

FISHERY ASSESSMENT REPORT

IFFO GLOBAL STANDARD FOR RESPONSIBLE SUPPLY OF FISHMEAL AND FISH OIL



R1

FISHERY:	Herring (<i>Clupea harengus</i>)
LOCATION:	Subdivision 25-29 and 32, Central Baltic Sea, including: Denmark, Sweden, Latvia (and excluding the Gulf of Riga)
DATE OF REPORT:	January 2019
ASSESSOR:	Jim Daly

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1. APPLICATION DETAILS AND SUMMARY OF THE ASSESSMENT OUTCOME			
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Certification Body Details			
Name of Certification Body:		SAI Global Ltd.	
Assessor Name	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-certification
Jim Daly	Vito Romito	5	Surveillance Year 2
Assessment Period	2018		
Scope Details			
1. Scope of Assessment		IFFO Global Standard for Responsible Supply – v 1.6	
2. Fishery		Herring (<i>Clupea harengus</i>)	
3. Fishery Location		Subdivision 25-29 and 32, Central Baltic Sea, excluding Gulf of Riga, Baltic countries: Denmark, Sweden and Latvia	
4. Fishery Method		Pelagic gears	
Outcome of Assessment			
5. Overall Fishery Compliance Rating		High	
6. Sub Components of Low Compliance		None	
7. Information deficiency		Effects of fishery on ETP species	
8. Peer Review Evaluation		Approve	
9. Recommendation		Approve	

2. QUALITY OF INFORMATION	
High	
3. COMPLIANCE LEVEL ACHIEVED	
High	
Recommendation	
Approve	
4. GUIDANCE FOR ONSITE ASSESSMENT	
Based on HIGH compliance findings	
Based on MEDIUM compliance findings	
Based on LOW compliance findings	
5. ASSESSMENT DETERMINATION	
<p>Demersal fisheries are concentrated in the south and west of the Baltic Sea, while pelagic fisheries are more widespread (Figure 1). Basin-wide, commercial fishing effort has declined in recent years. Multispecies analysis indicates that there is a trade-off between fishing on cod, or on herring and sprat in the central Baltic Sea (Figure 5). Discards for pelagic species in the Baltic Sea are very low, as both sprat and herring are target species and other bycatch (e.g. sticklebacks) are also landed in accordance with the EU landing obligation. Under this obligation up to 9% interspecies quota transfers are allowed for stocks considered to be within safe biological limits. Quota transfers were not considered in this catch advice. To achieve FMSY exploitation, any transfer under this regulation should be accounted for in setting the TAC's (ICES 2018).</p> <p>The EU component of the Central Baltic Sea herring fishery is managed within the Common Fishery Policy (CFP) framework and as such is subject to research, control and enforcement typical of European fisheries. Scientific understanding of the stock appears to be good, and ICES has made annual management and quota recommendations for nearly 30 years. A management plan has been agreed and implemented, meaning there are now explicit management objectives and evidence of an ecosystem approach to fishery management.</p> <p>The TAC value proposed for the central Baltic area (ICES, 2018) is based on advised catch for the central Baltic herring stock, plus the assumed catch of the Gulf of Riga herring taken in the central Baltic, minus the assumed catch of herring from the central Baltic stock taken in the Gulf of Riga (Figure 1). The values of the two latter figures are given by the average over the last five years.</p> <p>Although the EU component of the fishery is managed largely in line with ICES advice (and therefore implicitly follows the MSY and precautionary approaches), there is ostensibly an agreement in place that the Russian quota is 10% of the TAC. The combined TAC almost always totals more than the ICES advice. Reported landings (EU fleets) were well below the TAC from 1992-2002 but since then have been close to the TAC, which was fully taken in 2010 (Figure 4).</p> <p>Preliminary investigations indicate that western Baltic spring-spawning herring and central Baltic herring are mixing in Subdivisions 24–26. In their 2018 assessment ICES concludes that the level of mixing is still unknown and its potential impact on the assessment should be investigated. In their report (2018) WGBFAS state that according to national data submitters the mixing of pelagic species (herring and sprat) is corrected before</p>	

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submitting input landings data. It is recommended that this issue is also explored further.

Some additional information on the impacts of the fishery on the Baltic ecosystem and ETP species has been provided in this report. Evidence of an ecosystem approach to fishery management is noted, however further information on the impact of the fishery on ETP species is still lacking. For this reason a medium compliance rating is still retained for clause D3 from the 2017 assessment.

The Working Group on Bycatch of Protected Species (WGBYC) met in Iceland (May 2018). Highlights from the 2018 meeting included a review of ongoing bycatch mitigation re-search projects, bycatch risk assessments for harbour porpoise and common dolphin and a review of the compiled inventory of various sampling programmes providing information on bycatch of protected species.

Highlights from the 2018 meeting include reviews of on-going bycatch mitigation research projects (bycatch risk assessments (BRAs) for harbour porpoise and common dolphin (Celtic Seas and Bay of Biscay and Iberian Coast Ecoregions); a review of various sampling programmes that provide information on bycatch of protected species at the national level; a comparison of fishing effort from different sources and a review and application of the fishPi method to inform relative risk of bycatch of protected species in different gears.

Discussions on training for on-board observers were also recommended. WGBYC continues to incorporate monitoring, effort and bycatch data from non-EU states/countries that have fishing fleets in the North Atlantic and adjoining seas. This will facilitate more robust bycatch estimates for the many wide-ranging species that fall under WGBYCs remit.

Results from all research projects undertaken in the assessment area and reported to WGBYC will be included in future assessments of the fishery under the IFFO-RS v 2.0 standard (fisheries assessments).

Herring (*Clupea harengus*) has not yet been assessed for the IUCN Red List and is not on the current list of CITES endangered species (websites accessed 04.01.19).

Herring (*Clupea harengus*) harvested from the assessment area is approved by the assessment team for the production of fishmeal and fish oil (whole fish) under the IFFO-RS v 1.6 Standard.

