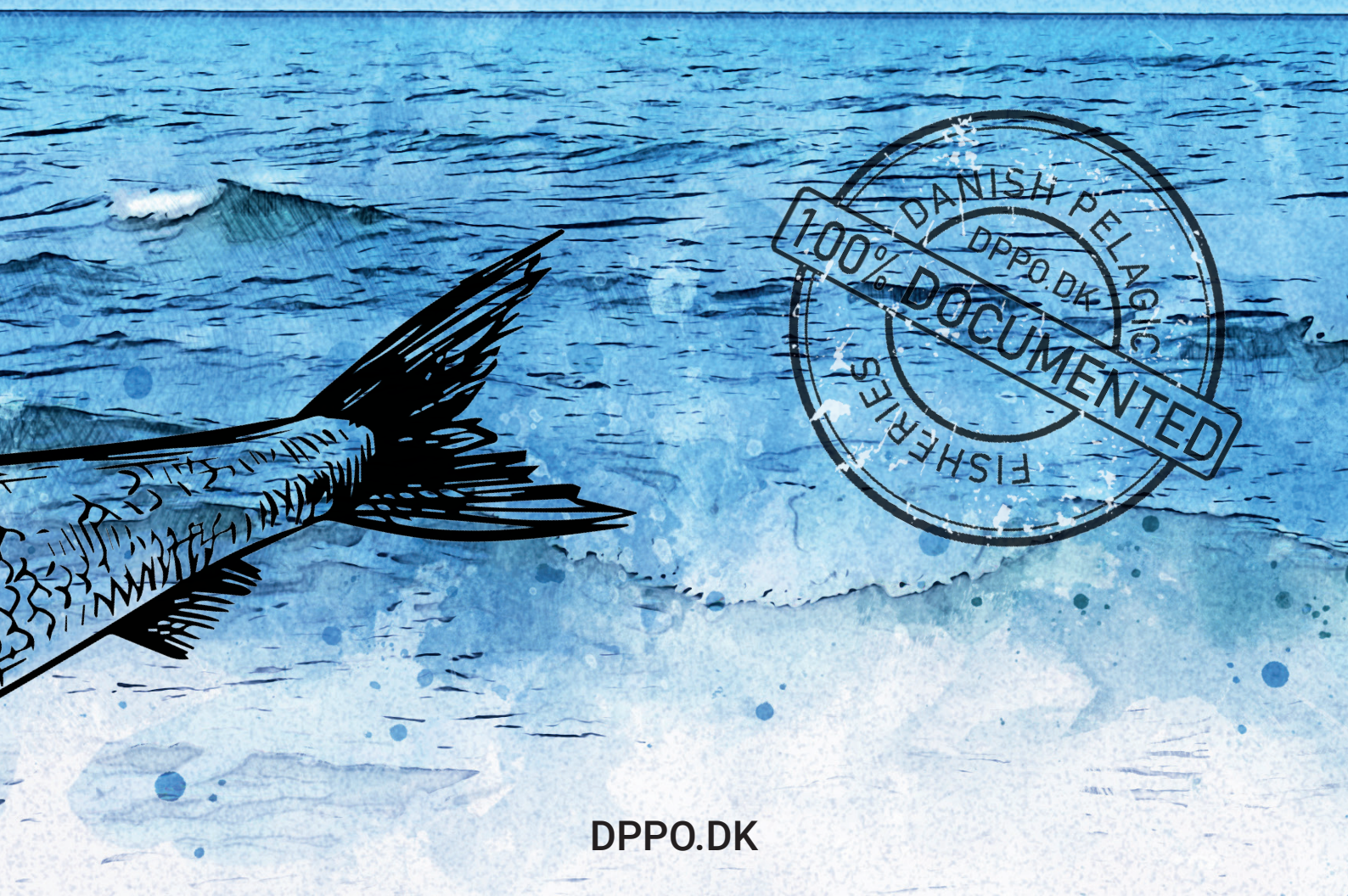


FACTS & FIGURES PELAGICS

DANISH PELAGIC PRODUCERS ORGANISATION



DPPPO.DK

Dear reader,

This is the first English edition of DPPOs "Pelagic Facts & Figures". On the following pages you get the opportunity to dig in to some of the key numbers, stats and figures that explain how members of DPPO are contributing to European food production while working to minimise CO2 emissions. We have spiced up statistics and tables, with a series of featured articles on a few of the many activities we as an PO initiate and coordinate.

I am especially proud of our contributions to science, our many projects with partners within the industry, in the supply chain and with academic and research institutions in Denmark, in Europe and around the world. Our Phd. program has already produced a number of scientific papers and this year we have expanded our academic activities with an internship program. We started our science program in 2013, and over the last 10 years we have proven that it is possible to bridge the gap between scientists and fishers. I look forward to seeing DPPO even more closely embedded within the scientific community, and vice versa, as we begin to explore the possibilities that lie in our "100% documented pelagic fisheries program".

"100% documented pelagic fisheries" is another DPPO initiative that strengthens our ability to document our sustainable practices and our commitment to compliance and science. Together with a number of other outreach activities, the initiative also aim to address some of the widespread misunderstandings related to modern pelagic fisheries with large and efficient vessels. Unfortunately few people outside the fishing community fully understand the ecological and climate related benefits of modern fishing, and how the Danish pelagic sector is leading the green transition and has set the standard for quality, fuel efficiency, safety and selectivity in the sustainable fisheries targeting small pelagic species for both direct human consumption and for reduction to ingredients in feed and pharmaceuticals. Our aim is to change those misconceptions and provide consumers with exciting, climate friendly and healthy culinary experiences sourced responsibly from the surplus production of well managed oceans.

Enjoy reading,

Jens Schneider Rasmussen



Jens S. Rasmussen

A MODERN AND SUSTAINABLE FISHERY GENERATING VALUE FOR FISHERS AND SOCIETY.

FACTS REGARDING THE DANISH PELAGIC PRODUCERS ORGANISATION

- Pelagic fishing is the fishing of fish species that move in schools in the open waters throughout the North Atlantic and the Baltic Sea, using low impact gear with minimal environmental and climate impact.
- Since 1984, DPPO has been the main organisation for Danish fishing vessels that fish for pelagic species such as herring, mackerel and horse mackerel for the consumer market, as well as industrial fish such as sandeel, sprat, blue whiting, sprat and Norway pout for the production of fishmeal and oil.
- Our members include 11 Danish shipping companies that operate one of the most modern fleets for pelagic fishing in Europe, with home ports in Skagen, Hirtshals and Hanstholm.
- DPPO's member vessels account for nearly 50% of all Danish catches and approximately 1/3 of the revenue in the Danish fishing industry.
- We deliver fish to companies such as Scandic Pelagic, Sæby Fish Industry and fishmeal producers 999 and FF Skagen, all of which are significant businesses in coastal Denmark.
- The fishing sector, measured in terms of GDP, amounts to 13.6 billion DKK, and in terms of employment, it represents 16,100 full-time equivalents. In 2018 the sector generated a turnover of 33.9 billion DKK.

DPPO'S STRATEGIC MILESTONES

SUSTAINABLE FISH STOCKS

Fishing should not exceed what the stock can sustain, and there should be fewer fluctuations in quotas from year to year, allowing for planned and sustainable fishing practices.

Our goal for 2023 is to establish long-term management plans for the most important pelagic stocks and to ensure that DPPO's species are climate and sustainability certified.

SCIENTIFIC WORK

Collaboration between fishermen and researchers is essential so that the data and practical knowledge from the fishing industry can be used in both scientific advice and targeted efforts for stock assessments and management plans as part of the international marine research community.

Our goal for 2023 is to equip DPPO vessels with facilities that support data collection and scientific work onboard, and to allocate 25% of DPPO's budget towards scientific research and activities.

NATURE AND CLIMATE EFFECTS

We aim to have the lowest possible environmental and climate impact, which means carrying out fishing operations with a low impact and which keep unwanted bycatch to a minimum.

