessels in the Register (~90%). Cyprus Fisheries Law¹ provides for a limited number of licenses for this segment annually and divides it into three (3) subcategories: vessels with fishing license category A', vessels with fishing license category B' and vessels with fishing license category C'.

The vessels with license A' or B' have mostly length 6-<12m and are allowed to operate every day all year round, with a number of restriction measures on the use of fishing gears and minimum landing sizes, according to the national and community law. The main gears used are trammel nets (GTR), set gillnets (GNS) and set longlines (LLS). Coding used in the current report for Polyvalent passive gears with length 0-< 6m and 6-< 12m of category A&B is *PG VL0006 (Category A&B)* and *PG VL0612 (Category A&B)*. Based on the 2019 modification of the National Fisheries Law, licenses of this category may not exceed the 327 vessels and concern vessels with length from 6-12 metres; owners of fishing vessels below 6m, with license during the adoption of the modified Law, are exempted.

¹ Basic Fisheries Law Cap. 135 and subsequent amendments of 1961 to 2022, Fisheries Regulations of 1990 to 2019 based on Article 6 of the Basic Law

The vessels with license category C' are mostly 0-<6m and have a limited fishing effort. By Law, the maximum allowable working days for this category, until the end of 2019, have been 70 days, exercised only in the weekends; since 2020 the maximum allowable working days has increased to around 100 days. There are very strict measures on the use of fishing gears. Maximum allowable length of nets is 800m, and maximum number of longlines is 2 with no more than 200 hooks each. The primary gear used is trammel nets (GTR) and the secondary gear is hand and pole lines [LHP]. **Coding** used in the current report for Polyvalent passive gears with length 0-<6m and 6-<12m **of category C (limited fishing activity) is PGO VL0006 (Category C) and PGO VL0612 (Category C)**. Based on current National Fisheries Law, licenses of this category may not exceed the 450 vessels.

The vessels using *Polyvalent 'passive' gears with length 12-<18m* range from 12-26m, but are clustered in one length category since the large majority of them are between 12-18m; information on the clustering of this fleet segment is provided in Table 5, in Section F. This fleet segment is engaged in two fisheries; the large pelagic fishery using drifting longlines and operating around Cyprus waters and the eastern Mediterranean (targeting swordfish, bluefin tuna and albacore), and in the inshore demersal fishery using mostly set nets and set longlines. There is also one vessel operating in Adriatic Sea. A limited number of licenses is provided for this segment annually. Furthermore, closed seasons, restriction measures on the use of gears and minimum landing sizes are employed, in accordance to national and community regulations.

In accordance with ICCAT management measures, specific fishing licenses are issued for targeting bluefin tuna, swordfish and albacore; the maximum allowable number of specific licenses differs depending on the species. During 2022 specific licenses were issued for targeting large pelagic species using drifting longlines. One vessel received also specific license for targeting bluefin tuna as purse seiner.

Demersal trawlers range from 19-27 m. Information on the clustering of this fleet segment to 24 -<40m is provided in Table 5, in Section F. The licensed trawlers are categorised, based on their type of license, in those fishing in the territorial waters of Cyprus and those fishing in international waters (eastern and central Mediterranean). It should be mentioned that from 2018 only one trawler receives license for operating in the central Mediterranean. Restriction measures on the use of trawl nets and minimum landing sizes are employed for all licensed trawlers, in accordance with national and community law. For the trawlers fishing in territorial waters a limited number of licenses is provided every year, and an extended closed season (from 1st of June until the 7th of November) is employed since the '80s. A *Management Plan for the Bottom Trawl Fishery Within the Territorial Waters of Cyprus* is implemented since the end of 2011, based on Article 19 of Council Regulation (EC) 1967/2006 (Mediterranean Regulation). The national technical measures introduced in the Management Plan for the Bottom Trawl Fishery include the restriction of the number of licensed bottom trawlers to 2, and the restriction of 2 areas from fishing with trawl nets on a rotational basis. Other provisions of the Mediterranean Regulation in the relevant Management Plan include minimum distance from the shore and minimum depth. It is worth mentioning that currently 4 vessels are assigned to this fleet segment; a vessel previously assigned to this fleet segment, has been recently (from 2021 onwards) moved to fleet segment PGP due to changes in fishing activity.

A.(ii) *Link with fisheries*

The bottom trawl fishery and the inshore fishery with polyvalent passive gears in Cyprus waters target a mix of demersal species, as it is the case in all Mediterranean demersal fisheries. The average landings of the bottom trawl fishery and the inshore fishery with polyvalent passive gears in GSA25, for the period 20219-2021, were around 89 t and 460 t respectively.

The species that represent at least 2% in terms of volume and value of the 2019-2021 average landings from the bottom trawl fishery in GSA25 are provided in **Figure 3**. Similarly, the species that represent at least 2% in terms of volume and value of the 2019-2021 average landings from the inshore fishery with polyvalent passive gears are shown in **Figure 4**.

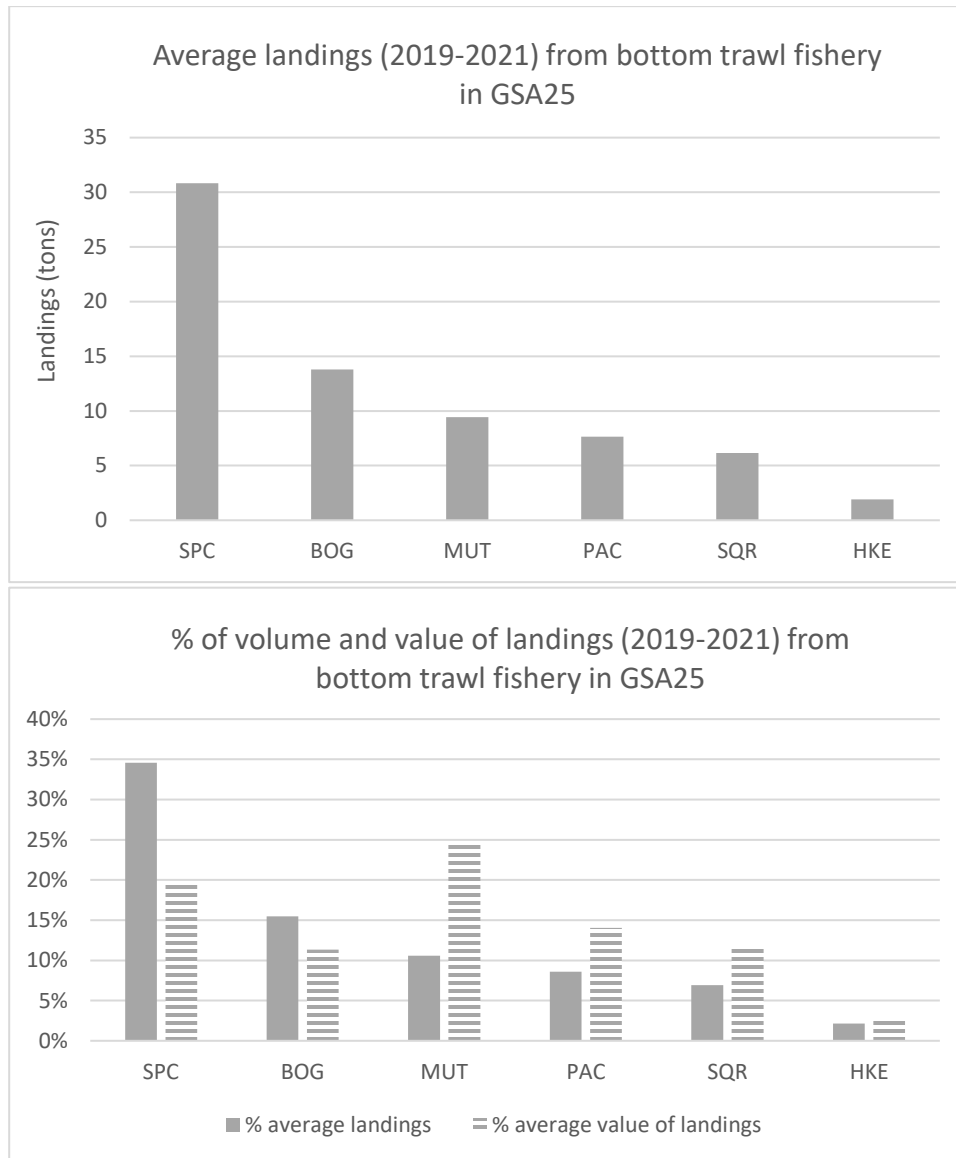


Figure 3: Most important species in 2019-2021 Cyprus landings from bottom trawl fishery (GSA25).