HIGH Compliance

A1, A2,A3, B1,B2, C1, D1, D2, E1, E2

MEDIUM Compliance

D3

LOW Compliance

SUMMARY OF LEVEL OF COMPLIANCE					
	The Management Framework and Procedures	Stock assessment procedures and management advice	Precautionary approach	Management measures	Implementation
legal and administrative basis	A1				
Fisheries management should be concerned with the whole stock unit	A2				
Management actions should be scientifically based	A3				
Research in support of fisheries conservation and management should exist		B1			
Best scientific evidence available should be taken into account when designing conservation and management measures		B2			
The precautionary approach is applied in the formulation of management plans			C1		
The level of fishing permitted should be set according to management advice given by research organisations				D1	
Where excess fishing capacity exist, mechanisms should be in established to reduced capacity				D2	
Management measures should ensure that fishing gear and fishing practices do not have a significant impact on non-target species and the physical environment				D3	
A framework for sanctions of violation of laws and regulations should be efficiently exists					E1
A management system for fisheries control and enforcement should be established					E2

KEY: Low Compliance: Medium Compliance: High Compliance:

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6. RATIONALE OF THE ASSESSMENT OUTCOME	
A. THE MANAGEMENT FRAMEWORK AND PROCEDURE	
LEVEL OF COMPLIANCE	
<i>A1. The management of the fishery must include a legal and administrative basis for the implementation of measures and controls to support the conservation of the fishery.</i>	
LOW	An administrative framework that ensures an efficient management of the fishery for its conservation is not established.
MEDIUM	An administrative framework that ensures an efficient management of the fishery for its conservation is somehow established, but there is evidence of not being efficient to ensure the conservation of the stock.
HIGH	A legal and administrative framework that ensures an efficient management of the fishery for its conservation is established and works efficiently toward the conservation of the stock.
<p><i>Determination: A legal and administrative framework that ensures an efficient management of the fishery for its conservation is established and works efficiently toward the conservation of the stock.</i></p> <p>Fishing vessels from nine nations operate in the Baltic Sea, with the highest number of large vessels (>12 m) coming from Sweden, Denmark, and Poland. Total finfish landings from the Baltic Sea peaked in the mid-1970s and again in the mid-1990s, corresponding to peaks in the abundance of cod and sprat stocks respectively. The proportion of the total annual landings caught by each country has varied little over time, except for the redistribution of catches by former USSR countries.</p> <p>Baltic Sea fisheries management is under the EU’s Common Fisheries Policy (CFP) and Russian legislation. The EU fisheries management includes input from the Regional Baltic Sea Fisheries Forum (BALTFISH); the Baltic Sea Advisory Council (BSAC) and the ICES Baltic Fisheries Assessment Working Group (WGBFAS). Coastal fisheries are managed nationally. Fisheries advice is provided by the International Council for the Exploration of the Sea (ICES) and the European Commission’s Scientific Technical and Economic Committee for Fisheries (STECF).</p> <p>An obligation to land all catches in the cod, salmon, herring and sprat fisheries in the Baltic Sea was implemented in 2015; a further agreement to include plaice catches was enacted in 2017. Under the EU landing obligation up to 9% interspecies quota transfers are allowed for stocks considered to be within safe biological limits. Quota transfers were not considered in this catch advice. To achieve FMSY exploitation, any transfer under this regulation should be accounted for in setting the TAC’s (ICES 2018).</p> <p>Europe:</p> <ul style="list-style-type: none"> Denmark, Sweden and Latvia are Member States of the European Union, and therefore in Community waters implement the Common Fisheries Policy (CFP). In force since 1983, the CFP aims to reconcile resource conservation with the preservation of income and jobs in coastal zones that offer few alternatives in terms of production or employment. It therefore covers not just resources but also markets and structures. <p>With regard to resource management, the CFP regulations comprise:</p> <ul style="list-style-type: none"> A traditional management tool based on TACs and quotas; Technical measures relating to gear or catch; Effort-related management, based on vessel engine power and the number of days at sea. <p>The CFP also provides for the introduction of measures to rebuild, over a period of several years, stocks that are threatened in terms of sustainable harvesting, and for recourse to effort-related management rules to supplement TACs and quotas.</p> <p>The CFP is periodically reviewed and reformed. The most recent CFP reform process was completed in 2013</p>	

and came into effect from the 1st January 2014. Key changes included:

- The introduction of an objective to ‘ensure high long-term fishing yields for all stocks at the latest by 2020’ (i.e. movement towards an MSY-based approach).
- The gradual (2015-2019) introduction on a fishery-by-fishery basis of a ‘landing obligation’, which effectively bans discarding.
- An overhaul of the management structure, including increased regionalisation and more extensive stakeholder consultation.

A recent Commission evaluation and a special report of the European Court of Auditors have all shown that the EU’s Fisheries Control System (FCS) in place has deficiencies and is overall not fit for purpose. The current EU’s FCS was designed prior to the reformed Common Fisheries Policy (CFP) and as such is not fully coherent with it. A European Commission Proposal (COM (2018) 368 Final) has been submitted to Parliament and Council in order to promote reform of the EU’s Fisheries Control Policy. When implemented the effects of an improved control regime should improve observed deficiencies in the control of Baltic Sea fisheries including the reduction and targeted fisheries for herring.

EC Multi-annual Plan (MAP, 2014):

In October 2014 an EC proposal for establishing a multi-annual plan for cod, herring and sprat in the Baltic Sea was published. The plan was developed through stakeholder consultation and impact assessments, and included the following explicit management objectives in relation to the Central Baltic herring stock:

- Achieve target fishing mortality of 0.23 - 0.29 (2015 deadline, F_{MSY} now revised to 0.22)
- Maintain a minimum spawning biomass of 600,000t (revised after 2018 assessment).

The proposed management plan was agreed by the European Parliament in March 2016. The plan was officially adopted in July 2016 by Regulation (EU) 2016/1139 establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and fisheries exploiting those stocks.

Denmark:

The Danish fleet comprises close to 350 vessels divided into offshore fisheries (approximately 100 vessels 8–12m and 80 vessels >12 m) and coastal fisheries (approximately 150 vessels). The large-vessel offshore fisheries target (a) sprat and herring in the northern Baltic Sea using small-meshed pelagic trawls and (b) cod and plaice in the southwestern Baltic fisheries using demersal trawls. In the western Baltic Sea, a flatfish fishery exists targeting plaice which also catches turbot, dab, flounder, and brill (**Figure 1**).

The responsible authority for monitoring and enforcing EU and national conservation policies is the Danish Agrifish Agency, which is a part of the Ministry of Food, Agriculture and Fisheries, under the 1999 Fisheries Act. The Agency carries out inspection at sea and landings, as well as verification of EU marketing standards.