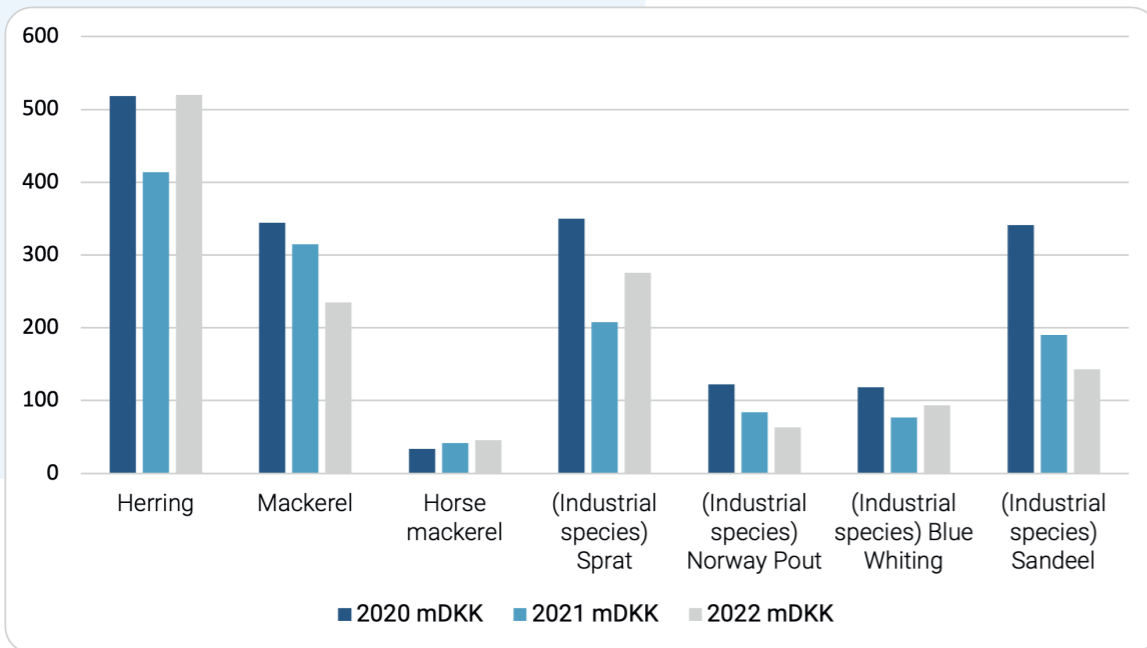
Our goal for 2023 is to fish without the bycatch of marine mammals, and for DPPO to take a leading role in the development and use of energy-efficient and low impact fishing gear

SIMPLE REGULATIONS

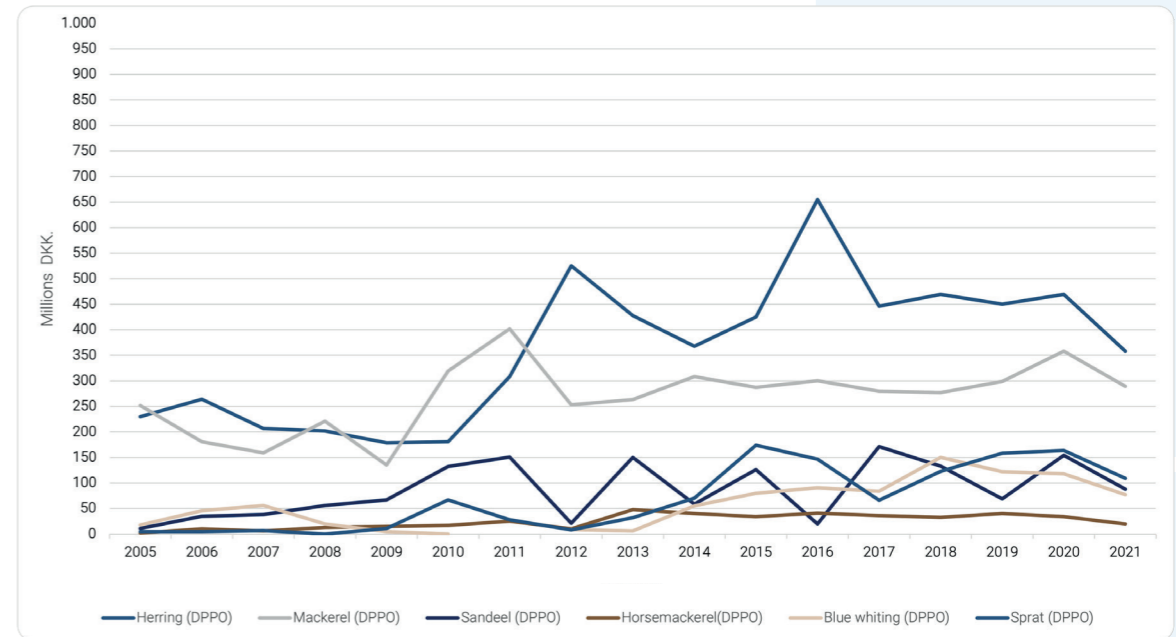
We strive for simple regulations, which means having a clear and logical set of rules with minimal administrative burdens on the fishing industry.

Our goal for 2023 is to establish targeted regulations for fishing with a minimum burden on individual fishermen and to ensure that DPPO maintains a strong and visible presence in the EU.