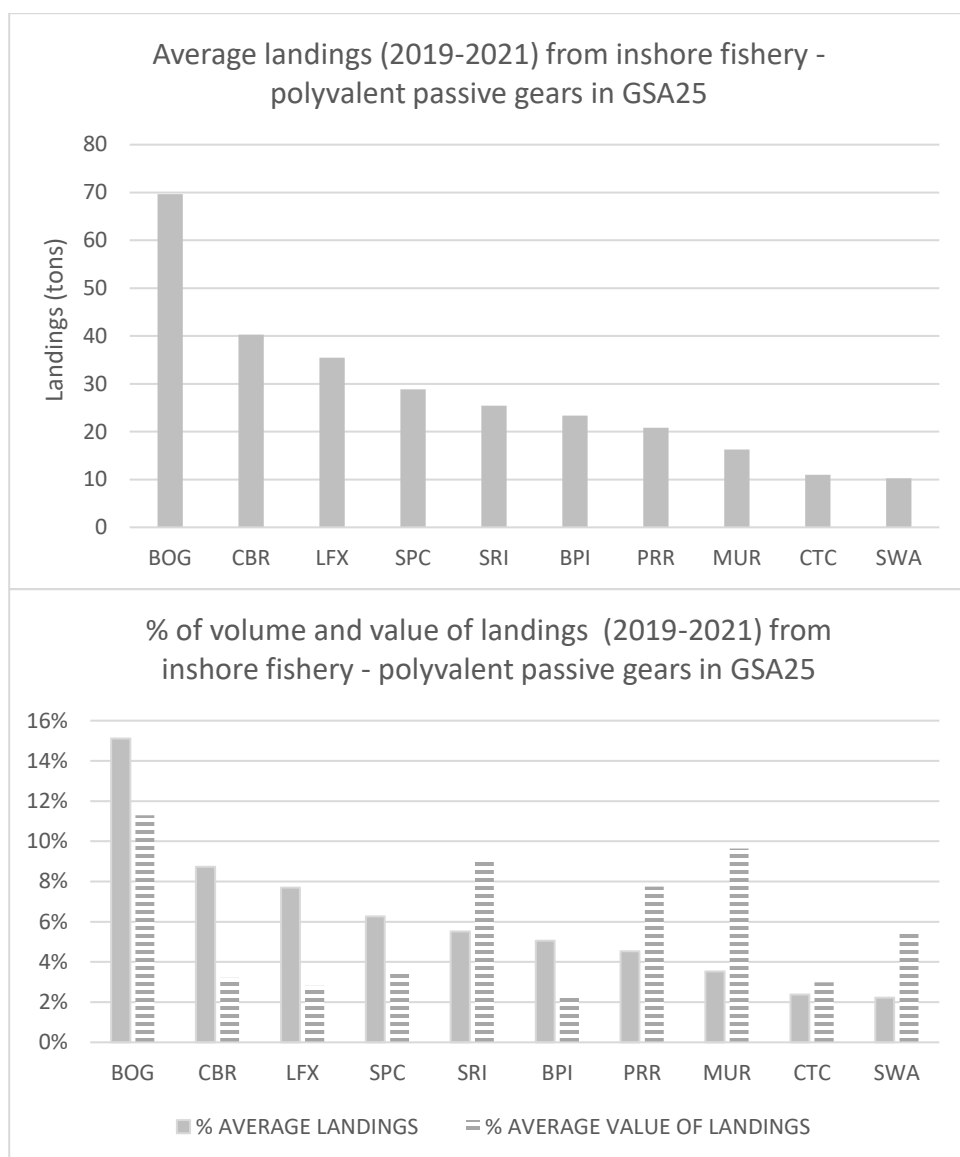


Figure 4: Most important species in 2019-2021 Cyprus landings from inshore fishery with polyvalent passive gears (GSA25).

Bottom trawlers in international waters operate in the central and eastern Mediterranean, though from 2020 there was no fishing activity in the eastern Mediterranean (GSA24). The average landings in central Mediterranean for the period 2019-2021 were 24 tons, with striped red mullet being the main species caught.

Concerning the large pelagic fishery, polyvalent vessels operate in the Eastern Mediterranean with drifting longlines, catching swordfish, albacore and bluefin tuna; there has been also 1 vessel operating in the Adriatic, though during 2021 fishing activity in that area was ceased. Bluefin tuna is under a multiannual management plan adopted by ICCAT (ICCAT Rec. 19-04, amended by Rec. 20-07). A 15-year Recovery plan of Mediterranean swordfish was adopted in 2016 by ICCAT (Recommendation 16-05). Management measures are also established for Mediterranean albacore by ICCAT Recommendation 17-05. During 2021, a 15-year rebuilding plan starting in 2022 was adopted for Mediterranean albacore (ICCAT Recommendation 21-06).

The average landings of the above large pelagic species for the period 2019-2021 are provided in **Table 3**.

Table 3: 2019-2021 average landings (t) of target species from Cyprus large pelagic fishery (LLD).

Species	Landings (LLD) in tons
ALB <i>Thunnus alalunga</i>	578.0
BFT <i>Thunnus thynnus</i>	65.8
SWO <i>Xiphias gladius</i>	36.5

A.(iii) Development in fleets

As shown in Table 2, from 2011 until 2022 the Cyprus fishing fleet was reduced by 22% in number of vessels, 5% in tonnage and 12% in power. In most of the fleet segments there has been a capacity reduction, with the exception of the *Polyvalent 'passive' gears with length 12-<18m* that had a considerable increase.

It is worth mentioning that from the 1st of May 2004 (date of accession of Cyprus to the EU) until the 31st of December 2022, exits financed with public aid involved vessels from the three main fishing fleet segments as follows:

- destruction of 17 vessels using polyvalent passive gears (12-18m LOA)
- destruction of 4 demersal trawlers and change of activity (RET) of 2 demersal trawlers,
- destruction of 173 small scale inshore vessels (<12m, category license A&B): 107 vessels destroyed in 2013, 65 vessels in 2015 and 1 vessel in 2016 (January).

B. Impact of fishing effort reduction schemes on fishing capacity

B.(i) Statement of effort reduction schemes

An action plan was made in 2013 and 2014 concerning small scale inshore vessels (vessels with polyvalent passive gears 0-<12m with category licenses A&B), following the demonstration of imbalance between their fishing capacity and fishing opportunities in the 2013 & 2014 Cyprus Balance Reports. The basic tool for achieving balance was the permanent cessation of fishing activities through scrapping or heritage function. The action plan that was included in the 2013 and 2014 Balance Reports was implemented during 2015 and was finalized early 2016.

The *Management Plan for the Bottom Trawl Fishery Within the Territorial Waters of Cyprus*, which is based on Article 19 of Council Regulation (EC) 1967/2006 (Mediterranean Regulation), is implemented since the end of 2011. The plan restricts the number and the fishing activity of the bottom trawlers operating in territorial waters. An action plan was proposed in the 2020 Balance Report for demersal trawlers, with main measure the permanent cessation of fishing activities. The target is the cessation of the two trawlers operating in the territorial waters of Cyprus, with a time frame of 2 years.

B.(ii) *Impact on fishing capacity of effort reduction schemes*

Following the action plan included in the 2013 and 2014 Balance Reports, during 2015 65 small scale inshore vessels (and one vessel in January 2016) were permanently withdrawn. The resulting capacity reduction was 189.74 GT (186.62 GT in 2015 and 1.55 GT in 2016) and 2863 kW (2797.08 in 2015 and 14.92 in 2016).

The national technical measures introduced in the Management Plan for the Bottom Trawl Fishery include the restriction of the number of licensed bottom trawlers to 2, and the restriction of 2 areas from fishing with trawl nets on a rotational basis (northwest part of Cyprus from 8 November – 15 February every year and southeastern part of Cyprus from 16 February-31 May every year). The 2020 action plan foresees the cessation of the two trawlers operating in the territorial waters of Cyprus, and is expected to result in a capacity reduction of 218 GT and 696 kW).