The Ministry also works for Danish fisheries and aquaculture through:

- Regulation and inspections of the fishing industry
- Support for research in fisheries and aquaculture production
- Support for the development of fisheries, the fish industry, fishery harbours and aquaculture
- Fish management and fishing license arrangements for recreational fisheries

The primary provider of scientific information and advice at the national level within Denmark is the National Institute of Aquatic Resources at the Technical University of Denmark (DTU Aqua). DTU Aqua’s stated mission is to conduct research, provide advice, educate at university level and contribute to innovation in sustainable exploitation and management of aquatic resources. DTU Aqua directly advises the Danish Ministry of Food, Agriculture and Fisheries and other public authorities.

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Sweden:

The fleet is comprised of around 20 offshore vessels (around 10 vessels >40 m) and around 550 coastal vessels (the vast majority < 12 m). The offshore fleet mostly targets herring and sprat using pelagic trawls in the main basin of the Baltic Sea, but also uses bottom trawls to fish for cod in the southern Baltic. Coastal fisheries use a mixture of gillnets, longlines, and fish traps to catch flatfishes and cod as well as a variety of freshwater species (in the archipelagic areas) and herring, whitefish, and salmon in Bothnian Bay (**Figure 1**).

As Sweden is a member of the European Union, the CFP and its legislation is directly applicable. The general principles governing the national fishery policy are established in a Parliamentary Act. This act also authorises the Government to issue legal acts in order to supplement the CFP and to regulate the fishery not covered by the CFP. The Government has forwarded this authorisation to the National Board of Fisheries together with general principles and guidelines. The central administration of fisheries policy is divided between the Ministry of Agriculture and the National Board of Fisheries (NBF). The Ministry draws up the framework of the fishery policy and represents Sweden at international negotiations. The NBF is the executive branch of the administration and responsible for the implementation of the fisheries policy and for giving technical advice to the government. At the regional level, the 21 county administrative boards include fisheries experts.

A large part of the fisheries research and development is carried out by the NBF at its three institutes of marine, coastal and freshwater research. Research is also undertaken at the universities and other public institutions. The Coast Guard carries out the fisheries control and surveillance at sea and in harbours in cooperation with the NBF.

Latvia:

The fleet comprises around 55 registered offshore vessels (12–40 m) and 610 coastal vessels (< 12 m). The offshore vessels target sprat in the Baltic main basin and herring in the Gulf of Riga using pelagic trawls, and cod and flounder in subdivisions 25 and 26 using demersal trawls (**Figure 1**). Since 2000, sprat and herring have accounted for 92% of the total annual landings. Most vessels in the coastal fleet are < 5 m and target herring, smelt, round goby, salmon, sea trout, vimba bream, turbot, eelpout, flounder, and cod using fykenets, trapnets, and gillnets.

As Latvia is a member of the European Union, the CFP and its legislation is directly applicable and is enacted through the ‘Fishery Law’ (1995, as amended). The Fisheries Department of the Ministry of Agriculture is responsible for national fisheries legislation and policy including implementing measures and obligations arising from the CFP. It represents Latvian fisheries sectoral interests in EU institutions and international organisations, co-ordinates the Fisheries Integrated Control and Information System and monitors compliance of Latvia’s fishing fleet with reference levels set by the EU.

Latvia’s Institute of Food Safety, Animal Health and Environment (BIOR) is responsible for the scientific assessment of fish stock, and for analysing biological and fishing data on catch levels for key commercial species. It is also responsible for analysing the sector’s economic situation, and for data collection. The State Environmental Service, part of the Ministry of Environmental Protection and Regional Development carries out fishing control in marine waters under Latvian jurisdiction, issues fishing licences, operates a vessel monitoring satellite centre and monitors fish landing at ports.

Latvia receives European Maritime and Fisheries Funding (EMFF) to help it improve fisheries infrastructure, the quality, control and traceability of products landed and investment in selective and smart fishing gear and to ensure a balance between fishing capacity and fishing opportunities. It will also help improve fish marketing and processing, implementation of the CFP and Integrated Maritime Policy (including the programme of measures under the Marine Strategy Framework Directive (Council Directive 2008/56/EC) to contribute to the conservation of the marine environment and prevent its deterioration) and community-led local development strategies.

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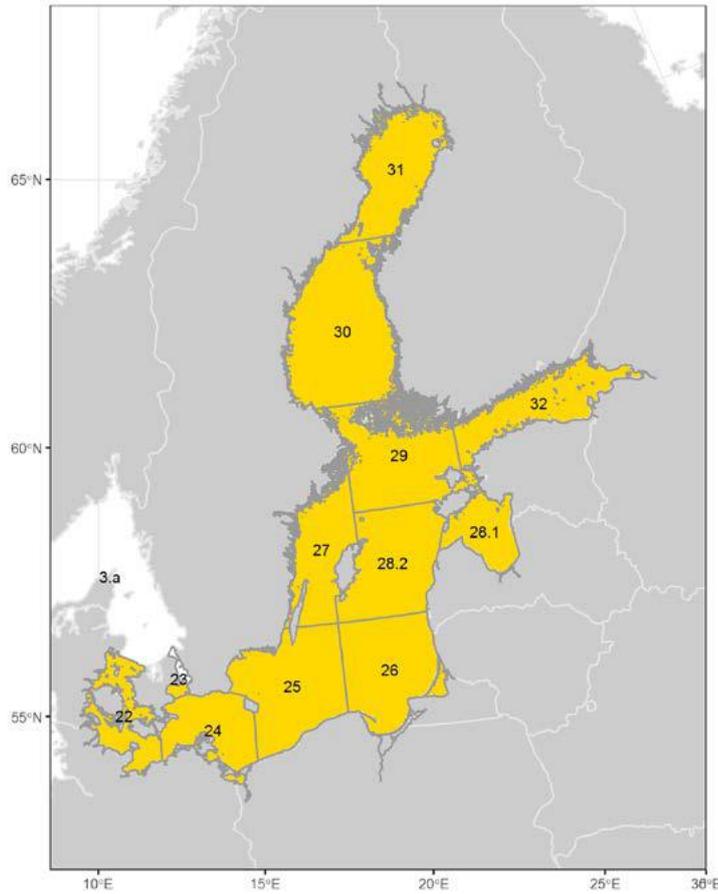


Figure 1 The Baltic Sea ecoregion (highlighted in yellow)
 Subdivision 28.1(Gulf of Riga) Subdivision 31(Bothnian Bay) **R27**

International science

Science-based fishery management advice at the international level is provided by the International Council for the Exploration of the Sea (ICES). ICES is a network of more than 1,600 scientists from 200 institutes (including DTU Aqua), linked by an intergovernmental agreement (the ICES Convention) to add value to national research efforts. Scientists working through ICES gather information about the marine ecosystem. Besides filling gaps in existing knowledge, this information is developed into unbiased, non-political fishery management advice. The 20 member countries that fund and support ICES use this advice to help them manage the North Atlantic Ocean and adjacent seas. ICES provides annual stock assessment and management advice in relation to the Baltic Sea Herring fishery via its Baltic Fisheries Assessment Working Group (WGBFAS).