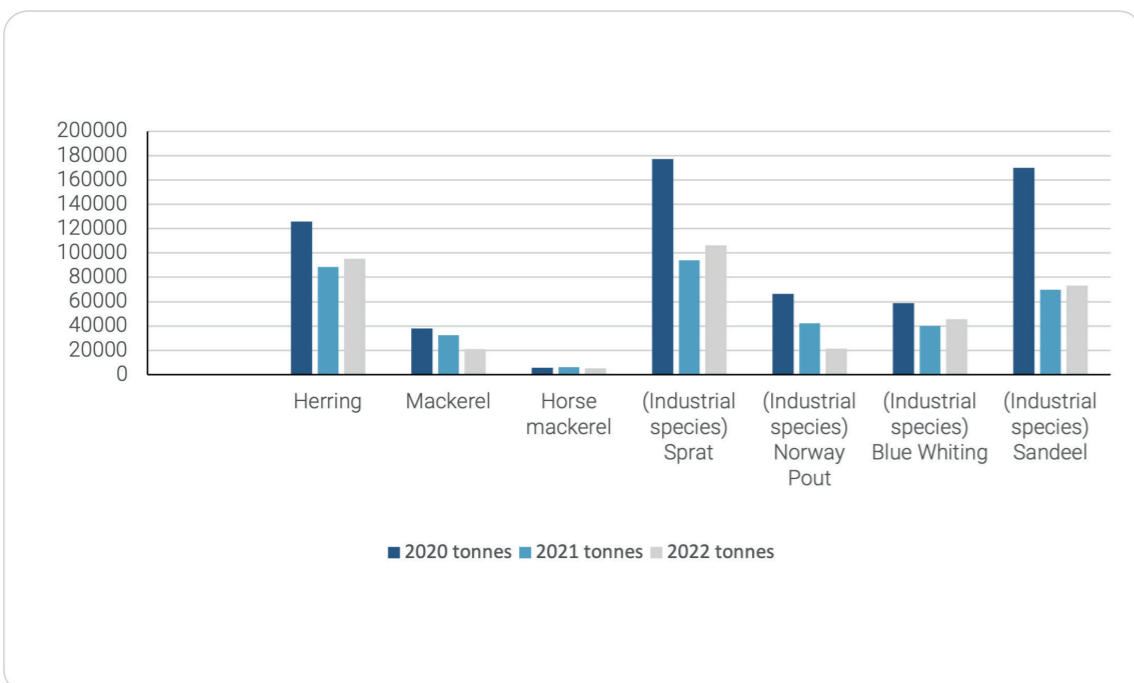
VALUE OF DANISH LANDINGS 2020-2022



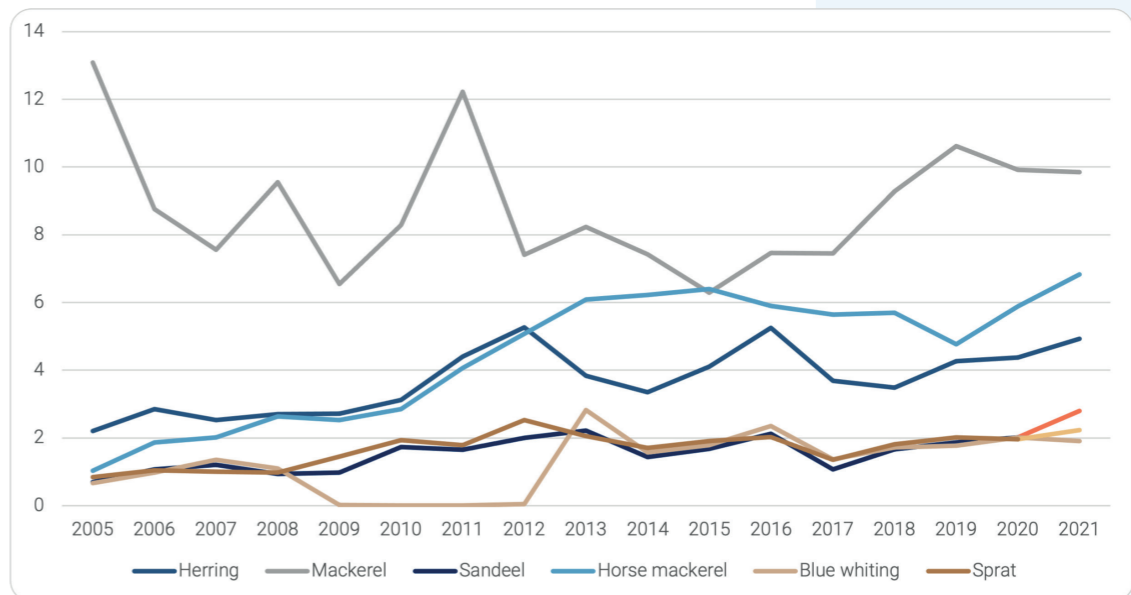
VALUE OF DPPO LANDINGS 2005 - 2021 (MILLION DKK)



QUANTITY OF DANISH LANDINGS 2020-2022



AVERAGE PRICE PER KILO



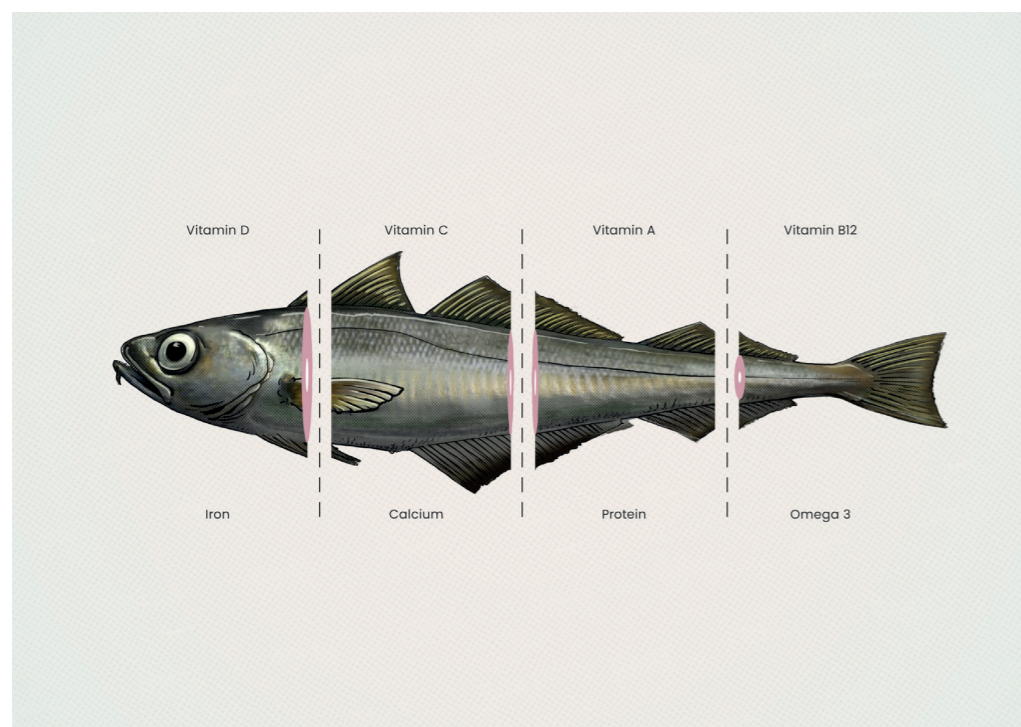
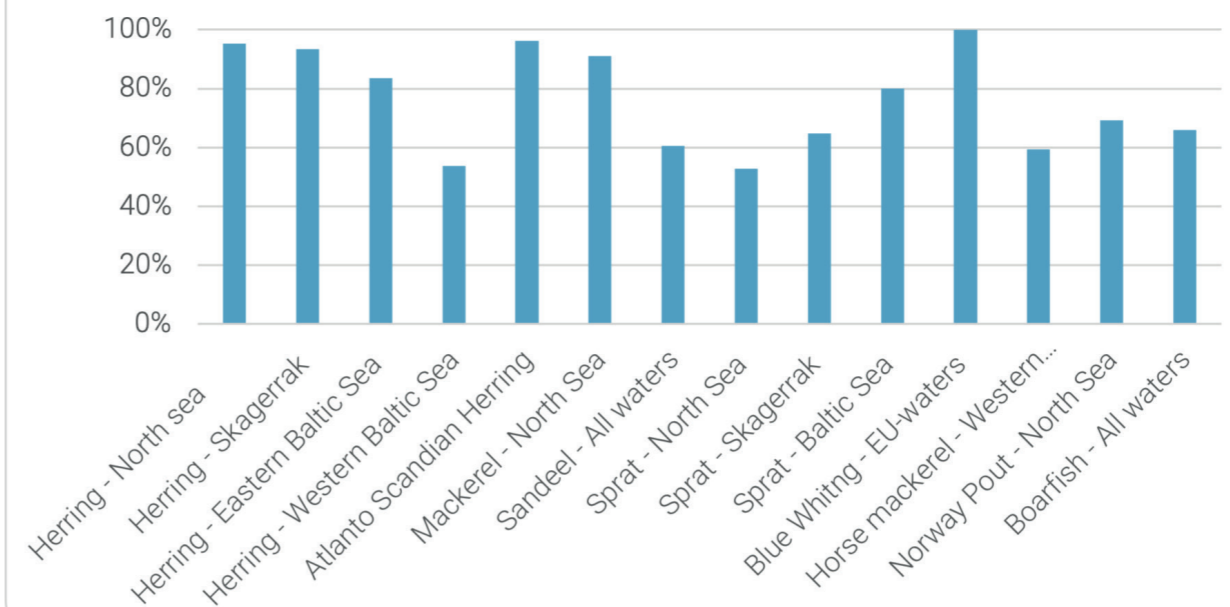
DANISH QUOTAS 2014-2023 (TONNES)