C. Statement of compliance with entry / exit scheme and with level of reference

Cyprus ensures that at all times the fishing capacity of its fleet does not exceed at any time the fishing capacity ceilings in tonnage (GT) and power (kW) set out in Annex II of Regulation (EU) 1380/2013, according to the provisions of Article 23 of Regulation (EU) 1380/2013.

The evolution of the fleet capacity of the Cypriot fleet (in tonnage and power) compared to its tonnage ceiling, as registered in the Community Fleet register, is provided in **Annex I**.

D. Strength and weaknesses of the fleet management system together with plan for improvements and information on general level of compliance with fleet policy instruments

D.(i) Summary of weaknesses & strengths of fleet management system

The Department of Fisheries and Marine Research (DFMR) is the single authority responsible for the management of fisheries resources and fishing fleet (management measures, issue and management of fishing licenses, control of fishing activities and VMS, record of logbooks, structural funds concerning fisheries). Management measures employed refer mostly to effort restrictions. A quota management system is applied for bluefin tuna, Mediterranean swordfish and Mediterranean albacore (from 2022 onwards).

Strengths of fleet management system

- Having a single authority for the management of fisheries resources and fishing fleet, as mentioned above, the following are ensured: continuous and precise update of the Fleet Register, monitoring of entries and exits, rapid and efficient evaluation of the eligibility of possible requests to increase tonnage, collection of all necessary information related with the management of the fleet, efficient effort monitoring through VMS and cross-check of effort logbook data, and efficient monitoring and inspection of bluefin tuna and swordfish catches.
- The Cyprus Fleet Register system is automatically connected with the DFMR Database on Licenses, thus any modifications on the licenses are automatically updated in the Fleet Register system.

- The Cyprus Fisheries Law provides for a maximum limit of fishing licenses for the different fleet segments, allowing the Director of the DFMR adjustments on the number of licenses issued year-by-year. It is noted that the maximum limit is adjusted in accordance with scrapping schemes.
- Professional fishing licenses are linked to both the vessels and the fishermen.
- Following the adoption of the 2019 modifications of Fisheries Law, the maximum duration of fishing licenses has been extended to five years, with the possibility of renewal. The possibility of transferable licenses has also been introduced, with certain requirements. These modifications provide more securement to fishermen, with long-term vision for economic sustainability.
- Following the 2019 modification of the Fisheries Law, the criteria for issuing fishing licenses to small scale inshore vessels (<12m, category license A&B) require much less administrative effort and are less time-consuming.
- The 2019 modification of the Fisheries Regulations introduces further restrictions for the recreational fishery, assisting the work of the control division in combating illegal fishing.

Weaknesses of fleet management system

The absence of auction markets, the existence of many small landing sites and the fact that the majority of the fishing fleet is under 10m create difficulties in monitoring and evaluating the accuracy of the landings and fishing effort.

D.(ii) *Plan for improvements in fleet management system*

Following the long process of revision of the National Fisheries Law and Regulations, and their adopted modifications at the end of 2019, there are currently no further plans for improving the fleet management system.

D.(iii) *Information on general level of compliance with fleet policy instruments*

Cyprus considers a priority the adjustment of the fishing capacity of its fleet, for achieving a balance between the resources and the fishing capacity. It complies with the provisions of Article 23 of Regulation (EU) 1380/2013, Regulation (EU) 2017/218 on the management of entries and exits, the increase in tonnage (for improving safety, working conditions, hygiene and product quality), the collection, transmission and exchange of information and the financial support through the EMFF on the adaptation of its fishing fleet.

Specifically, Cyprus ensures that at all times the fishing capacity in tonnage (GT) and power (kW) do not exceed the fishing capacity ceilings set out in Annex II of Regulation (EU) 1380/2013, through a continuous and precise update of the Fleet Register, evaluation of the eligibility of possible requests to increase tonnage, monitoring of entries and exits. Necessary information related with the management of the fleet are collected, for evaluating the availability of fisheries resources in relation to the active Cyprus fleet.

Efforts to implement the National and Community Legislation continued in 2022 in order to ensure compliance with the Common Fisheries Policy of the EU and to accomplish the best possible management of the resources.

During 2022, the decree put into force was the Application of Community Decisions and Community Regulations that concern the Fisheries Sector, Law 134/2006 (17th Modification of Annexes of Law - Decree 80/2022). The Decree includes, among others, the following Regulations:

- Commission Implementing Regulation (EU) 2022/46 of 13 January 2022 implementing Regulation (EU) 2021/1139 of the European Parliament and of the Council establishing the European Maritime, Fisheries and Aquaculture Fund and amending Regulation (EU) 2017/1004 as regards the identification of energy-efficient technologies and the specification of methodology elements to determine the normal fishing effort of fishing vessels
- Council Regulation (EU) 2022/109 of 27 January 2022 fixing for 2022 the fishing opportunities for certain fish stocks and groups of fish stocks applicable in Union waters and for Union fishing vessels in certain non-Union waters
- Council Regulation (EU) 2022/110 of 27 January 2022 fixing for 2022 the fishing opportunities for certain fish stocks and groups of fish stocks applicable in the Mediterranean and Black Seas

The DFMR is using conventional and electronic means of control, in order to identify and combat illegal fishing activities. The FMC is monitoring the fishing activities of the vessels via VMS & ERS and other available systems (i.e. EMSA IMS, Satellite Images) and data submitted or feeded to the systems. During 2021, the monitoring of fishing activities using VMS and ERS for vessels with overall length more than 12 meters as well as reefer vessels contributed to improving the control of activities real-time as well as through crosscheck of all available information (logbooks, take over declarations, sales notes, inspections). The Electronic Reporting System is compulsory for fishing vessels with length more than 12m, with some exceptions for vessels between 12-15m. Electronic sales note declarations for registered buyers with an annual financial turnover in first sales of fisheries products of more than €20 000 is also compulsory. Nevertheless, all logbook and sales data, even if submitted to DFMR on paper, are submitted to the electronic system. Regular cross checks are performed to validate information coming from different sources. Information is checked and compared between fishing logbooks, landing declarations, sales notes, VMS and other documents. These controls have proven to be effective in detecting discrepancies/errors or non-compliance/infringements of the Regulations. The exchange of sales notes between MS for registered buyers over 200.000 through FLUX was implemented during 2021. Standardized procedures of control and inspection has resulted in a more uniform and transparent form of fisheries control, compliance and infringement procedures. Data exchange from the VMS and ERS and other methods of communication with other Member States, the EU, the EFCA (European Fisheries Commission) and NEAFC (North East Atlantic Fisheries Commission) and other third countries continued throughout 2021.

During 2021, DFMR Inspectors conducted 977 patrols along the coast, in harbours/fishing shelters, at selling / storage facilities of fishery products and at inland waters and 153 patrols at sea. Out of the total number of 1130 patrols conducted during 2021, 196 land patrols and 66 sea patrols were carried out by the DFMR's permanent staff outside regular working hours, while 336 land patrols were carried out by hiring services personnel outside regular working hours. Within the framework of the Joint Deployment Plan for the conservation of Bluefin tuna and swordfish fisheries and other demersal stocks in the Mediterranean, the DFMR conducted 38 patrols at sea and 57 land patrols exclusively for the control of the fishing activities of the species. During the closed fishing season of swordfish (January to March) the DFMR performed additional 44 sea patrols on pelagic vessels and another 156 land patrols at ports and landing sides regarding the same fishery. During 2021 DFMR reported a total of 643 Infringements.

At the same time during the daily inspections from the FMC of the electronic systems and the checks performed related to the obligations, rules and technical measures for fisheries that can be controlled through the electronic systems, a total of 122 infringements were identified from these checks. In addition to the daily checks, 719 cross-checks were carried out in 2021 and 184 irregularities/non-compliance/violations were identified.

E. Information on changes of the administrative procedures relevant to the management of the fleet

As mentioned also in section D (i), the Fisheries Law has been amended, among others for modifying the management system of limited licenses (criteria for obtaining a fishing license, duration and transferability of fishing licenses).

With the upgrading of the Fleet Register, which was finalised during 2017, procedures for cross-checking information and updating any modifications of the vessel, the license and owner status have become automatic.

In December 2019, DFMR procured the Tender for Development, Implementation, Operation and Enhanced Maintenance of the Integrated Fisheries Management Platform (IFMP), aiming at the complete digitization of the Department, including e-Services, ensuring optimized performance, compliance and alignment of the EU Regulations for Fisheries Control and Management. The evaluation procedure was completed in March 2021. Due to a recourse filed to the Tender Review Authority, the tender was signed on January 2022.