Baltic Sea Advisory Council (BSAC)

Also relevant to the management of herring in the Baltic Sea is the Baltic Sea Advisory Council (BSAC), which was set up in March 2006 as a result of the 2002 CFP reform. The role of Regional Advisory Councils (RACs) was further refined by the 2013 reform. The main objective of the BSAC is to provide advice on the management of Baltic fisheries, through its membership of representatives of the fishing industry and other non-governmental groups affected by the CFP, including eNGOs, consumers and others.

R2, R4,R11,R14,R15,R19-R24,R26-R28

LEVEL OF COMPLIANCE

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A2. Fisheries management should be concerned with the whole stock unit over its entire area of distribution and take into account fishery removals and the biology of the species.	
LOW	Fisheries management is not concerned with the whole stock unit over its entire area of distribution and do not take into account any of the matters listed in 'A1'.
MEDIUM	Fisheries management is concerned with matters listed in 'A1' but not entirely. Fisheries, in relation to 'A1' statement, should improve to ensure the long term conservation of the marine resource.
HIGH	Fisheries management should be concerned with the whole stock unit over its entire area of distribution and take into account: <ul style="list-style-type: none"> • All fishery removals • The biology of the species

Determination: The stock management unit reflects the current best scientific understanding of the biological stock. Discard data are not currently available but discarding is generally thought to be limited. H

Herring in the central Baltic is composed of a number of local populations differing in growth parameters. Among the factors influencing the future mean weight-at-age of the stock is recruitment success for the individual populations. Separate trial assessments for different populations conducted in 2013, however, showed only a limited impact of this complex stock structure on the perception of the overall stock dynamics.

Preliminary investigations indicate that western Baltic spring-spawning herring (Division 3a and Subdivisions 22–24) and central Baltic herring (Subdivisions 25–29 and 32, excluding Gulf of Riga herring **Figure 1**) are mixing in Subdivisions 24–26. However, this is not taken into account in the current assessment. ICES noted (2017) that investigations into a method to address the mixed species issue will be undertaken in 2018. However in their 2018 assessment ICES conclude that the level of mixing of the herring stocks is still unknown and its potential impact on the assessment should be investigated.

The TAC value proposed for the central Baltic area (ICES, 2018) is based on the advised catch for the central Baltic herring stock, plus the assumed catch of the Gulf of Riga herring taken in the central Baltic, minus the assumed catch of herring from the central Baltic stock taken in the Gulf of Riga (**Figure 1**). The values of the two latter are given by the average over the last five years.

ICES (2018) advises that when the EU multiannual plan (MAP) is applied, catches in 2019 that correspond to the F ranges in the plan (0.23 - 0.29) are between 115 591 tonnes and 192 787 tonnes. According to the MAP, catches higher than those corresponding to F_{MSY} (155 333 tonnes) can only be taken under conditions specified in the MAP, whilst the entire range is considered precautionary when applying the ICES advice rule. The corresponding TAC in the central Baltic management area for 2019 was therefore calculated as 155 333 tonnes + 251 tonnes – 4363 tonnes = 151 221 tonnes.

Species misreporting of herring has occurred in the past (Hentati-Sundberg *et al.*, 2014) and there are again indications that it is a problem in some nations. Discards and bycatch are considered negligible (ICES 2018).

Stock Overview

The stock comprises mainly spring-spawning herring and a small autumn-spawning population. Spring-spawning occurs at the coast with a temporal gradient from south to north. After spawning, individuals migrate to the deep basins for feeding. In addition, migrations between subareas of the Baltic have been observed. Since 2005, the stock has been managed together in Subdivisions 25–27, 28.2, 29 and 32 (EC and Russian quotas).

Central Baltic herring one of the largest herring stock assessed by WGBFAS, it comprises a number of spawning components. This stock complex experienced a high biomass level in the early 1970s but has declined since then. The proportion of the various spawning components has varied in both landings and in stock. The southern components, in which individuals are growing to a relatively larger size, has declined and during the last years the more northerly components, in which individuals reach a maximum size of only about 18–20 cm, are dominating in the landings. The latest stronger year classes were the 2002, 2007 and

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2011 year-class, respectively. The 2014 year class was estimated in 2017 to be the fourth highest of the whole time series. This estimate has since been downgraded (ICES 2018).

The spawning stock size has shown an increasing trend, with minor fluctuations, since the beginning of the 2000’s. Decreased catch advice (ICES 2018) is due to a change in the perception of stock size. The stock size was downscaled and fishing mortality upscaled due to low survey indices in the last two years. F has been above FMSY (0.22) since 2015; F (2018) was calculated at 0.35 (**Figure 2, Table 1**). Recruitment in 2015 is estimated to be the highest of the entire time-series (ICES 2018).

R2, R8, R26, R28

HIGH LEVEL OF COMPLIANCE

A3. Management actions should be based on long-term conservation objectives

LOW	Management actions are not based on long term management objectives.
MEDIUM	Management actions are based on long term management objectives. However the actions are not scientifically formulated.
HIGH	Management actions are based on long term management objectives, and actions are science based.

Determination: There are implicit long-term objectives for the Baltic herring stock based on the requirements of the CFP. A management plan was proposed at the end of 2014 and was agreed in early 2016, this was then officially adopted in July 2016, therefore a high compliance rating is now appropriate

The Common Fisheries Policy (CFP) is the primary instrument for sustainable fisheries management. As such it addresses the impacts of fishing on target stocks as well as impacts on other ecosystem components. Implementing an Ecosystem Approach to Fisheries Management (EAFM) has been set as one of the objectives of the Common Fisheries Policy Reform Regulation (EU) No1380/2013) “...to ensure that negative impacts of fishing activities on the marine ecosystem are minimized...” and “...that aquaculture and fisheries activities avoid the degradation of the marine environment.” (Article 2.3).

The CFP, specifically after the 2013 reform, presents some specific measures which should impulse the implementation of EAFM within European Fisheries. Among these measures are

- 1) fishing at Maximum Sustainable Yield (MSY).
- 2) avoid and reduce unwanted catches.
- 3) manage stocks by means of multi-annual plans. Specifically, for these plans, multiple stocks should be covered when those stocks are jointly exploited.