SPECIES	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Herring										
I, II (Atlanto scandian)	9.333	6.314	7.069	14.409	9.704	13.129	11.724	13.015	11.969	10.220
North Sea	80.026	74.079	91.628	82.745	111.299	59.468	59.468	49.993	62.975	55.491
- Bycatches	12.526	15.072	12.601	10.891	9.256	12.628	8.573	7.421	7.823	7.388
Skagerrak/Kattegat	19.357	18.034	21.178	21.131	20.255	12.325	10.309	9.080	10.516	9.771
- Bycatches	5.692	5.692	5.692	5.692	5.692	5.692	5.692	5.692	5.692	5.692
The Channel	1.153	1.049	1.359	1.201	1.708	800	800	668	909	782
Western Baltic Sea (22-24)	2.769	3.115	3.686	3.981	2.426	1.262	442	221	110	110
Eastern Baltic Sea (25-32)	2.480	3.596	3.905	4.205	5.045	3.748	3.374	2.146	1.180	1.558
Mackerel										
North Sea/Skagerrak/Kattegat	26.530	22.709	19.461	22.031	17.836	14.480	19.998	18.666	17.468	171.876
Norwegian waters north of 62°N	19.437	16.521	14.043	16.004	12.803	10.242	14.453	13.359	Afventer	Afventer
Sandeel										
North Sea/Skagerrak/Kattegat	195.471	336.964	82.273	458.552	195.875	106.387	215.863	95.295	83.123	181.637
Sprat										
North Sea	122.383	310.987	199.746	149.592	151.264	91.347	91.347	78.553	50.114	
Skagerrak	22.300	22.300	22.300	22.300	17.840	17.840	8.920	13.086	8.422	Afventer
Østersøen	23.672	21.068	19.958	25.745	25.875	26.710	20.730	21.993	24.852	
Blue Whiting										
North Sea, Western waters	28.325	30.106	31.704	58.818	61.277	48.813	49.845	45.680	36.723	62.968
Faroese waters		880	1.100	1.100	1.100	1.100	1.100		Ingen kvote	
Norway Pout										
North Sea	106.152	127.882	128.880	141.819	85.186	54.949	121.386	116.447	49.478	46.929
Horse Mackerel										
North Sea	13.397	8.320	10.629	8.140	9.861	11.662	6.821	5.249	3.216	3.080
Horse mackerel, Western waters		5.519	5.519	6.973	5.986	5.985	5.311	6.758	6.056	1.236
Total	691.003	1.030.207	682.731	1.055.329	750.288	498.567	656.156	503.322	380.626	558.738

EU QUOTAS, DANISH QUOTAS AND DANISH SHARES OF EU QUOTAS (2023)

STOCK	EU	DK	DK SHARE OF EU QUOTA
Herring - North sea	180661	62975	35%
Herring - Skagerrak	21684	10516	48%
Herring - Eastern Baltic Sea	53653	1180	2%
Herring - Western Baltic Sea	788	110	14%
Atlanto Scandian Herring	27278	11969	44%
Mackerel - North Sea	25562	17468	68%
Sandeel - All waters	86303	83123	96%
Sprat - North Sea (2022)	53976	50114	93%
Sprat - Skagerrak (2022)	11627	8422	72%
Sprat - Baltic Sea	251943	24852	10%
Blue Whiting (EU-waters)	192886	36723	19%
Horse mackerel - Western waters	55649	6056	11%
Norway Pout - North Sea	49524	49478	100%
Boarfish - All waters	21341	5592	26%

DPPO SHARES OF DANISH QUOTAS (2023)



VALUE OF DPPPO MEMBERS LANDINGS 2022



EU WATERS	277 MDKK.
UK WATERS	665 MDKK.
NORWEGIAN WATERS	79 MDKK
INTERNATIONAL WATERS	3 MDKK

EAT CLIMATE FRIENDLY, EAT HERRING!

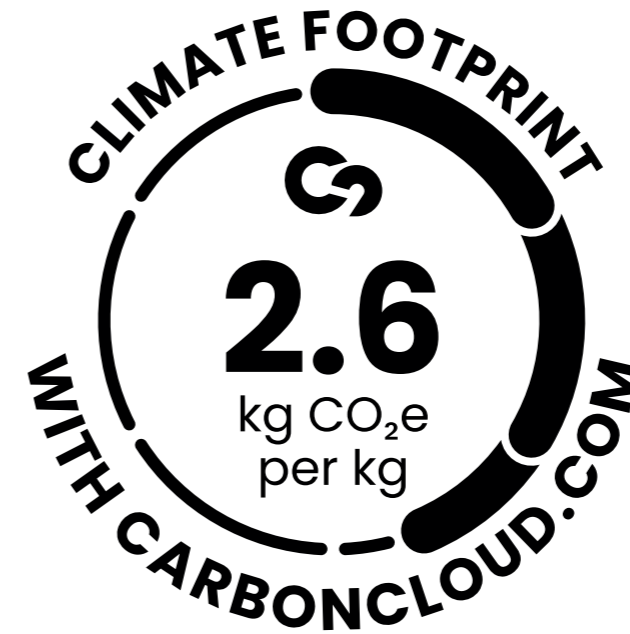
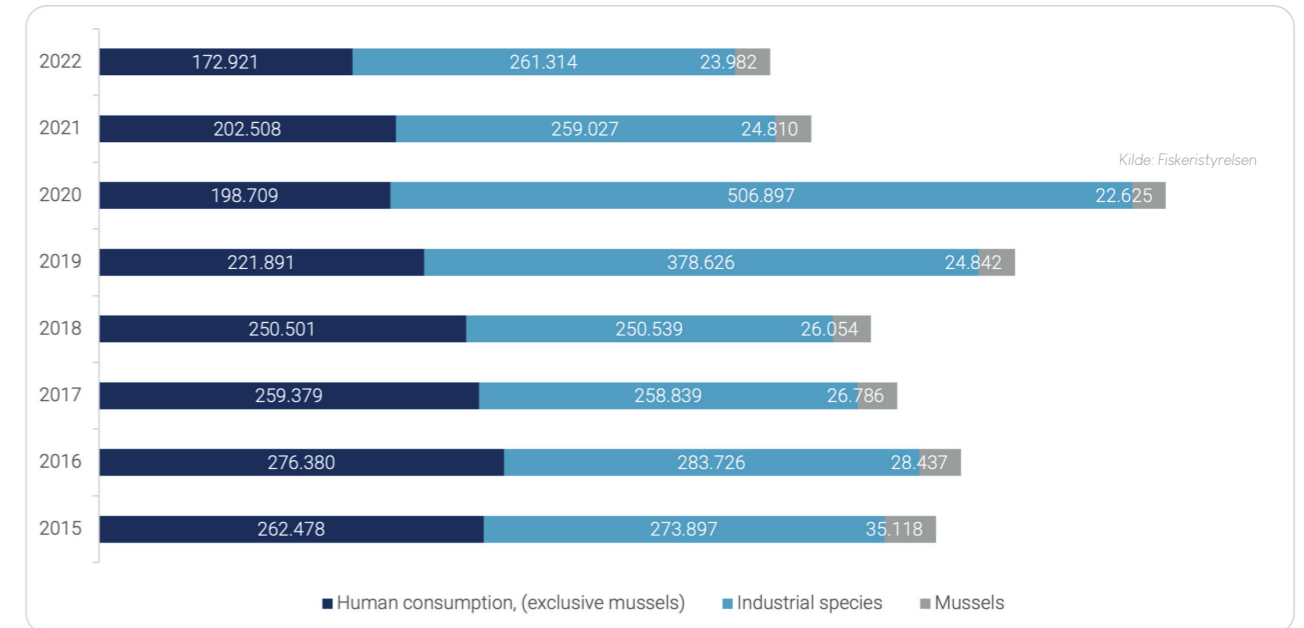
Herring is a healthy, sustainable, climate-friendly, affordable, and easy-to-use ingredient. Herring 52 is an online campaign created to inspire Europeans to include more herring in their meals. As an individual, you have an impact on the climate by emitting CO2. Your diet contributes significantly to your personal CO2 emissions, depending on what you eat (and the distance the food has to travel).

Fresh herring has one of the lowest carbon footprints per kilo. Herring is a natural resource that does not require water, feed or energy to be produced. It is simply harvested from its natural habitat and kept fresh or preserved. The fishing industry also uses the most modern, energy and resource efficient methods for catching and landing, so you can enjoy eating herring with a clear conscience.

"So, by including herring in your diet you not only benefit your health, you also support sustainable and environmentally-friendly food choices."



DANISH LANDINGS 2015 – 2022 (TONNES)



"Pickled herring" currently is verified by Carbon Cloud and has a climate footprint of 2.6 kg CO₂e/kg. This value is updated when there are changes in the way the product is made.