F. Estimation and discussion of balance indicators

In accordance with the 2014 Balance Indicator Guidelines adopted by the Commission, two *biological* (sustainable harvest indicator, stocks-at-risk indicator), two *economic* and two *vessel use indicators* should be used for assessing the balance of the different Cyprus fleet segments.

For the preparation of the 2022 Report, Cyprus has calculated the indicators required by the 2014 Commission Guidelines, considering that there has not been any further revision of the Guidelines. Data used are the ones transmitted by Cyprus to the Commission through the 2022 Official Fleet Economic Data Call and the most recent assessments and advice from relevant scientific bodies on stock status and their exploitation rates.

Information is provided below on the clustering of fleet segments that were done for the estimation of indicators.

Clustering of fleet segments

The segments that have been clustered are shown on **Table 5** “Economic Clustering of fleet segments”, where the clusters are named after the biggest segment in terms of number of vessels in the case of the polyvalent passive gears with length ≥ 12 m fleet segment. The vessels above the 24m length group are only 3 and 3 in the length group 18- <24 m. Thus, for sampling purposes, as well as for confidentiality reasons they were regrouped in the 12- <18 m length group. It is noted that there were 30 active vessels with length less than 18m (length group 12- <18 m). All the groups of vessels using polyvalent passive gears with length ≥ 12 m are engaged in the same métiers since these vessels target the same group of species with the same gears despite their vessel’s length; this is evident from the landings value and volume.

As for the demersal trawlers fleet segment, there are 2 demersal trawlers in the length group 18- <24 m and 2 in the length group 24- <40 m. It is noted that there is not any demersal trawler above 40m thus, for sampling purposes as well as for confidentiality reasons all the trawlers were regrouped in the same below length group. Actually, there were regrouped in the length group 24- <40 m (up to 28m). All groups are engaged in the same métier and they target the same group of species with the same gear despite their vessels length.

It is emphasized that the cost structure of the clustered segments does not change much. It is important to have in mind that for all segments a census was performed.

Table 5: Economic Clustering of fleet segments for 2021

Name of the clustered fleet segments	Total number of vessels in the cluster by the 31 st of December of the sampling year	Fleet segments which have been clustered	Number of vessels in the segment by the 31 st of December of the sampling year
Passive gears: Polyvalent "passive gears only" 12- <18m*	36	Polyvalent passive gears 12-18 m	30
		Polyvalent passive gears 18-24 m	3
		Polyvalent passive gears 24-40 m	3
Demersal trawlers 24-<40m*	4	Demersal trawlers 18-24 m	2
		Demersal trawlers 24-<40m	2

F(i) *Biological Sustainability Indicators*

Sustainable Harvest Indicator

The Sustainable Harvest Indicator (SHI) was calculated by the DFMR in accordance with the current guidelines i.e. as an average of F/F_{msy} for each available stock concerned (i) that is exploited by the fleet segment, weighted by the value of the landings V_i of that stock:

$$\frac{\sum_{i=1}^{i=n} V_i \frac{F_i}{F_{msy_i}}}{\sum_{i=1}^{i=n} \sum V_i}$$

Value and catch data used were based on data provided by Cyprus through the 2023 Official Fleet Economic Data Call.

As required by the Commission Guidelines, for the calculation of the SHI the most recent value of fishing mortality available from scientific assessments was taken into account.

Information on F/F_{msy} on stocks exploited by Cyprus fleets was extracted from the following sources:

- GFCM Stock Assessment Forms and Stock Assessment Results (STAR) available at <http://www.fao.org/gfcm/data/safs> and <https://www.fao.org/gfcm/data/star/en/>
- ICCAT website (<https://www.iccat.int/en/>)

In addition, the Biological Indicator Visualisation Tool, available at http://sirs.agrocampus-ouest.fr/stecf_balance_2022/ was consulted.

Table 6 provides the values of F/F_{msy} of the stocks used for calculating SHI indicator for the different fleet segments, for the years 2019-2021. **Table 7** provides the SHI calculations for each fleet segment, as well as information on the stocks included in the indicator.

As seen from **Table 7**, the indicator SHI covers stocks that constitute at least 40% of the value of landings for 3 fleet segments for the period 2019-2021:

- the demersal trawlers CYP DTS VL2440,
- the polyvalent fleet CYP PGP VL1218, and
- the purse seiner CYP PS VL2440.

Table 6: Values of F/Fmsy of stocks used for calculating SHI indicator for Cyprus fleet.

Stock	Reporting Year	Reference Year	Year	F/FMSY	Method
ALB_all	2021	2019	2019	1.21	JABBA
ALB_all	2021	2019	2020	1.21	
ALB_all	2021	2019	2021	1.21	
BFT_all	2017	2014	2019	0.43	VPA2box (V4.01)
BFT_all	2017	2014	2020	0.43	
BFT_all	2017	2014	2021	0.43	
BOG_25	2017	2016	2019	1.2	XSA
BOG_25	2017	2016	2020	1.2	
BOG_25	2017	2016	2021	1.2	
CBR_25	2022	2020	2019	0.67	AMSY
CBR_25	2022	2020	2020	0.67	
CBR_25	2022	2020	2021	0.67	
DPS_12-16	2022	2020	2019	1.35	XSA
DPS_12-16	2022	2020	2020	1.35	
DPS_12-16	2022	2020	2021	1.35	
HKE_12-16	2022	2021	2019	1.33	SS3
HKE_12-16	2022	2021	2020	1.19	
HKE_12-16	2022	2021	2021	0.93	
HKE_17-18	2022	2021	2019	2.39	SS3
HKE_17-18	2022	2021	2020	1.87	
HKE_17-18	2022	2021	2021	1.69	
MUT_12-14	2022	2021	2019	3.23	XSA
MUT_12-14	2022	2021	2020	3.23	
MUT_12-14	2022	2021	2021	3.23	
MUT_24	2022	2021	2019	0.92	CMSY in addition to LBB, and LBSPR
MUT_24	2022	2021	2020	0.92	
MUT_24	2022	2021	2021	0.92	
MUT_25	2022	2022	2019	3.11	SAM
MUT_25	2022	2022	2020	2.64	
MUT_25	2022	2022	2021	2.77	
PAC_25	2019	2019	2019	0.81	SPICT
PAC_25	2019	2019	2020	0.81	
PAC_25	2019	2019	2021	0.81	
SBA_25	2022	2020	2019	1.14	CMSY
SBA_25	2022	2020	2020	1.05	
SBA_25	2022	2020	2021	1.05	
SPC_25	2016	2015	2019	0.14	SS3
SPC_25	2016	2015	2020	0.14	
SPC_25	2016	2015	2021	0.14	
SWO_all	2020	2018	2019	0.93	XSA
SWO_all	2020	2018	2020	0.93	
SWO_all	2020	2018	2021	0.93	

Table 7: SHI values and relevant stocks for the different Cyprus fleet segments.