ICES recommends that a spatial management plan (SMP) for clupeid stocks in Subdivisions 25 & 26 be developed. This would consider prey availability for the recovery of cod in Subdivisions 25-26 and redistribution of the fishery in Subdivisions 27–32 to promote growth of cod's prey species (herring, sprat). The plan could establish restrictions on sprat catches in the main cod area and redistribution of the fishery to the northern areas (Subdivisions 27–32). This may reduce the density-dependent effect and therefore increase growth for clupeids in the area (**Figure 3**). Other long term objectives listed in the Multiannual Plan include contributing to the achievement of the objectives of the CFP, especially reaching and maintaining MSY for stocks concerned; implementation of the landing obligation and use of the Ecosystem Approach to Fisheries Management (EAFM).

R2, R4, R18, R26, R28, R30

B. STOCK ASSESSMENT PROCEDURES AND MANAGEMENT ADVICE

LEVEL OF COMPLIANCE

B1. Research in support of fisheries conservation and management should exist.

LOW	Research to support the conservation and management of the stock, non-target species and physical environment does not exist
MEDIUM	Research to support the conservation and the management of the stock, non-target species and physical environment exists, however research programmes could be significantly improved to decrease scientific advice uncertainty.
HIGH	Research to support the conservation and the management of the stock, non-target species and physical environment exist,

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and existent research is considered most adequate for the long term conservation of the target, non-target and physical environment

Determination: Fishery-dependent and independent data are collected for the stock, and a stock assessment is conducted annually by ICES. In general, the level of research appears to be sufficient for the informed management of the stock.

Management of the Central Baltic herring stock is supported by the collection of fishery-dependent and fishery-independent data, and by more general research on ecosystems and species which affect the stock.

Fishery-dependent research

The overall frequency of herring sampling in Subdivisions 25–29 and 32 (excl. Gulf of Riga Subdivision 28.1) in the Baltic for 2015 was four samples. From these four samples a total of 503 fish were measured and 185 fish aged per 1000 tonnes landed. In 2015, sampling was most frequent in Subdivision 32 followed by Subdivisions 26 and 25. The sampling for age composition could be improved for catches in foreign ports. Catch data is regarded as uncertain for this fishery, particularly from 1992 and onwards due to the mixing of sprat and herring in the catches. The possibility to find a method to correct for this was due to being investigated in the proposed benchmark 2018.

In their report WGBFAS (2018) state that according to national data submitters the mixing of pelagic species is corrected before submitting of input data. Species misreporting of herring has occurred in the past (Hentati-Sundberg et al., 2014) in certain States and there are again indications that it is a problem. It is recommended that this issue is explored further in future assessments.

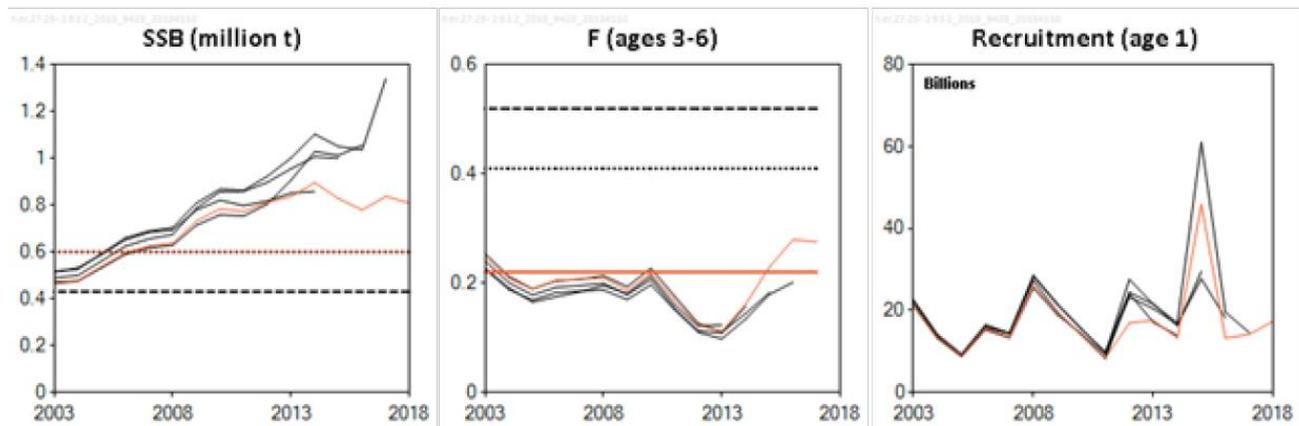
Fishery-independent research

Input data for the assessment was derived from commercial catches (international landings, age distributions from catch sampling); one survey acoustic index (BIAS); natural mortalities from multispecies model (SMS) until 2011, for 2012–2017 natural mortalities are based on regression of M against eastern Baltic cod SSB; fixed maturity ogive. A benchmark survey was conducted in 2013.

Quality of Assessment

Preliminary investigations indicate that the stocks of western Baltic spring-spawning herring (Division 3.a and subdivisions 22–24) and central Baltic herring (subdivisions 25–29 and 32, excluding Gulf of Riga herring) are mixing in subdivisions 24–26. This is not taken into account in the current assessment but should be investigated further.

For this stock, the SSB in 2019 is above MSY Btrigger. In such a situation, catch scenarios applicable under the MAP correspond to fishing mortalities between F_{lower} and F_{upper} . However, according to the MAP, catches corresponding to F higher than F_{MSY} (i.e. Column B of Annex I in the MAP) can only be taken under conditions specified in the MAP, stated below (Figure 2):



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Figure 2. Herring in subdivisions 25–29 and 32, excluding the Gulf of Riga. Historical assessment results (final-year recruitment estimates included in red). R26

The stock size was downscaled and fishing mortality upscaled due to low survey indices in the last two years. This is the reason given for the downward revision of the 2014 year class (ICES, 2018).

R8, R26, R28-R29

According to the MAP, for the purposes of fixing fishing opportunities, there should be an upper threshold for F_{MSY} ranges in normal use and, provided that the stock concerned is considered to be in a good state (above MSY trigger), an upper limit for certain cases. It should only be possible to fix fishing opportunities to the upper limit if, on the basis of scientific advice or evidence, it is necessary for the achievement of the MAP objectives in mixed fisheries or necessary to avoid harm to a stock caused by intra- or inter-species stock dynamics, or in order to limit year-to-year variations in fishing opportunities. For the purpose of applying the upper limit, it is necessary to recall objectives set out in Regulation (EU) No 1380/2013 that the MSY exploitation rate is to be achieved in any event by 2020.