Scan the QR-code to see the updates of this product's climate footprint.

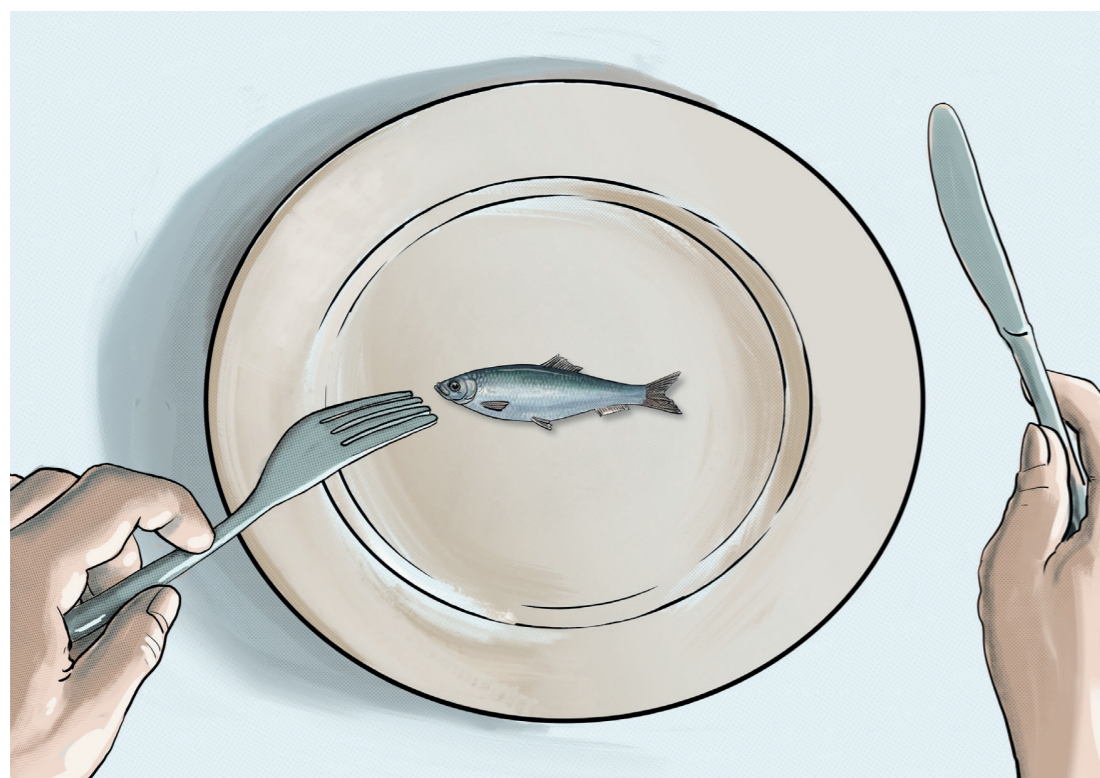


SMALL PELAGICS – AN OVERLOOKED SOURCE OF PROTEIN

Grasshoppers, mealworms and algae are all alternative sources of protein trying to make their way into the international food market. The question is: why look for alternative sources when we already have one that is not fully exploited?

Small pelagic fish are species such as sprat, sandeel, Norway pout, boarfish and capelin. They are not species we usually think of when preparing dinner, but if we think a little creatively, these fish can be used for much more than fish meal and fish oil. Fish, as we all know, is a healthy source of protein, and contains important minerals, vitamins and Omega-3 fatty acids.

In addition, fish, especially small pelagic species, is one of the most climate-friendly sources of protein we can sink our teeth into. Unlike the production of protein on land, fishing needs no fertilizers or expanses of fields. The climate footprint of the protein is thereby kept to a minimum. Small pelagic fishing accounts for a massive proportion of total pelagic fisheries. This year, about 73% of the total catch by DPPPO members consisted of small pelagic species. Through various processes, these fish are converted into fishmeal and fish oil, and used by feed manufacturers and breeders in aquaculture.



The Marine Ingredients Organisation (IFFO) estimates that 75% of the annual fish oil production goes to fish farming in aquaculture. Both fishmeal and fish oil are used in aquaculture to ensure good growth, good animal welfare and to ensure that the farmed fish are of the best quality when they land on our plate. Small pelagic fishing has thus long been an important player in our fisheries and food production. It will only become even more important as time goes by and the world's population increases. A population that needs protein every day in order to be nourished. The United Nations has estimated that the world's population is likely to reach 10 billion by the year 2050. This means that global food production will have to increase by approximately 70%. Global fish production is expected to increase from 179 million tonnes in 2018 to 204 million tonnes in 2030. This increase of 25 million tonnes must come from farmed fish in aquaculture.

Such a massive increase underlines yet again how important it is now, as well as in the future, to exploit the world's few nutrient-rich protein sources with a low climate footprint such as small pelagic fish: sprat, Norway pout and sandeel.

"The expected massive increase in world population underlines yet again how important it is now, as well as in the future, to exploit the world's few nutrient-rich protein sources with a low climate footprint such as small pelagic fish: sprat, Norway pout and sandeel."

Scan the QR-code to watch a short animated clip on Youtube, which will give you an insight into what industrial fishing actually is, and how it plays a role in all of our daily lives.



INTERNSHIP WITH DPPO

In 2022, DPPO hired Emil Bundgaard Holm as part time employee to help improving the coverage of the data self-sampling done by DPPO's member vessels. In 2023 Emil moved from a part time position to an internship contract as a part of his education at DTU Aqua fisheries Engineering. Below is his own description of what he has been involved with during his time at DPPO.



ON BOARD SAMPLING IN ALL PELAGIC FISHERIES

In my internship one of tasks had been to ask our members to take biological samples in all our fisheries. I have the contact, to the fishermen and they contact me, when they have delivered a sample off a given fish in the fishing factory. Then I'm contacting DTU Aqua, and tell them where the sample are placed, and then they pick it up, to analyze it. The samples have different weights, after what the target fish is, because off the size of the different fish they are targeting is not the same size. I made a schedule in cooperation with our members to make it easier for them to make the sample. Figure 1 shows is how many samples there were taken in 2022. DTU Aqua use the samples to estimate how old the fish our members are catching, to evaluate the different stocks.

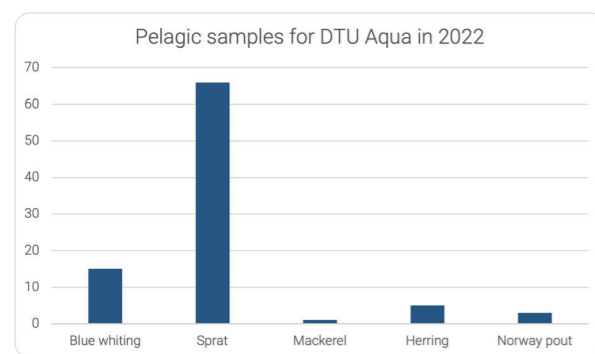


Fig. 1.

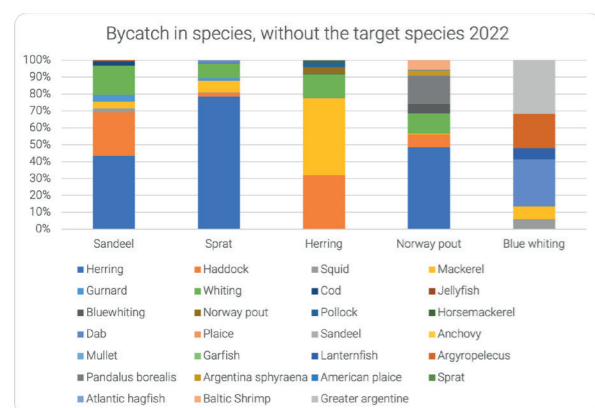


Fig. 3.

