Too many vessels chase too few fish

Briefing & Polish case study
On 1 January 2019 it is five years ago the European Common Fisheries Policy (CFP) was reformed and new measures introduced to help eliminate a persistent issue of overfishing and depletion of European fish stocks. Article 22 of the CFP’s Basic Regulation establishes mechanisms by which Member States are to seek to identify overcapacity and continually to adjust the size and nature of their fishing fleets to their fishing opportunities. In other words: If there are too many vessels fishing for too few fish, it is an obligation for EU Member states to identify this and “put in place measures to adjust the fishing capacity”.

Reporting under Article 22 should provide national authorities of Member States, and indirectly the European Commission and Parliament, as well as other interested stakeholders, with the information they need to identify and act on fleet overcapacity and help realise one of the main goals of the CFP. But is this currently happening?

Undermining a key pillar of the Common Fisheries Policy

The new FishSec study, “Too many vessels chase too few fish - is EU fishing capacity really being reduced?”, takes a closer look at article 22 of the CFP, recent annual capacity balance reports submitted by EU Member States with Baltic Sea coasts, and the reporting guidelines for national reporting by the European Commission.

Every year, EU Member States are to submit reports to the Commission on the balance between how much their fishing fleets are able to catch compared to the amount of fish they are allowed to catch (capacity balance reports). The more technical description would be that EU Member States need to evaluate the capacity of their fleets and their fishing opportunities based on guidelines developed by the Commission. If an overcapacity is identified by a Member State in its report, the Member State is to prepare and submit an action plan to the Commission to achieve balance.

Capacity balance reporting relating to the Western Baltic cod fishery, a fishery showing clear symptoms of overcapacity and overfishing, is used as a running case study in the FishSec report. National reports which do not identify and address this overcapacity clearly do not fulfill the intentions of the CFP.

The conclusions are alarming. EU Member States as well as the European Commission fail to comply with article 22, thereby undermining a key pillar of the European Common Fisheries Policy - the adaption of the size of the fleet to the amount of fish that can be caught sustainably.

Decision-makers and stakeholders do not currently receive adequate information from Member States and the Commission about fishing overcapacity. As a consequence, the CFP’s system designed to reduce overcapacity is not delivering the intended reductions where it is needed.

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Today, there is no way for decision makers to get the full picture when reading just one national fleet balance report. For this you need to dig through all national reports, make your own calculations and analysis and finally put together all these pieces of the puzzle. Only then is it possible to get a better overview of the fishing capacity targeting Western Baltic Cod, and identify possible overcapacity. Our analysis show, that across the four national fleets catching Western Baltic Cod (Denmark, Poland, Germany and Sweden) 399 bottom trawlers and seiners longer than 12 meters are part of fleet segments with vessel utilisation indicating overcapacity.

**Failure to identify and reduce overcapacity in relation to specific fish stocks on a regional basis is a threat to the sustainability in the Western Baltic cod fishery**, both biologically and economically. Instead of reducing the fishing capacity some member states continue to request quotas higher than scientific advice, which undermines the recovery of the stock and long term profitability. An accurate regional assessment would clarify the need to reduce capacity to achieve a better balance.

**Overcapacity still a threat to fleet profitability – and it may be growing**

From a regional perspective, neither of the two national reports\(^3\) analysed most closely in this study - the Danish and the German ones - reflect the actual extent of overcapacity in the western Baltic cod fishery. Fleet segments\(^4\) are identified and grouped together in such a way that an overcapacity is identified for small vessels, but not for larger vessels - even if the latter fish more from the same depleted stock.\(^5\) Also, it is not possible to obtain a good regional overview either from the national reports of any of the Member States in the Baltic Sea region or from the reviewed capacity reports produced by The European Commission’s Scientific, Technical and Economic Committee for Fisheries, STECF. Thus, reporting does not currently provide fisheries managers and stakeholders at the regional level with the information needed to reduce regional overcapacity and to pressure decision-makrs to prevent overfishing.

In the context of identifying overcapacity, it is relevant to notice, that it is still common for Member States, like for instance Denmark, and some stakeholders to argue for the right to catch more fish for so-called socio-economic reasons.\(^6\) However, for a Member State to plead socio-economic reasons for higher fishing quotas could indicate that it has an overcapacity in its fleet. Claims regarding socio-economic impacts should trigger the Commission (and where relevant, the Member State) to take a closer look at the capacity balance of fleet segments potentially fishing the relevant stock. This has not been done, even though it is clear that overcapacity still is a concrete threat to fleet profitability.