LEVEL OF COMPLIANCE

B2. Best scientific evidence available should be taken into account when designing conservation and management measures.

LOW	Scientific advice is not taken into account when designing conservation and management measures.
MEDIUM	Scientific advice is taken into account, when designing conservation and management measures. However some areas of discrepancy are identified that could have a significant impact in the long term conservation of the marine environment.
HIGH	Scientific advice is taken into account, when designing conservation and management measures, in a comprehensive manner.

Determination: ICES research and advice is the primary source of scientific information for developing fishery conservation and management measures. The organisations supporting the CFP are structured to ensure the inclusion of best available scientific evidence in the decision-making process.

Scientific, Technical and Economic Committee for Fisheries (STECF):

The European Commission (EU) receives scientific advice on EU fisheries from its Scientific, Technical and Economic Committee for Fisheries (STECF). STECF is composed of independent scientists and experts representing a broad range of opinion, and is systematically consulted before any proposals are drafted. On biological issues, STECF depends to a great extent on advice from ICES for the North-East Atlantic, North Sea and Baltic Sea.

The advice provided by ICES includes the stock assessments and deeper analysis on which the Commission bases both its annual recommendations for setting TACs and quotas, and more long-term proposals on how fisheries in European waters can be managed sustainably. ICES advised a TAC of 151,221t in 2019; the TAC (EU & Russian) allocated (Subdivisions 25-27, 28.2, 29,32) was 170,360t. Increasingly ICES also provides a great deal of integrated advice at ecosystem level, in support of the shift towards a more holistic approach to managing Europe’s seas.

STECF play a leading role in helping the Commission to formulate policies ranging from long-term plans to emergency closures, by providing an authoritative and highly targeted scientific opinion which goes well beyond the purely biological dimension and can be made available at short notice. It also provides extensive economic and social advice, not only on the impact of policy proposals, but also as a support for better management (for instance, on the impact of discarding), or on fleet dynamics and economic performance.

Multispecies analyses:

In the Baltic ICES multispecies analyses indicate that trade-offs exist between fishing on cod or herring and sprat. Increased fishing pressure on cod may increase the risk of a low cod stock size, thereby reducing cod predation on sprat and herring and allowing great survival and growth in these two prey species. Increased fishing pressure on herring and sprat may have a negative impact on the condition and growth of cod (by

reducing the forage available for cod) and result in lower cod yields. The magnitude of the interaction between the species depends on the spatial and temporal overlap among the three stocks (**Figures 3, 5**). ICES recommends that a spatial management plan (SMP) for clupeid stocks in Subdivisions 25 & 26 be developed.

Mixing of Herring and Sprat:

The technical interaction in the Baltic pelagic fishery differs between fisheries. The majority of herring and sprat are caught with pelagic trawls. Pelagic trawlers performing a directed fishery for either sprat or herring have a very variable degree of mixing in the catches of sprat and herring. The degree of mixing varies on a spatial scale. According to logbooks and sales slips, the mixing can vary between < 5% to 40% although these percentages are not quantifiable at this stage. Reference points (SSB/F) for herring (this report) and for sprat reported by ICES (2018) confirm that both stocks are currently been fished sustainably. This mitigates the effects of the (potentially) high mixing of both stocks in the fishery for herring.

Given that information available on the mixing in the directed single species pelagic fishery is based on logbooks and sales slips and thus on a trip basis, the actual mixing in individual hauls is at present unknown. Some countries have started to record additional species catch composition data to allow for adjustments.

The directed herring fishery close to Bornholm (Subdivisions 23–25 **Figures 1,3**) is reported to have less sprat in the catches than further north in the Baltic (Subdivisions 27–29 **Figures 1,3**). Mixing of herring and sprat in the directed herring trawl fishery is highest in Subdivision 32, decreasing further north in subdivisions 30–31. The vast majority of the total herring landings in Subdivisions 30–31 are not for human consumption and these tend to be mixed.

The majority of the landings in the directed herring trawl fishery are for human consumption but there are also landings for industrial purposes. Herring is caught as a bycatch in the directed sprat fishery which is mainly in the central part of the Baltic. Landings in this fishery are mainly for industrial purposes, but there are also landings for human consumption. The directed sprat fishery shows the same spatial variation in mixture of herring and sprat as the directed herring fishery. There is, however, a low spatial overlap of the directed herring and sprat fishery reported (**Figure 3**).

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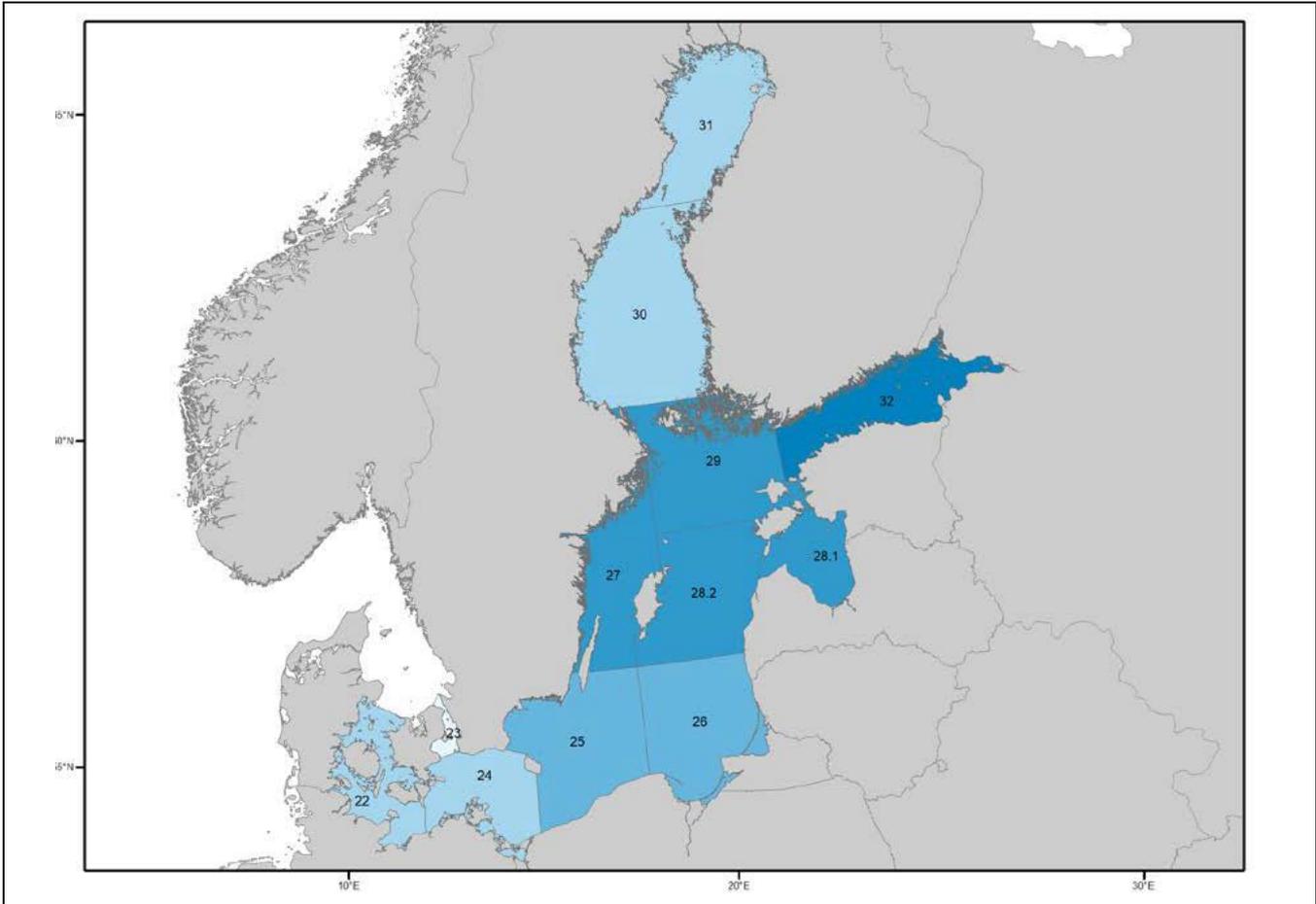