DANISH PELAGIC LANDINGS AND BYCATCH DATA FROM SKAW-INSPECTION

In cooperation with DTU Aqua, I have digitalized all samples from DPPO landings in 2022. The samples are taken by Skawinspektion, who is an independent third party there sample our members catch in the factories. There were no mackerel landings in Denmark in 2022, and that's the reason, that I don't have data for mackerel. In general, we do not see a huge problem with bycatch in our fisheries, because our target species, is living in schools, and they are "easy" to find and catch in the seine or pelagic trawl. It is only the Norway pout fishery where the bycatch is over 10%. Figure 2 and figure 3 shows the share with and without the target species. Figure 4 shows how the bycatch species shares.

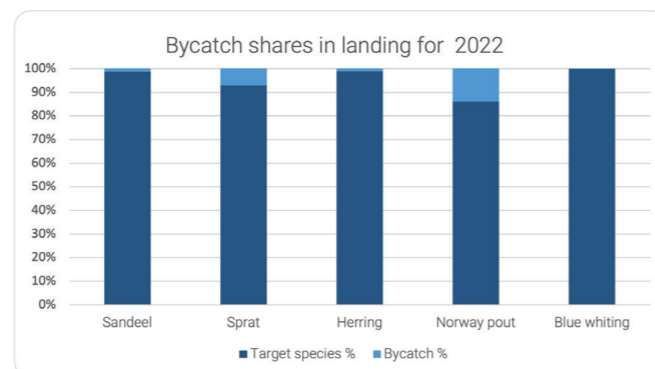
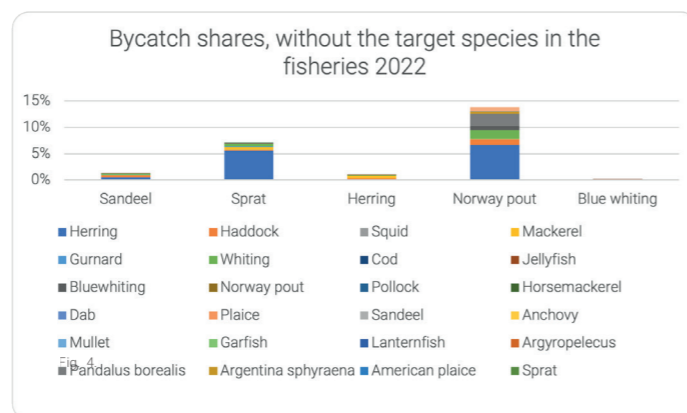


Fig. 2.



DPPO PHD-PROGRAM

THE ONGOING PROJECTS OF AXELLE CORDIER & PACO RODRIGUEZ

PACO RODRIGUEZ:

"Project title: Optimising important pelagic fish resources by using data from commercial vessels"

The ocean makes up 71% of the earth's surface, and 29% of the total animal biomass is fish. Fish is a sustainable and healthy protein source which plays a key role in food security. Small pelagic schooling fish also have significant potential for the green transition, as they are a CO2-friendly protein source. However, the challenge when mobilising fish in the green transition is to ensure sustainability and maintain low CO2 emissions in the catching process. Using direct fishing observations, this project will provide an insight into the spatial distribution of schooling fish, so stock assessments can be improved and fishing optimised. The project will establish a biomass time series for annual TAC/quota advice. Specifically, the project will also provide knowledge about the spatial distribution of fish, so fishing operations can be optimised and CO2 emissions can be reduced. The project also aims to help secure fish stocks at levels that can be fished in the most efficient way and minimise CO2 emissions."



AXELLE CORDIER:

"Project title: The impact of climate variability on fish population dynamics and reference points"

Climate change is affecting fish productivity (i.e., the change in biomass from one year to the next) in numerous ways including growth, natural mortality and recruitment. But there is a lack of mechanistic understanding between oceanographic conditions and recruitment when making biological reference points. This is a problem because we can expect increased climate-ocean variability in the Northeast Atlantic. The aim of this project is to investigate the impact of climate variability on some commercially important fish stocks and integrate it into the development of Management Strategy Evaluations (MSEs). We explored this by using different kinds of surplus production models.



DPPO LEADS THE WAY IN FULLY DOCUMENTED FISHERIES: ENSURING TRANSPARENCY AND SUSTAINABILITY

In the dynamic world of pelagic fisheries, the Danish Pelagic Producers Organisation (DPPO) stands out as a frontrunner. With its commitment to transparency, credibility and trust, DPPO has taken the lead in introducing a ground-breaking project in Europe: fully documented fisheries. Here we describe the project's key aspects, the setup on the vessels and current status, and highlights DPPO's recent partnership with Integrated Monitoring, which marks a significant milestone in the journey towards sustainable fishing practices.

Setting a new standard for transparency: DPPO's project aims to set a new standard for transparency in pelagic fishing. By embracing cutting-edge technology, including video and sensor monitoring, DPPO ensures comprehensive documentation of fishing activities on all vessels. This initiative not only builds trust among stakeholders, but also generates invaluable data for research, traceability and consumer awareness.

Advancing sustainability and industry collaboration: At the heart of DPPO's project is a commitment to sustainability and to promote a "License to operate" for pelagic fishing. The organisation acknowledges the importance of responsible fishing practices and recognizes that collaboration is essential. DPPO has taken the proactive step of sharing the data from sensors and cameras with Danish fisheries authorities, as well as other relevant public and private partners. This collaborative approach demonstrates DPPO's dedication to actively shaping new regulations and fostering a culture of continuous improvement within the industry.



Differentiating fisheries and climate footprint: DPPO's fully documented fisheries system offers a unique advantage, making it possible to differentiate various fishing practices based on their climate footprint. Recognising the growing significance of climate impact for consumers and financial institutions, DPPO's project will empower the organisation to provide consumers with verified information on the environmental impact of different fisheries. This not only ensures informed choices, but also opens new avenues for market differentiation and sustainable growth.

Enhancing scientific advice and research: With an emphasis on evidence-based decision-making, DPPO's project uses the power of technology in order to improve scientific advice and research. For example, by collecting acoustic data directly from the vessels, DPPO hopes to enhance the accuracy of stock assessments and monitoring efforts. This valuable information enables scientists and policymakers to make informed decisions on the sustainable management of fishery resources.

Partnership with Integrated Monitoring: DPPO has recently entered into a significant partnership with Integrated Monitoring, a leader in comprehensive monitoring solutions. This collaboration strengthens DPPO's capacity to implement and manage the fully documented fisheries project effectively. By making use of Integrated Monitoring's expertise and state-of-the-art technology, DPPO is strengthening its position as a frontrunner in the industry, while ensuring the highest standards of data collection, analysis and reporting.

Conclusion: DPPO's groundbreaking project on fully documented fisheries sets a new benchmark for transparency, credibility and sustainability in the pelagic fishing sector. By embracing innovative technologies, fostering collaboration and giving priority to scientific research, DPPO is spearheading the transformation towards responsible fishing practices. With its recent partnership with Integrated Monitoring, DPPO is well equipped to achieve its vision of a more transparent, accountable and sustainable fishing industry.

DANISH PELAGIC PRODUCER ORGANISATION STRENGTHENED IN THE EU

In September 2021 at its General Assembly, the European Association of Fish Producers Organisation (EAPO) elected Esben Sverdrup-Jensen, CEO of the Danish Pelagic Producer Organisation (DPPO), as its new President for a two-year term. The EU fishing industry faces difficult challenges in the coming years. So it is important for DPPO as well as the entire Danish fishing industry that the sector plays a prominent role in the EU. The Presidency of EAPO is also a platform that provides an opportunity to address Danish key issues in the EU

When elected President of EAPO, Esben Sverdrup-Jensen told the press that: Producer organisations are the link between the EU and national authorities, and those who catch the fish. The role and task of POs is to make EU legislation applicable and workable in the fishing grounds and to help develop and improve legislation for sustainable fisheries. EAPO will work closely with and build alliances with all those who support the objective of achieving a sustainable fishing industry in the EU: social, economic and environmental sustainability.