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\(^3\) Those produced in 2016 and 2015 respectively by Denmark and Germany, who together dominate the western Baltic cod fishery. Links to these and the other national reports reviewed may be found in the References section at the end of this study. 

\(^4\) A fleet segment is a subdivision of a country’s overall fishing fleet. A segment is normally defined as a combination of a particular fishing technique category and a vessel length category. See for example [https://datacollection.jrc.ec.europa.eu/wordef/fleet-segment](https://datacollection.jrc.ec.europa.eu/wordef/fleet-segment)

\(^5\) A stock is defined in the Basic Regulation as “a marine biological resource that occurs in a given management area” (Art. 4(14)), that is, the population of a particular species of fish in a particular area. ICES defines a fish stock thus: “A part of a fish population usually with a particular migration pattern, specific spawning grounds, and subject to a distinct fishery. In theory, a Unit Stock comprises all the individuals of fish in an area, which are part of the same reproductive process. It is self-contained, with no emigration or immigration of individuals from or to the stock. On practical grounds, a fraction of the unit stock is considered a ‘stock’ for management purposes (or a management unit), as long as the results of the assessments and management remain close enough to what they would be on the unit stock.” ICES. Acronyms and terminology, [http://www.ices.dk/community/Documents/Advice/Acronyms_and_terminology.pdf](http://www.ices.dk/community/Documents/Advice/Acronyms_and_terminology.pdf)

Apart from EU Member States, the Commission itself also fails to comply with key provisions of Article 22 in a number of ways. For example, its Guidelines do not indicate relevant enough parameters and indicators for national capacity balance reporting. Moreover, there is overall poor compliance with the Basic Regulation and the Commission’s Guidelines among EU Member States in the Baltic Sea region.

STECF has repeatedly criticised the Commission’s Guidelines and proposed improvements. However, STECF’s criticisms and recommendations have not been reflected in the Commission’s reports to the European Parliament and Council, and the Commission have taken no visible follow-up actions in response to STECF’s findings. Furthermore, there is a serious weakness in the CFP’s indicators for measuring fishing capacity. They do not take account of ‘technological creep’, the immense increase in fishing capacity resulting from any technical innovation such as sonar, underwater cameras, improved more efficient fishing gear, better propellers, etc, etc. As a result a Member State’s ability to catch fish may increase despite indicators showing a decrease.

The Polish example: Biggest cod fishery still not accounted for

Poland’s 2015 capacity balance report complies with the requirements of the European Commission’s Guidelines on most parameters, but it fails to describe the country’s fishing fleet in relation to the fish stocks targeted in a comprehensive way. Also, clear information is provided on catches of western Baltic cod (in weight) per segment, although the Polish catch of this stock is relatively small, while corresponding information on the eastern Baltic cod stock, which is much more important to the Polish fleet, is lacking.

The table below collects and summarises the findings for segments that fished western Baltic cod in 2015 (for more explanation of the different indicators, please see the glossary):

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The segment with the largest share of the Polish catch of Western Baltic cod (demersal trawlers or seiners with a vessel length of 12-18 metres, VL1218 DTS) is described as relying “(...) on overfished stocks that are exploited at a level higher than FMSY, with the sustainable harvest indicator exceeding 1 in the period of 2013–2015.”

Two segments (vessels between 10-12 meters in length and using passive gear only, VL1012 PG, and vessels 12-18 metres long using drift and/or fixed nets respectively, VL1218 DFN) are assessed as showing clear imbalance between fishing capacity and fishing opportunities, while two segments (VL1218 DTS and VL1824 DTS, that is, demersal trawlers or seiners 12-24 metres long) are assessed as slightly out of balance. However, the supporting analysis in some cases appears to downplay the seriousness of the red indicator values recorded for the segment. For example, the conclusion for the segment catching the largest share of western Baltic cod is that the fishing capacity of demersal trawlers or seiners between 12-18 metres in length (VL1218 DTS) is only slightly imbalanced in relation to available fishing opportunities (with an outlook for improvement) and the segment’s financial performance is indicative of its good economic situation.

Poland included an action plan in its capacity balance report for 2014 and included the same plan in its report for 2015. The Polish action plan provides adjustment targets, tools and a set time frame. As such it fulfils the requirements of Article 22. However, the 2015 report does not include a follow-up on what action has been taken.