Figure 3 Spatial variation in reported mixing of herring and sprat in trawl fishery in the Baltic. Darker colour indicates higher mixing. **R28**

R2, R5,R6.R8,R25, R28-R30

C. THE PRECAUTIONARY APPROACH

LEVEL OF COMPLIANCE

C1. The precautionary approach is applied in the formulation of management plans.

LOW	The precautionary approach is not applied in the formulation of management plans.
MEDIUM	The precautionary approach is applied, however not all uncertainties are taken into account.
HIGH	The precautionary approach is applied, taking into account uncertainties relating to the dynamic of fish population (recruitment, mortality, growth and fecundity), and the impact of the fishing activities, such as discards and by-catch of non-target species as well as on the physical environment (Habitats).

Determination: The precautionary approach is applied, taking into account uncertainties relating to the dynamic of fish population and the impact of the fishing activities, such as discards and by-catch of non-target species as well as on the physical environment.

The EU CFP makes a broad commitment to the application of the precautionary approach, and ICES advice is provided largely on the same basis. Stocks are ordered into six main categories according to the level of scientific information available, from category 1 stocks where full quantitative assessments are possible, to categories 5 and 6 stocks which have little or no data beyond total landings. Advice for stocks in higher categories is more conservative and precautionary than for those in lower categories which are better understood. Where there is a change in the level of uncertainty in the understanding of a stock, this can result in a change in categorisation. Herring is considered a Category 1 stock, with a full quantitative assessment conducted. Reference points have been defined for the stock based on the MSY and precautionary

approaches.

Spawning-stock biomass (SSB) decreased until 2001 and then increased, and it has been above MSY Btrigger since 2007. Fishing mortality (F) increased until 2000 and then decreased, remaining below FMSY since 2004. Recruitment in 2015 is estimated to be the highest of the whole time-series (**Figure 2, Table 1**).

Table 1. State of the Central Baltic Herring stock, 2014 – 2018, in relation to MSY-based and PA-based reference points. From the May 2018 ICES advice (R26)

	Fishing pressure				Stock size			
	2015	2016	2017		2016	2017	2018	
Maximum Sustainable Yield	F_{MSY}	✗	✗	✗ Above	$B_{Trigger}$	✓	✓	✓ Above trigger
Precautionary Approach	F_{pa} F_{lim}	✓	✓	✓ Harvested sustainably	B_{pa} B_{lim}	✓	✓	✓ Full reproductive capacity
Management plan	F_{ranges}	✓	✓	✓ Within range	$MSY B_{trigger}$	✓	✓	✓ Above

According to the MAP, catches higher than those corresponding to FMSY (155 333 tonnes) can only be taken under conditions specified in the MAP, whilst the entire range is considered precautionary when applying the ICES advice rule.

R26; R28

D. MANAGEMENT MEASURES

LEVEL OF COMPLIANCE

D1. The level of fishing permitted should be set according to management advice given by research organisations.

LOW	The level of fishing permitted is not set according to management advice given by research organisations.
MEDIUM	The level of fishing permitted is higher than management advice given by research organisations. However, the difference is not considered to have a significant impact of the sustainability of the stock
HIGH	The level of fishing permitted is set according to management advice given by research organisations.

Determination: *The level of fishing permitted is set according to management advice given by research organisations. ICES advises that when the EU multiannual plan (MAP) is applied, catches in 2019 that correspond to the F ranges in the plan are between 115 591 tonnes and 192 787 tonnes. According to the MAP, catches higher than those corresponding to F_{MSY} (155,333 tonnes) can only be taken under conditions specified in the MAP (Section B1).*

ICES advised a TAC of 151,221t in 2019; the TAC (EU & Russian) allocated (Subdivisions 25-27, 28.2, 29,32) was 170,360t in line with previous year where, due to the allocation to the Russian fleet the allocated TAC has exceeded the ICES advised TAC. However ICES also advised that catches corresponding to the F ranges in the MAP (0.23 - 0.29) are between 115, 591t and 192, 787t.

ICES assesses that fishing pressure on the stock is above FMSY and below F_{pa} and F_{lim} ; spawning stock size is above MSY Btrigger, B_{pa} , and B_{lim} (Figure 2). The decreased catch advice is due to a change in the perception of stock size. The stock size was downscaled and fishing mortality upscaled due to low survey indices in the last two years. There is also a downward revision of the 2014 year class (ICES 2018).

Annual stock assessments are carried out by ICES, and TACs are set according to scientific advice. Reported landings (EU Fleets) were well below the TAC from 1992-2002 but since then have been close to the TAC, which was fully taken in 2010, suggesting that species misreporting of herring as sprat may have been an incentive (**Figure 4**).