Fleet segment	Year	Sustainable Harvest Indicator (SHI)	List of stocks included in SHI (with F/Fmsy available)	Number of stocks included in SHI	% of landings value of stocks included in SHI	% of landings volume of stocks included in SHI
CYP DTS VL2440	2019	1.39	ALB_all, BOG_25, CBR_25, DPS_12-16, HKE_12-16, MUT_12-14, MUT_24, MUT_25, PAC_25, SBA_25, SPC_25, SWO_all	12	54%	69%
	2020	1.29	ALB_all, BOG_25, CBR_25, DPS_12-16, HKE_12-16, MUT_12-14, MUT_25, PAC_25, SBA_25, SPC_25, SWO_all	11	61%	78%
	2021	1.37	ALB_all, BOG_25, CBR_25, DPS_12-16, HKE_12-16, MUT_12-14, MUT_25, PAC_25, SBA_25, SPC_25, SWO_all	11	65%	72%
CYP PGP VL1218	2019	1.13	ALB_all, BFT_all, BOG_25, CBR_25, HKE_17-18, MUT_25, PAC_25, SBA_25, SPC_25, SWO_all	10	93%	96%
	2020	0.98	ALB_all, BFT_all, BOG_25, CBR_25, HKE_17-18, MUT_25, PAC_25, SBA_25, SPC_25, SWO_all	10	94%	97%
	2021	0.94	ALB_all, BFT_all, BOG_25, CBR_25, HKE_17-18, MUT_25, PAC_25, SBA_25, SPC_25, SWO_all	10	94%	96%
CYP PG VL0006 (A&B category)	2019	0.90	BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	6	23%	40%
	2020	0.97	BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	6	21%	36%
	2021	0.97	BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	6	16%	30%
CYP PG VL0612 (A&B category)	2019	0.99	ALB_all, BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	7	26%	41%
	2020	1.01	ALB_all, BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	7	26%	39%
	2021	1.06	ALB_all, BFT_all, BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	8	26%	35%
CYP PGO VL0006 (C category)	2019	1.16	ALB_all, BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	7	6%	15%
	2020	1.21	ALB_all, BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	7	6%	13%
	2021	1.11	ALB_all, BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	7	3%	5%
CYP PGO VL0612 (C category)	2019	1.16	ALB_all, BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	7	6%	15%
	2020	1.21	ALB_all, BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	7	6%	13%
	2021	1.11	ALB_all, BOG_25, CBR_25, MUT_25, PAC_25, SBA_25, SPC_25	7	3%	5%
CYP PS VL1824	2019	0.43	BFT_all	1	100%	100%
	2020	0.43	BFT_all	1	100%	100%
	2021	0.43	BFT_all	1	100%	100%

Table 8 provides the values of the SHI in traffic light system, for the fleet segments for which the indicator represents at least 40% of the value of landings. According to the 2014 Balance Indicator Guidelines, for SHI “Values of the indicator above 1 indicate that a fleet segment is, on average, relying for its income on fishing opportunities which are structurally set above levels corresponding to exploitation at levels corresponding to MSY”. Therefore, where SHI >1 it is considered 'out of balance' and is indicated in red; where SHI < 1 it is considered 'in balance' and indicated in green; where SHI=1 it is indicated with yellow.

Table 8: Estimated Sustainable Harvest Indicator for Cyprus fleet segments in traffic light system

Fleet segment	Sustainable Harvest Indicator		
	2019	2020	2021
CYP DTS VL2440	1.39	1.29	1.37
CYP PGP VL1218	1.13	0.98	0.94
CYP PS VL2440	0.43	0.43	0.43

In the case of the small-scale inshore fleet (Polyvalent passive gears fleet with length 0-< 6m and 6-< 12m), it is difficult to reach the 40% of the value of landings due to the limited available number of stock assessments with values of F/Fmsy, and the high number of species caught. Following the validated assessment of new species by the GFCM Working Group on Stock Assessment of Demersal species (WGSAD) in 2022, the number of stocks with values of F/Fmsy of the fleet segment CYP PG VL0612 has increased to around 40% of landings and 26% of value of landings; the SHI indicator could be considered meaningful to assess balance or imbalance for this segment.

It is worth mentioning that effort is made for increasing the number of assessed stocks exploited by the small-scale inshore fleet, with the collection of relevant biological data. A new assessment of *Siganus rivulatus* was presented at the GFCM Working Group on Stock Assessment of Demersal species in January 2022, which was evaluated as preliminary. It is anticipated that in the following years the SHI will cover stocks that constitute at least 40% of the value of landings for all fleet segments.

Stocks-at-risk (SAR) indicator

According to the guidelines, a stock at high biological risk means a stock which is either

- (a) assessed as being below the B_{lim} biological level; or
- (b) subject to an advice to close the fishery, to prohibit directed fisheries, to reduce the fishery to the lowest possible level, or similar advice from an international advisory body, even where such advice is given on a data-limited basis; or
- (c) subject to a fishing opportunities regulation which stipulates that the fish should be returned to the sea unharmed or that landings are prohibited; or
- (d) a stock which is on the IUCN "red list" or is listed by CITES.

and for which either:

- 1- the stocks make up to 10% or more of the catches by the fleet segment; or
- 2- the fleet segment takes 10% or more of the total catches from that stock.

Based on criteria (a) – (d), 7 stocks were identified from the landings reported in the 2023 Fleet Economic Data Call for the period 2019-2021 that could be used for the SAR indicator, presented in **Table 9**. The relevant species are considered by IUCN as vulnerable, endangered or critically endangered. For all these species, reported landings

are very low. It is also noted that ELE was probably erroneously reported instead of AOM - *Echelus myrus*, that has the same common name in Cyprus.

Criteria 1- the stocks make up to 10% or more of the catches by the fleet segment; or 2- the fleet segment takes 10% or more of the total catches from that stock were not met for any fleet segment, therefore it is considered that all fleet segments are in balance with their fishing opportunities.

Table 9: Stocks at risk exploited by the Cyprus fishing fleet segments during 2019-2021

Stocks considered for SAR indicator	Fleet segments exploiting stocks
ALV <i>Alopias vulpinus</i>	CYP PGP VL1218, CYP DTS VL2440
BSH <i>Prionace glauca</i>	CYP PGP VL1218, CYP DTS VL2440
CBM <i>Sciaena umbra</i>	CYP PG VL0006, CYP PG VL0612, CYP PGO VL0006, CYP PGO VL0612
COB <i>Umbrina cirrosa</i>	CYP PG VL0006, CYP PG VL0612, CYP PGO VL0006, CYP PGO VL0612
DEC <i>Dentex dentex</i>	CYP PG VL0006, CYP PG VL0612, CYP PGO VL0006, CYP PGO VL0612, CYP PGP VL1218, CYP DTS VL2440
ELE <i>Anguilla anguilla</i>	CYP PG VL0612, CYP PGP VL1218
GPD <i>Epinephelus marginatus</i>	CYP PG VL0006, CYP PG VL0612, CYP PGO VL0006, CYP PGO VL0612, CYP PGP VL1218, CYP DTS VL2440

It has been noted that in STECF-22-15 report the tuna purse seiner was identified as out of balance with 1 stock at risk (eastern bluefin tuna). We consider that eastern bluefin tuna, for which a multiannual conservation and management plan is in place by ICCAT since 2019, following a multiannual recovery plan, does not meet the criteria to be considered as stock at risk.

F(ii) Economic indicators

The Cypriot national fleet was in a net loss-making position in 2021 with a small net loss, but its economic performance was significantly better when compared to the previous year 2020. The fisheries conditions have been improved since the mid of March 2020 when the COVID-19 appeared in Cyprus and the Government had to take measures to stem the spread of this virus.

Operating subsidies are very important mainly for the coastal fishing fleet as the amount given to them is a significant percentage, around 19%, in relation to their income from fishing. Hence the handling of operating subsidies therefore plays a vital role in the economic analysis of the Cyprus fleet. Thus, the operating subsidies, in this analysis, are considered as part of other income.

Return on Fixed Tangible Assets (RoFTA)

The ROI indicator shows the long-term viability. The return on investment compared to the potential return that would be received from investing the capital asset value elsewhere. Due to the fact that there is not a market for fishing rights in Cyprus the data on intangible assets are not available. It is noted that the fishing licences for the small-scale fleet (Categories A' & B') are issued on a five-year basis. As for the rest of the fleet segments, the licences are issued annually and quotas for the year 2021 exist only for three species: the blue-fin tuna, the swordfish and albacore which they are also granted on an annual basis. Thus, the value of intangible assets is considered small. Having this in mind, the indicator Return on Fixed Tangible Assets (RoFTA) for each category of the fleet is considered more appropriate, since the value of fishing rights is not included.

The indicator is calculated as follows:

$$\text{RoFTA} = \text{Net profit} / \text{Depreciated Replacement Value}$$

The indicator is compared against TRP: return on risk free long-term investment minus inflation.

The RoFTA indicator is estimated for the four segments of the active fishing fleet (vessels with polyvalent passive gears 0-<6m, vessels with polyvalent passive gears 6-<12m vessels, with polyvalent passive gears 12-24m and demersal trawlers 24-40m), based on 2021 data. It is noted that the fleet segments: polyvalent passive gears 12-24m and demersal trawlers 24-40m, have been clustered as shown and explained on the Annex Table: "Economic Clustering of fleet segments", where the clusters are named after the biggest segment in terms of number of vessels.