Producer organisations are the link between the EU- and national authorities, and those who catch the fish. The role and task of POs is to make EU legislation applicable and workable on the fishing grounds and to help develop and improve legislation for sustainable fisheries. The European Association of Fish Producers Organisations (EAPO) represents 28 POs from 9 EU Member States, with approximately 16,000 vessels, 3.5 million tonnes of landings and € 3 billion first-sales value. EAPO was founded in 1980.



Esben Sverdrup-Jensen

CEO at Danish Pelagic Producers Organisation (DPPO)
President at European Association of fish Producers Organisations (EAPO)

EAPO'S OBJECTIVES ARE THE FOLLOWING:

To assist its members in fulfilling their key role as a PO to achieve the objectives of the Common Fisheries Policy and the Common Market Organisation for Fishery and Aquaculture Products.

To advise its members on the management of their Production and Marketing Plans.

To improve the relationship between European POs by looking for common ground when addressing the challenges for the European fisheries, particularly in marketing and other specific tasks of the POs.

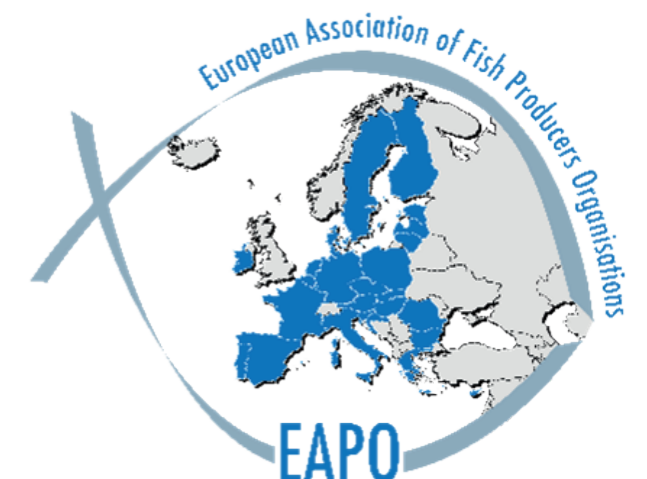
To address these issues with the relevant authorities in the Member States, the Council of Fisheries Ministers, the European Parliament, and the European Commission and to be acknowledged by these authorities as a European body representing the fisheries sector.

To influence rules and regulations targeting sustainable production which is socioeconomically viable and respects the environment.

10 YEARS OF CFP

Every Fish PO recognised by its EU Member State can apply for membership of the association. It is now ten years since the EU last amended the rules regulating fishing under the EU's Common Fisheries Policy. So, the Commission recently carried out an evaluation of the current rules - not only to ensure that the rules are fully implemented in the individual Member States, but also to see if there is a need to adjust the rules in different areas. However the Commission is not proposing a genuine reform of the Common Fisheries Policy. On many occasions, the EU Commissioner for Fisheries – Virginijus Sinkevicius – has made it clear that it will not make a proposal for reform, but will collaborate with authorities and stakeholders to find out what works well and what needs to be adjusted. The Commission presented its report on the implementation of the current rules earlier this year. What exactly will happen remains to be seen, but in its report the Commission states that there is room for improvement and produces several recommendations to both stakeholders and national authorities.

The European Parliament has launched a similar exercise. It is still too early to predict how the work on the Common Fisheries Policy will be carried out, but the Danish Pelagic Producer Organisation will follow it closely and actively, push for changes that can benefit the pelagic sector in Europe. The Danish Pelagic Producers Organisation is present in Brussels. Our joint representation in Brussels is on the job, following in particular the work of the European Parliament in order to highlight key Danish issues



SPRAT IN THE NORTH SEA, SKAGERRAK AND KATTEGAT

In the last decade, sprat has become one of the most important species for the DPPO fleet. Compared to earlier years, when the TAC fluctuated at around 150 000 tonnes per year, the TAC in 2022/2023 was at a record low.

The reasons for this are an uncertain stock size assessment and uncertainty in predicting the strength of the incoming year class. As a result, fishing opportunities are restricted out of precautionary considerations. In order to improve the scientific basis for the best possible TAC and quota advice, DPPO is considering starting up two independent scientific surveys. One survey will focus on an acoustic measurement of the stock size during the summer. The other will focus on estimating with greater certainty the incoming yearclass by means of a dedicated trawl survey in the Wadden Sea area, where juvenile sprat is most abundant.

Moreover, in a recent study, DPPO's PhD. student Paco Rodriguez-Tress has shown that it is possible to link fishing efforts and fleet movement to sprat stock size, with the potential to develop real-time monitoring management. These findings were presented for the first time at the Small Pelagic Fish Symposium in Lisbon in the autumn 2022.

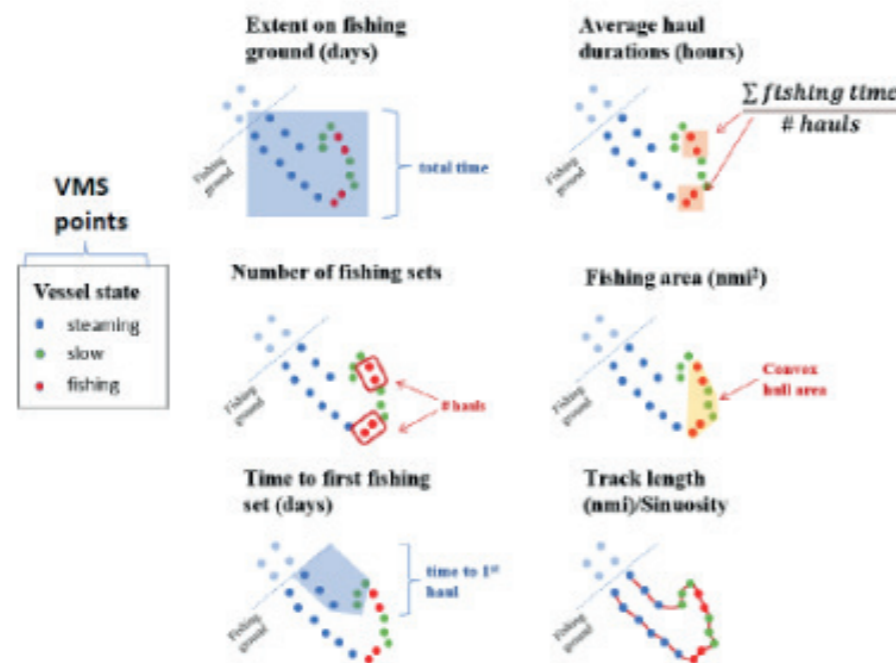
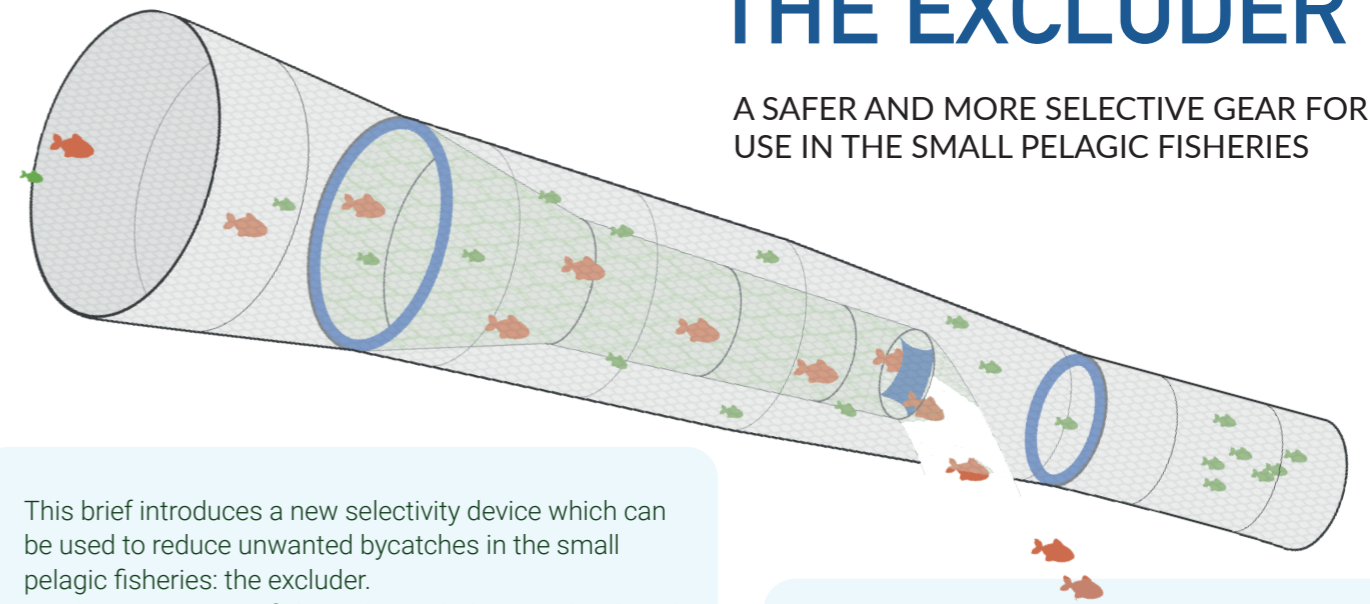


Figure 1. a schematic presentation of the methods used to estimate fishing behaviour of vessels taking part in the sprat fishery.