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**Indicator values, catches and assessments for segments of the Polish fleet with catches of western Baltic cod in 2015**

<table>
<thead>
<tr>
<th>Length</th>
<th>Gear code</th>
<th>ROI current</th>
<th>SHI 3 years</th>
<th>SAR</th>
<th>Utilisation</th>
<th>Catch of western Baltic cod, tonnes</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>VL0010</td>
<td>PG</td>
<td>0.02</td>
<td>1.32</td>
<td>0.62, 0.75, 0.85</td>
<td>0</td>
<td>0.40</td>
<td>30</td>
</tr>
<tr>
<td>VL1012</td>
<td>PG</td>
<td>-0.11</td>
<td>-0.09</td>
<td>1.48, 1.28, 1.28</td>
<td>1</td>
<td>0.42</td>
<td>208</td>
</tr>
<tr>
<td>VL1012</td>
<td>DFN</td>
<td>-0.04</td>
<td>0.53</td>
<td>1.69, 1.55, 2.97</td>
<td>1</td>
<td>0.49</td>
<td>81</td>
</tr>
<tr>
<td>VL1218</td>
<td>DTS</td>
<td>0.00</td>
<td>0.96</td>
<td>1.30, 1.51, 1.13</td>
<td>1</td>
<td>0.58</td>
<td>321</td>
</tr>
<tr>
<td>VL1824</td>
<td>DTS</td>
<td>-0.04</td>
<td>0.57</td>
<td>1.35, 1.41, 1.01</td>
<td>1</td>
<td>0.54</td>
<td>89</td>
</tr>
<tr>
<td>VL2440</td>
<td>TM</td>
<td>0.01</td>
<td>1.14</td>
<td>1.25, 1.30, 0.96</td>
<td>0</td>
<td>0.66</td>
<td>15</td>
</tr>
</tbody>
</table>

**Indicators:**
- ROI: Return on Investment Indicator
- SHI: Sustainable Harvest Indicator
- SAR: Stocks at Risk Indicator
- VL: indicates vessel length range in metres.

**Gear codes:**
- PG: Vessels using passive gears only
- DFN: Drift and/or fixed netters
- DTS: Demersal trawlers and/or demersal seiners
- TM: Pelagic trawlers

Utilisation in this table is based on kW days; the Guidelines allow the Member State to choose to base utilisation on kW days or GT days. The Polish report provides data on both.

Source: Polish national report for 2015, pp. 2, 8, 9, 11, 12. More detailed information on the indicators may be found in Annex III of the present report.

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9. Polish report, p. 26
since the action plan first appeared in the 2014 report. Specifically, no information is provided on numbers of vessels that have been scrapped or temporarily suspended from fishing.

A prime driver behind overfishing and depletion of fish stocks

Excessive fishing capacity has long been recognised by the UN Food and Agriculture Organization (FAO) as the primary cause to overfishing and depletion of fish stocks\textsuperscript{10}, and globally the issue has been addressed at a number of occasions. At the World Summit on Sustainable Development in Johannesburg in 2002, governments from all around the world, including the EU Member States, agreed urgently to address the issue of managing fleet capacity. \textsuperscript{11} They made a commitment to;

\textit{maintain or restore stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis and where possible not later than 2015.}\textsuperscript{12}

Also, In the run-up to the 2013 reform of the European Common Fisheries Policy (CFP), a 2009 European Commission Green Paper summed up the problem for European Union (EU) fisheries as being that “too many vessels chase too few fish.”\textsuperscript{13} The Green Paper stated, this was the fundamental problem to be solved by the CFP,\textsuperscript{14} and accordingly a number of provisions that seek to address overcapacity were introduced with the CFP reform in 2013. One of the primary provisions was article 22.

However, up until the time of the 2013 reform of the CFP, the EU Member States’ progress towards the goal of maintaining or restoring stocks to MSY levels (maximum sustainable yield) was insufficient.\textsuperscript{15} Accordingly, the reform stipulating that by 2020 at the latest (and where possible by 2015) fishing pressure is to be set at FMSY (the level of catches of a given stock that produces the MSY).\textsuperscript{16} This deadline is fast approaching with less than 2 years left to end overfishing, and overcapacity as the main driver still not sufficiently addressed.