The Traffic light system is used: **red** < TRP; **green** > TRP ; **yellow** 0 – TRP

Table 10: RoFTA indicator

ROFTA			
FLEET SEGMENTS	YEARS		
	2020	2021	Δ
DTS VL2440	-1.86	9.51	↗
PG VL0006 (A&B)	21.81	71.78	↗
PG VL0612 (A&B)	6.90	25.35	↗
PGP VL 1218	-2.62	-10.04	↘

RISK FREE INTEREST RATE

YEARS	2020	2021
%	0.136	0.6299

The development trend is analysed for all indicators for the latest year (2021) to 2020 and indicated by an arrow: "↗" improved/increased; "↘" deteriorated/decreased and "↔" stable.

The RoFTA is negative for the fleet segment polyvalent passive gears 12-<18m vessels indicating economic over-capitalization. This segment shows deterioration compared to previous year. As for the small - scale fleet segments, both of them are positive showing economic viability. The same stands for the demersal trawlers 24-<40m, The development trend of the polyvalent passive gears 0-<6m length group and the polyvalent passive gears 6-<12m length group are positive compared to last year.

In 2015 the small-scale fishery fleet was reduced by 66 vessels, scrapped within the framework of the Scheme of Permanent Cessation, co-funded by European Fisheries Fund, and despite the fact that it may be rather early to come up with safe results the situation for this fleet segment (PG 6-12m) is good showing important improvement.

Comparing the RoFTA with the interest rate of a low-risk long term investment, as calculated above, it shows that it is more beneficial to invest elsewhere for polyvalent passive gears 12-24m. On the contrary, this is not the case for the polyvalent passive gears 0-<6m, for the 6-<12m fleet segments and demersal trawlers 24-40m.

The calculations of indicator RoFTA are provided in Table 11.

TABLE 11: Calculation of RoFTA

	2020				2021			
	PG VL0006 (A&B)	PG VL0612 (A&B)	PGP VL1218	DTS VL2440	PG VL0006 (A&B)	PG VL0612 (A&B)	PGP VL1218	DTS VL2440
Income	269,972	3,150,637	1,951,494	911,537	307,162	3,477,426	2,267,806	917,988
Less Exp	168,867	2,164,329	2,342,551	1,028,382	214,212	2,450,555	2,885,926	735,808
Net Profit	95,106	986,309	-391,057	-116,845	92,950	1,026,871	-6,181,121	182,180
Cap.Val	435,968	14,298,240	14,905,856	6,272,000	129,501	4,050,075	6,154,035	1,915,688
RoFTA	21.81	6.90	-2.62	-1.86	71.78	25.35	-10.04	9.51

Ratio between current revenue and break-even revenue

This ratio gives a short-term view of financial viability and it is calculated as follows:

$$\text{Ratio} = \text{Current Revenue (CR)} / \text{BER}$$

Where, the break-even revenue (BER) is the revenue required to cover both the fixed and variable costs so that zero profits and losses are generated and it is calculated as follows:

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

It is noted that the opportunity cost of capital is excluded.

Table 12: CR/BER*

CR/BER

		2020	2021	Δ
DTS	VL2440	0.63	1.87	↗
PG	VL0006 (A&B)	5.37	7.26	↗
PG	VL0612 (A&B)	2.42	3.17	↗
PGP	VL1218	0.50	0.26	↘

The fleet segments with ratio less than 1 is the polyvalent passive 12-24m (PGP 12-24m) segment showing that the income is not enough to cover all the costs: fixed, variable and capital, indicating that the segment is not profitable, with potential overcapitalization. In addition to this, the segment shows deterioration compared to the previous year 2020. On the other hand, the ratio for the small -scale fleet segments (the polyvalent passive gears 0-<6m length group and the polyvalent passive gears 6-<12m) are well above 1, showing much improvement for both groups if compared to the previous year 2020. In contrast to 2020 the trawlers 24-40m (DTS 24-40m) segment has also been improved with the indicator being above 1 for the year 2021.

The calculations for this indicator are shown below:

TABLE 13: Calculation of Ratio= CR/BER

YEARS	2020				2021			
	PG VL0006 (A&B)	PG VL0612 (A&B)	PGP VL1218	DTS VL2440	PG VL0006 (A&B)	PG VL0612 (A&B)	PGP VL1218	DTS VL2440
Income	263,972	3,150,637	1,951,494	911,537	307,162	3,477,426	2,267,806	917,988
FC	21,786	694,975	775,717	312,113	14,845	474,236	838,266	208,561
VC	147,081	1,469,353	1,566,834	716,269	199,367	1,976,319	2,047,660	527,247
BER	49,199	1,300,347	3,935,441	1,456,987	42,301	1,098,603	8,635,309	489,984
CR/BER	5.37	2.42	0.50	0.63	7.26	3.17	0.26	1.87

F(iii) Vessel Use Indicators

Inactive Fleet Indicator

Table 14 provides the proportion of inactive vessels of the fleet with respect to number of vessels, power and tonnage for the period 2016-2021, by length class and in total. The development trend is analyzed for the period 2016-2021, using the slope equation and a 5% threshold to indicate significance: Slope > 0.5 **increasing**; Slope < -0.5 **decreasing**; -0.5 < Slope < 0.5 **no trend** and slope = 0 flat/null trend.

In 2021 the inactive fleet accounted for less than 10% of the total number of vessels, GT and kW. Inactivity concerned 4 length classes (VL0006, VL0612, VL1218 and VL2440), in which inactive vessels were either unlicensed, licensed, or both (see Table 15 below). Length class VL2440 displayed increasing trends in all 3 categories (number, GT, kW).

Table 15: Information on inactive vessels in 2021

Length class of inactive vessels	Number of inactive vessels	Information on inactive vessels
VL0006	31	30 unlicensed, 1 licensed
VL0612	32	30 unlicensed, 2 licensed
VL1218	2	2 licensed
VL2440	1	1 unlicensed

Based on the Guidelines, which set a threshold of 20% of inactivity as indication of technical inefficiency, the inactive fleet indicator does not indicate any technical inefficiency at national level.

Table 14: Inactive Fleet Indicator

		Number of inactive vessels								Δ	% of inactive vessels						Δ
MS	Fleet segment			2016	2017	2018	2019	2020	2021	#	2016	2017	2018	2019	2020	2021	#
CYP	NONE	INACTIVE	VL0006	29	20	18	41	37	33	increasing	3.5%	2.5%	2.2%	4.8%	4.3%	3.9%	increasing
CYP	NONE	INACTIVE	VL0612	40	14	21	38	38	32	increasing	4.8%	1.7%	2.6%	4.4%	4.4%	3.8%	no trend
CYP	NONE	INACTIVE	VL1218	1	3	3	4	2	2	decreasing	0.1%	0.4%	0.4%	0.5%	0.2%	0.2%	decreasing
CYP	NONE	INACTIVE	VL1824	0	0	0	0	0	0	-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-
CYP	NONE	INACTIVE	VL2440	0	1	1	1	1	1	increasing	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	increasing
CYP	National inactive fleet			70	38	43	84	78	68	increasing	8.4%	4.7%	5.3%	9.8%	9.0%	8.0%	increasing
		% of inactive kW								Δ	% of inactive GT						Δ
MS	Fleet segment			2016	2017	2018	2019	2020	2021	kW	2016	2017	2018	2019	2020	2021	GT
CYP	NONE	INACTIVE	VL0006	2.3%	1.6%	1.2%	2.7%	2.4%	2.0%	no trend	0.8%	0.5%	0.5%	1.0%	0.8%	0.9%	increasing
CYP	NONE	INACTIVE	VL0612	5.1%	6.7%	4.2%	5.2%	4.3%	3.4%	decreasing	3.9%	5.3%	3.6%	3.7%	2.8%	2.4%	decreasing
CYP	NONE	INACTIVE	VL1218	0.6%	0.8%	1.2%	1.9%	1.5%	0.7%	decreasing	1.0%	0.9%	1.4%	1.6%	2.5%	0.6%	decreasing
CYP	NONE	INACTIVE	VL1824	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	-
CYP	NONE	INACTIVE	VL2440	0.0%	1.2%	1.3%	1.2%	1.2%	1.2%	increasing	0.0%	3.3%	3.5%	3.4%	3.3%	3.3%	increasing
CYP	National inactive fleet			8.1%	10.2%	7.9%	11.0%	9.4%	7.3%	no trend	5.7%	10.0%	8.9%	9.7%	9.4%	7.2%	no trend

Vessel Utilisation Indicator

Table 16 provides the estimated Vessel Utilisation Indicator per fleet segment in traffic light system (Status: $0.7 <$ red (out of balance); $0.7 \geq$ green (in balance)). The development trend is analyzed for the period 2016-2021, using the slope equation and a 5% threshold to indicate significance, as: Slope > 0.05 increasing; Slope < -0.05 decreasing; $-0.5 < \text{Slope} < 0.5$ no significant trend and slope = 0 flat/null trend.