THE EXCLUDER

A SAFER AND MORE SELECTIVE GEAR FOR USE IN THE SMALL PELAGIC FISHERIES



This brief introduces a new selectivity device which can be used to reduce unwanted bycatches in the small pelagic fisheries: the excluder. For the Norway pout fishery, the excluder was developed to provide a more species-selective, and safer alternative to the heavy, rigid sorting grid. The excluder has been adopted into EU legislation but is not allowed in the UK EEZ where most of the fishery traditionally takes place. Therefore, there is an urgent need to change the current arrangements between the EU and the UK, allow the use of the excluder in UKs EEZ and thereby introduce a safer and much more selective Norway pout fishery.

There are evident benefits of the excluder:

- The effects of minimizing unwanted bycatches are well documented.
- It significantly improves crew safety because it is made of lighter, flexible material and therefore easy to handle.
- Experience gained so far indicates great potential in minimizing the risk of unwanted bycatches of marine mammals, elasmobranchs and other protected species.
- Effectively reduces fishing effort, impact on marine environment and CO2 emissions

In 2020¹, the excluder was evaluated by the Commission's Scientific, Technical and Economic Committee for Fisheries (STECF) as an alternative to the sorting grid. Based on the conclusions from the STECF the Commission in 2021 adopted a Commission Delegated Regulation allowing the use of the excluder in the Norway pout fishery, and as an exemption from the sorting grid.²

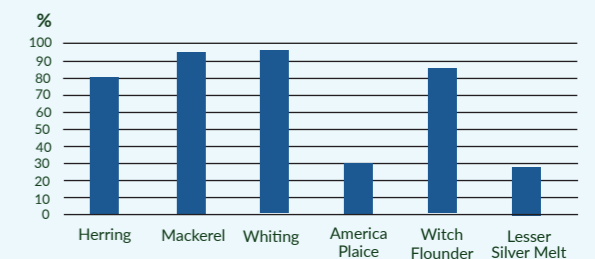
¹ Scientific, Technical and Economic Committee for Fisheries (STECF) – 65th Plenary Report (PLEN-20-03), Ulrich, C. and Doerner, H. editor(s), EUR 28359 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-27162-8 (online), doi:10.2760/148684 (online), JRC122989.
² <https://eur-lex.europa.eu/legal-content/en/txt/pdf/?uri=celex:32022R0199>

DESIGN

The Excluder consists of an outer-net and an inner-net selection tube. The inner tube has an outlet in a bottom panel, enabling escape of unwanted bycatches. To reach the codend, organisms must pass through the meshes of the inner selection tube. This design ensures maximum selectivity in the fishery and is much easier to handle on deck, compared to the heavy, rigid grid.

The excluder is currently being used on a voluntary basis in the sandeel, herring and sprat fisheries in the North Sea, Skagerrak, as well as the Baltic Sea. Several scientific projects have been started to further develop the excluder and to tailor it to the specific challenges faced in those fisheries. These include minimising the risk of accidental bycatches of marine mammals.

Reduction of bycatch when using the excluder compared to sorting grid in the Norway pout fishery³ (Eigaard et. al. 2021)



³ Eigaard OR, Herrmann B, Feekings JP, Krag LA, Sparvevohn CR (2021) A netting-based alternative to rigid sorting grids in the small meshed Norway pout (*Trisopterus esmarkii*) trawl fishery. *PLoS ONE* 16(1): e0246076. <https://doi.org/10.1371/journal.pone.0246076>

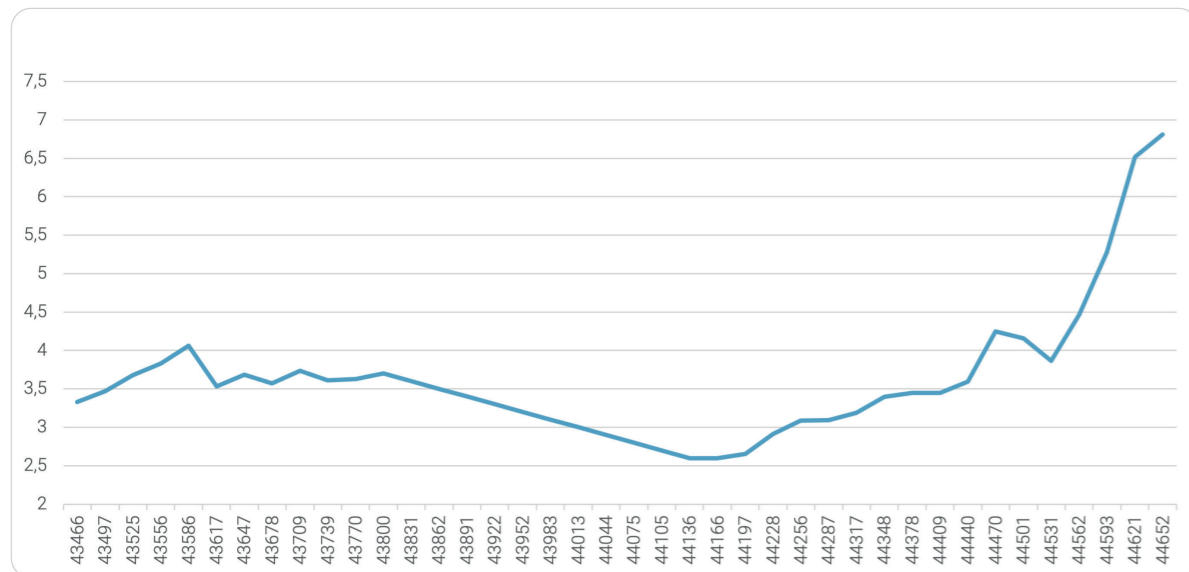
DEVELOPMENT IN FUEL PRICES 2012 - 2022

(DKK PER LITER)

The price of fuel is one of the most important indicators to show how the world economy is developing. In 2012, the world saw rising fuel prices, which rose to the highest level since 1993. This price increase was due to the recovery of the world economy after the period of global recession because of the financial crisis in 2008.

Since then, the price has remained relatively stable, but with a significant drop in 2020 and 2021, which was due to the fact that COVID-19 had put the world economy into reverse gear – which was also felt on the fishing industry.

The fact that the price has risen again to historically high levels in 2022 was partly due to the recovery of the world economy from the pandemic and partly to uncertainty in the markets due to the war in Ukraine.



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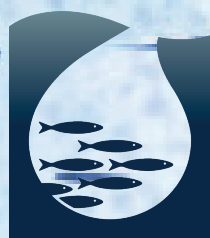
Why are small pelagic fish so important for global food production? (Video content)



An inspiring culinary universe based around the North Sea herring. (www.sill52.se)



New white paper: Seafood - Denmark is a leading hub for sustainable production and innovation (FOOD Nation website)



DPPO

Danish Pelagic
Producers Organisation