\textsuperscript{10} FAO Fisheries technical paper 445, 2003, Measuring capacity in fisheries, \url{http://www.fao.org/3/a-y4849e.pdf}
\textsuperscript{11} Plan of Implementation of the World Summit on Sustainable Development, Article 31(d), \url{http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_Planimpl.pdf}
\textsuperscript{12} United Nations: Plan of Implementation of the World Summit on Sustainable Development \url{http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_Planimpl.pdf} Article 31(a), and FAO, World Summit on Sustainable Development 2002 and its implications for fisheries \url{http://www.fao.org/docrep/meeting/005/v8294e.htm}
\textsuperscript{13} EU Commission: Questions and Answers on Maximum Sustainable Yield (MSY) \url{http://europa.eu/rapid/press-release_MEMO-06-268_en.htm}
\textsuperscript{16} European Parliament, Fact Sheets on the European Union, The Common Fisheries Policy: origins and development \url{http://www.europarl.europa.eu/atyourservice/en/displayFtu.html?FtuId=FTU_5.3.1.html} \textit{“F”} refers to fishing pressure. A more technical definition of F in this context is: \textit{F, Fishing mortality: Instantaneous Rate of Fishing Mortality. When fishing and natural mortality act concurrently, F is equal to the instantaneous total mortality rate (Z), multiplied by the ratio of fishing deaths to all deaths.”} ICES, Acronyms and terminology, \url{http://www.ices.dk/community/Documents/Advice/Acronyms_and_terminology.pdf}
Main recommendations

- Member States more actively seek to identify and address imbalances in their fleets;
- The European Commission revises its Guidelines to ensure that national reports reflect the total pressure on a fish stock;
- Member States and the European Commission act to ensure that a regional report is prepared showing the total capacity from all countries targeting a specific fish stock.

Glossary: Descriptions of the indicators

Biological indicators

The Sustainable Harvest Indicator (SHI)

The sustainable harvest indicator is a measure of how much a fleet segment relies on stocks that are overfished. Here, “overfished” is assessed with reference to $F_{\text{msy}}$ values over time, and reliance is calculated in economic terms. Where $F_{\text{msy}}$ is defined as a range, exceeding the upper end of the range is interpreted as “overfishing”.

Threshold: 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. This could be an indication of imbalance if it has occurred for three consecutive years. Shorter time period should be considered in the case of small pelagic species.

The Stocks at Risk Indicator (SAR)

The stocks-at-risk indicator is a measure of how many stocks are being affected by the activities of the fleet segment that are biologically vulnerable – in other words, stocks which are at low levels and are at risk of not being able to replenish themselves …

Threshold: if a fleet segment takes more than 10% of its catches taken from a stock which is at risk, this could be treated as an indication of imbalance.18

Economic indicators

The Return on Investment Indicator (RoI)

The first indicator (Return on Investment) compares the long-term profitability of the fishing fleet segment to other available investments. If this value is smaller than the low-risk long term interest rates available elsewhere, then this suggests that the fleet segment may be overcapitalised.

Threshold: If the return on investment (RoI) is less than zero and less than the best available long-term risk-free interest rate, this is an indication of long-term economic inefficiency that could indicate the existence of an imbalance.

The Current Revenue/Break-Even Revenue Indicator (CR/BER)

The second indicator is the ratio between current revenue and break-even revenue. This measures the economic capability of the fleet segment to keep fishing on a day-by-day basis: does income cover the pay for the crew and the fuel and running costs for the vessel? If not, there may be an imbalance.

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18 It is not clear from the Guidelines whether the share of catches is to be calculated in terms of value or of landed weight.
Threshold: If the ratio between current revenue and break-even revenue is less than one, this is an indication of short-term economic inefficiency that could indicate the existence of an imbalance.

**Technical/vessel use indicators**

Inactive Fleet Indicator/ Vessel Utilization Indicator

The first indicator describes the proportion of vessels that are not actually active at all (i.e. that did not fish at any time in the year).

The second indicator concerns the average activity levels of vessels that did fish least once in the year, taking account of the seasonality of the fishery and other restrictions. Under normal conditions, it can be expected that 10% or less of the vessels in a fleet segment should be inactive, which could be due to major repairs, refits, conversions or pending sales and transfers.

Threshold: if more than 20% of the fleet segment is recurrently inactive or if the average activity level of vessels in a fleet segment is recurrently less than 70% of the potential, workable activity of comparable vessels, this could indicate technical inefficiency, that may reveal the existence of an imbalance, unless it can be explained by other reasons, such as unexpected climatic or man-made events or emergency measures as foreseen in the CFP.
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