In accordance with the Guidelines, the capacity is indicated in kW for active and in GT for passive gear segments.

As indicated in Table 16, the indicator was calculated mainly based on observed maximum days. For fleet segment PG VL0612 (Category A&B), the “observed maximum days” is given as the “Average number of days of the top 10 most active vessels in the fleet segment”; this definition is used under FDI Data Call for maximum days at sea. For the rest of the fleet segments, for which the value of “observed maximum days” is used, this value has been calculated based on the most active vessel of the fleet segment, and is provided in Table 16. For the two segments of Category C, the maximum activity is considered to be the maximum by Law allowable days during a year; although from 2020 the maximum allowable days are 100 days, the previous to 2020 maximum allowable days has been used (i.e., 70 days).

The maximum observed effort of Demersal trawlers during 2021 was 221 days. The results of this indicator suggest technical overcapacity for this fleet. It is noted that the vessels exhibit some heterogeneous activity; vessels operating in Eastern Mediterranean are involved also in the large pelagic fishery using drifting longlines, while the trawler in the central Mediterranean operates also as tug vessel.

The maximum observed effort of the segment “vessels using polyvalent passive gears 12-18 m” during 2021 was 170 days. This segment exhibits heterogeneous activity, which can be explained by the fact that the segment includes vessels using only drifting longlines targeting large pelagic with seasonal closures, seasonal fisheries (albacore) and vessels using both drifting longlines for large pelagic and bottom nets and set longlines targeting demersal species. Therefore, for the segment “vessels using polyvalent passive gears 12-18 m” it is considered that the low value of capacity utilization does not indicate technical overcapacity.

Concerning the small-scale inshore fleet segments, for which the relevant maximum observed effort is shown in Table 16, the relatively low values of the indicator may indicate technical overcapacity. However, in Cyprus many of the fishers in the small-scale inshore fleet segments do not work full-time as fishermen, and have additional sources of income. STECF-22-15 reiterated “the conclusion of PLEN 21-03 that the use of VUR indicator is misleading for small scale segments and/or seasonal fisheries, given that their maximum sea-days is very variable”.

Regarding the tuna purse seiner segment, there is only one purse seiner, with fishing capacity management plan in accordance with ICCAT Recommendation [19-04]; the Vessel Utilisation Indicator has not been calculated.

Table 16: Estimated Vessel Utilisation Indicator for the Cyprus fleet segments in traffic light system.

Fleet segment													Δ	Comments
	2016		2017		2018		2019		2020		2021			
	kW-days	GT-days	kW-days	GT-days	kW-days	GT-days	kW-days	GT-days	kW-days	GT-days	kW-days	GT-days		
CYP DTS VL2440	0.64		0.77		0.57		0.59		0.51		0.67		increasing	calculated based on observed maximum days (221 days in 2021)
CYP PGP VL1218		0.53		0.50		0.54		0.50		0.51		0.49	decreasing	calculated based on observed maximum days (170 in 2021)
CYP PG VL0612 (Category A&B)		0.55		0.50		0.47		0.51		0.45		0.50	no trend	calculated based on observed maximum days (226 days in 2021)
CYP PG VL0006 (Category A&B)		0.70		0.60		0.59		0.60		0.67		0.66	no trend	calculated based on observed maximum days (177 days in 2021)
CYP PGO VL0612 (Category C)		0.38		0.35		0.37		0.25		0.22		0.19	decreasing	calculated based on maximum allowable days (70 days)
CYP PGO VL0006 (Category C)		0.39		0.40		0.40		0.22		0.18		0.23	decreasing	calculated based on maximum allowable days (70 days)

G. Statement of MS opinion on balance of fleet capacity and fishing opportunity

Based on an overview of the estimated balance indicators in traffic light system, the fishing capacity of the different fleet segments in relation to the fishing opportunities is as follows:

- Demersal trawlers seem to be under- utilized, with an increasing trend. It is noted that the vessels exhibit some heterogeneous activity; vessels operating in Eastern Mediterranean are involved also in the large pelagic fishery using drifting longlines, while the trawler in the central Mediterranean operates also as tug vessel. It is important to mention that the fishing areas available to the fleet in the Eastern Mediterranean have been decreased, since they are hindered by illegal activities of Turkey to fish in international waters of GSA24 and Cyprus EEZ (evidenced in **Annex II**). The estimated SHI, which represents more than 40% of the value of landings, is negative (>1). However, the economic performance of this fleet segment is in net profit-making position, and the overall economic analysis shows improvement compared to previous year during which the segment was showing net -loss. It is noted though that one of the most active vessels that belonged to the trawlers segment until 2020, changed its operations and in 2021 it was moved to the segment “vessels using polyvalent passive gears 12-18 m”. This action had a positive effect on the economic situation of the trawlers segment. Taking into account the above, it is suggested that the fleet is not in balance with its exploited resources, at least based on the biological indicator SHI.
- The vessels with polyvalent passive gears 12-18m show a heterogeneous activity, which is considered to exist due to the different fisheries exercised by the fleet, rather than due to a technical overcapacity. It is important to mention that the fishing areas available to the fleet for fishing large pelagic fish in the Eastern Mediterranean have been decreased, since they are hindered by illegal activities of Turkey to fish in international waters of GSA24 and Cyprus EEZ (evidenced in **Annex II**); this forces the fleet to reduce their fishing days targeting large pelagic fish, with subsequent economic consequences. The SHI represents more than 90% of the value of landings. According to the guidelines, there is an indication of an imbalance situation if SHI values above 1 occur for three consecutive years; based on this, there is no indication of imbalance. However, the fleet segment seems to have been operating at a net loss-making situation in 2021. The deterioration of economic performance compared to 2020 was mainly due to the significant increase in some of the cost items like the tremendous increase in energy cost by 77% compared to the year 2020. In 2022 Cyprus implemented the scheme for the fishery and aquaculture sectors, to compensate for the additional costs incurred as a consequence of the crisis due to the military aggression of Russia against Ukraine (ARTICLE 26 (2) REG. (EU) 2021/1139-EMFAF). In addition, it is noted that one of the most active vessels that belonged to the trawlers segment until 2020, changed its operations and in 2021 it was moved to this segment. This action had a negative effect on the economic situation of the segment. The Ratio between current revenue and break-even revenue is also deteriorated compared to previous year. It is noted though, that for some of the vessels there are no audited financial accounts. In addition, it has recently come to our attention that economic data provided are not representative, and a process has initiated in 2021 for correcting the data received, in collaboration with the fishing industry. We consider that the economic performance of the

- fleet is not as negative as the indicators suggest. Considering all the above, it is suggested that this fleet segment is in balance with the resources.
- The vessels with polyvalent passive gears 6-12m (small scale inshore fishery with category licenses A&B) seem to some extent underutilized; considering though that many of the fishers do not work full-time as fishermen and have additional sources of income, it is not concluded that there is technical overcapacity. The estimated SHI is >1 , however it is based on stocks that account for less than 40% of the value of landings and based on the guidelines it cannot be used meaningfully. The fleet segment shows improvement of its economic performance and the segment is in a net profit-making position. The improved economic performance was mainly due to the significant increase in value of landings by 17%. The RoFTA is positive and increased compared to the previous year, indicating long term viability. The same picture stands for the ratio CR/BER which is positive and again increased compared to the previous year, showing that the income is sufficient to cover the costs. Based on all the above, it is suggested that this segment is in balance with the fishing opportunities.
 - The vessels with polyvalent passive gears 0-6m (small scale inshore fishery with category licenses A&B) seem to be underutilized; considering though that many of the fishers do not work full-time as fishermen and have additional sources of income, it is not concluded that there is technical overcapacity. The estimated SHI is >1 ; however, the indicator is based on stocks that account for less than 40% of the value of landings, and based on the guidelines it cannot be used meaningfully. The RoFTA is highly positive, and the ratio CR/BER is also well above 1 despite the fact that the sector is in a net-loss situation. It is noted that the economic situation is much improved compared to the previous year 2020. This economic result should be treated with caution, since the information is based only on questionnaires, due to the absence of financial accounts and logbooks and due to the small population of the fleet segment. Based on all the above, it can be concluded that this fleet segment is in balance with the resources.
 - The vessels with polyvalent passive gears with length 0- $<$ 6m and 6- $<$ 12m of category C [*PGO VL0006 (Category C)* and *PGO VL0612 (Category C)*] seem to be underutilised based on the maximum allowable days. The estimated SHI is >1 ; however, it is based on stocks that represent less than 40% of the value of landings and cannot be used meaningfully. Due to the very limited fishing effort that this fleet can exercise by Law, mainly in the weekends, the limitations on the use of fishing gears [see Section A(i)], and the fact that most of them do not sell their fish, it is considered that a statement of the fishing capacity of these fleet segments in relation to the fishing opportunities is not applicable.
 - The tuna purse seiner segment concerns only one vessel, which is under a fishing capacity management plan in accordance with ICCAT Recommendation [19-04]. The estimated SHI is <1 . Due to confidentiality reasons (only one vessel is included in the segment), no economic information can be provided. It is considered that this segment is in balance with the fishing opportunities.

H. Action Plan

The analysis of the balance indicators suggests that demersal trawlers (DTS VL2440) are not in balance with the fishing opportunities. An action plan concerning this fleet segment was proposed under the Cyprus Balance Report during 2020.

It is recalled that the measure proposed under the action plan is the permanent cessation of fishing activities, and the target is the cessation of the two trawlers operating in the territorial waters of Cyprus. As indicated in the action plan, in the case the target of permanent cessation of the two trawlers is not achieved, the proposed measure is the replacement of the diamond meshed trawl net of 50mm by a square meshed net of 40mm. A time frame of 2 years has been given for reaching the target for permanent cessation (until 2023). In the case the target of permanent cessation of the two trawlers is not achieved, the diamond meshed trawl net of 50mm will be replaced at the codend by a square meshed net of 40mm, during 2024.

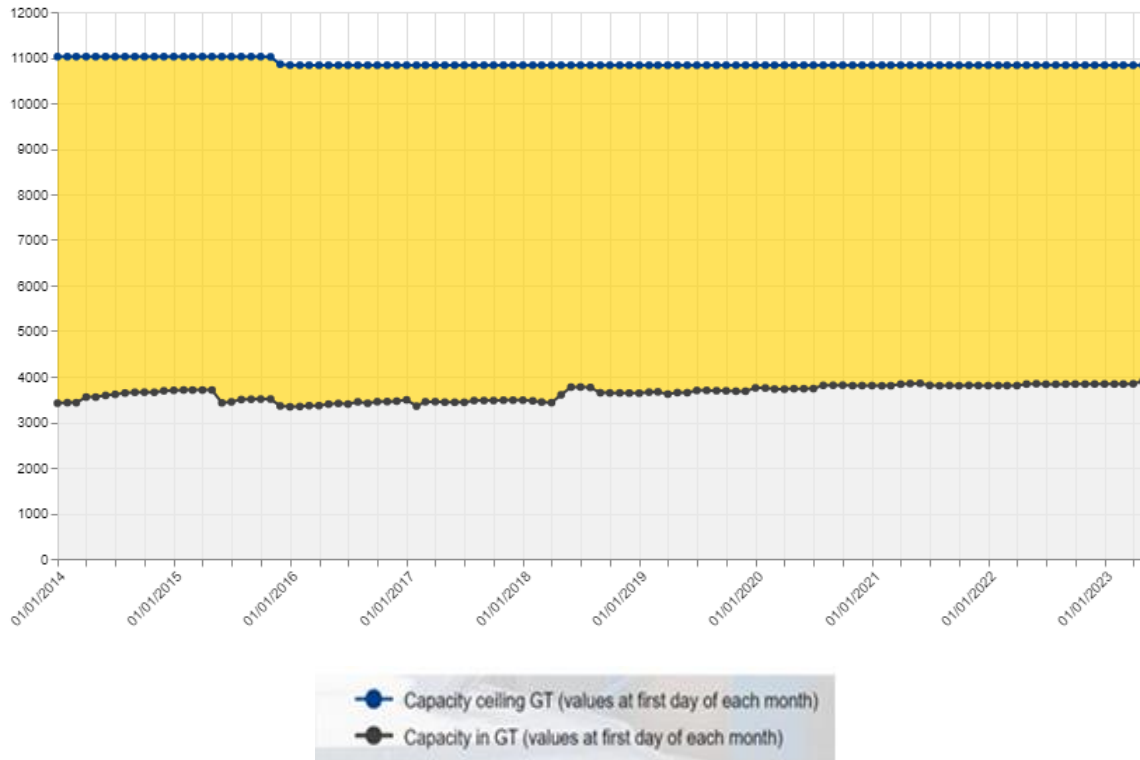
An additional measure that will be introduced is a closed area for trawling in the north-west part of Cyprus. Following the 2 year - time frame for reaching the target of permanent cessation (until 2023), this measure will be implemented during 2024.

ANNEX I

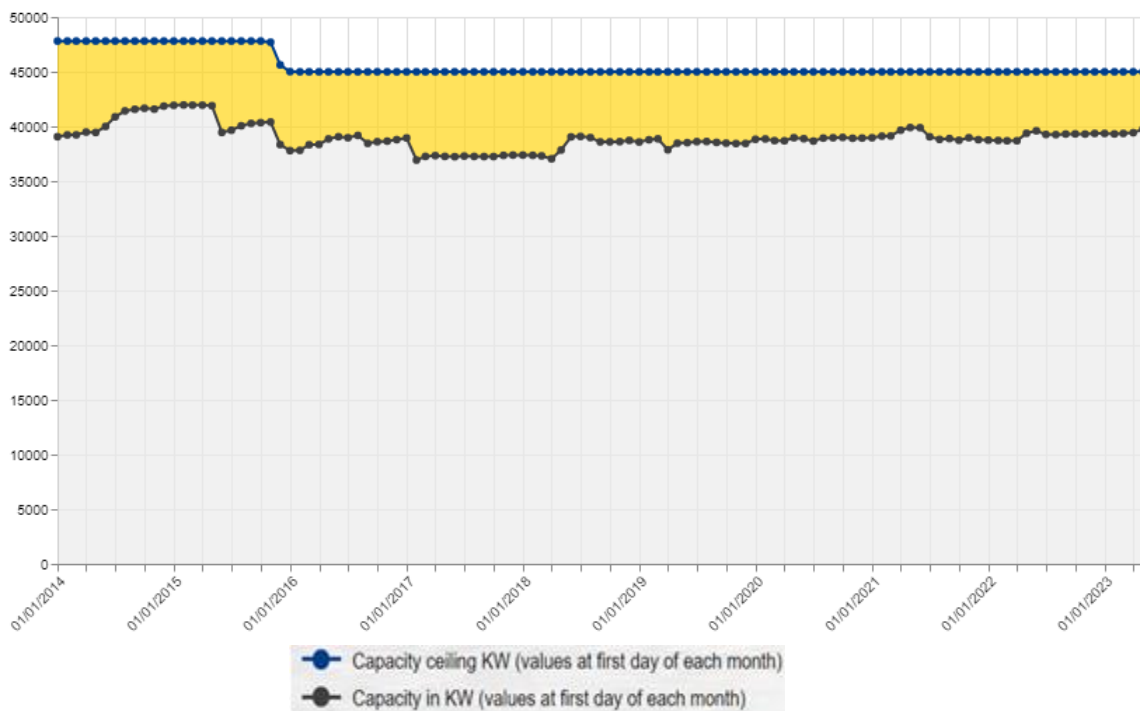
Tonnage and Power Statistics for Cyprus - Evolution between 1/1/2014 and 1/1/2023

(source: https://webgate.ec.europa.eu/fleet-europa/stat_ceilings_en)

Cyprus: tonnage of the fleet compared to its tonnage ceiling



Cyprus: power of the fleet compared to its power ceiling



Annex II

Annual density grid analysis (Gaussian Kernel - 1 km radius) of historical VMS (Vessel Monitoring System) data of the offshore (>200 m depth) Cypriot fishing fleet, for the years 2012 to 2020 (points with speed >4 kt excluded).