Although no estimates of the extent of misreporting are available, it is thought to have been reduced by a regulation introduced in 2005 that only allows EC vessels in the herring and sprat fishery to land unsorted catches in ports where sampling schemes are in operation. Some countries have started to record additional

species catch composition data to allow adjustments. Discards are considered low and the by-catch of sprat and juvenile cod is unknown.

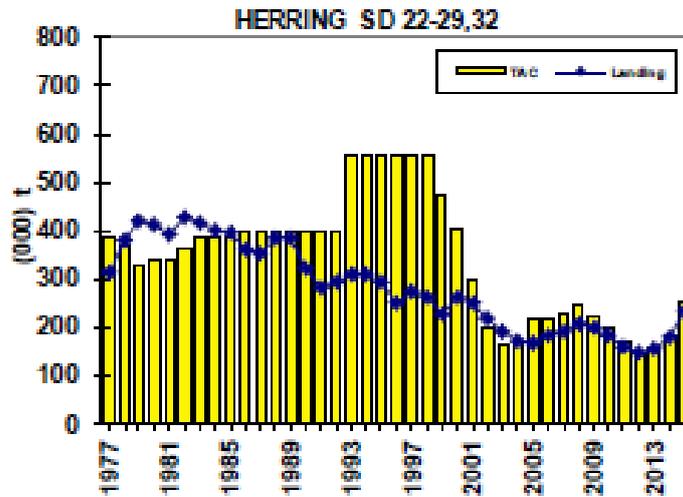


Figure 4. Reported landings of herring and agreed TACs in the Central Baltic sea R28

R2,R26,R28

LEVEL OF COMPLIANCE

D2. Where excess fishing capacity exist, mechanisms should be in established to reduced capacity to allow for the recovery of the stock to sustainable levels.

LOW	Mechanisms to allow for recovery of the stock to sustainable levels are not established.
MEDIUM	Mechanisms to allow for recovery of the stock to sustainable levels are somehow established. However there is no evidence of the efficiency of the methods used.
HIGH	Mechanisms are established to reduce capacity to allow for the recovery of the stock to sustainable levels and there are evidences of recovery.

Determination: Mechanisms are established to manage European fishing capacity, both in general and (through the application of an annual quota) specifically in the case of the Central Baltic Sea herring fishery.

The EU CFP includes provisions to limit, and historically reduce, total fishing capacity through a combination of subsidising fishery exits and restricting new entries. The entry-exit regime, which applies to the majority of EU Member State vessels, is one of the main pillars of the European-wide fishing capacity management system. The entry-exit regime applies separately to the capacity measured in terms of gross tonnage, and power (in kilowatts). Any entry of capacity into the fleet of a Member State has to be compensated by the previous exit of at least the same amount of capacity.

As a general rule, the capacity of the national fleets cannot increase with respect to its levels on 1 January 2003, for 'EU 15' Member States and on the accession date for Member States which acceded to the Community after 2003. The second pillar of the fishing capacity management system is the rule that capacity leaving the fleet with public aid cannot be replaced. Such capacity, expressed both in tonnage and power, is subtracted directly from the maximum fleet capacity of each Member State. Capacity reductions supported with public aid are therefore permanent.

Stock-specific capacity limitation is applied primarily through the annual herring quota. As annual landings have matched the TAC in recent years, it is clear that the fleet capacity is sufficient to catch the quota. Excess capacity is clearly not leading to excess fishing pressure in the Baltic herring fishery at present.

R2,R4,R9

LEVEL OF COMPLIANCE

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D3. Management measures should ensure that fishing gear and fishing practices do not have a significant impact on non-target species and the physical environment.

LOW	There are no management measures to prevent the impact of the fishing methods and fishing practices on non-target species and the physical environment.
MEDIUM	There are management measures to prevent the impact of the fishing methods and fishing practices on non-target species and the physical environment. However it is not science based.
HIGH	There are management measures to prevent the impact of the fishing methods and fishing practices on non-target species and the physical environment. Measures are based on scientific information.

Determination: Information is limited on the impacts of the fishery on the Baltic ecosystem and ETP species. The multiannual management plan has been implemented, along with the ecosystem-based management approach within, however further information on the impact on seal and porpoise nutrition is required.

M

All fisheries have the potential to catch protected, endangered, or threatened (ETP) species, such as seabirds and marine mammals, as non-targeted bycatch. Recording of the catch of seabirds and mammals has been undertaken in some Baltic Sea fisheries, usually where there is perceived risk of such bycatch. Seabirds can become entangled in gillnets or hooked on longlines and consequently drown. Seals can be caught in submersed trapnets and harbour porpoises entangled in gillnets, leading to the deaths of these animals. Pelagic trawling is generally considered to have virtually no impact on the benthic environment, although some interactions have been reported. Measures in place to minimise bycatch of ETP species during pelagic trawling include the use of specific mesh sizes, exclusion devices (turtle, dolphin) and acoustic deterrents such as 'pingers'.

Studies conducted between 1980 and 2005 indicated that at least 76 000 birds, mostly sea ducks, were killed annually in Baltic Sea gillnets. This number may have declined in more recent years, probably due to the consequential decline in sea duck populations. Birds that actively pursue their prey underwater were more susceptible than those that graze on benthos. For at least four bird species, this mortality was sufficiently high to generate declines in population abundance and be unsustainable.

The abundance of both ringed seal and harbour porpoise populations in the central Baltic Sea are very low, having been depleted (for uncertain reasons) in the past. Any fisheries bycatch of these populations is detrimental, but documenting such bycatch is difficult at sea. Dead harbour porpoises exhibiting evidence of gillnet entanglements are found and reported regularly, so it is likely that bycatch in gillnets is adversely affecting the critically endangered central Baltic Sea population. Information on Interactions with purse seines nets at sea is currently not available.

A report from the ICES Working Group on Bycatch of Protected Species (WGBYC, 2018) included a review of ongoing bycatch mitigation research projects; bycatch risk assessments (BRAs) for harbour porpoise and common dolphin in the Celtic Seas, Bay of Biscay and Iberian Coast Ecoregions and also a review of a compiled inventory of various sampling programmes that provide information on bycatch of protected species at the national level.

During monitoring under the DCF observer programme (WGBYC, 2018) bycatch of several seabirds was recorded and included 12 unidentified ducks and two velvet scoter (*Melanitta fusca*). These bycatches occurred in one fleet segment, vessels under 15m using gillnets with mesh sizes ≥ 110 mm in the Baltic Sea.

The WGBYC Report summarises the total number of bycatch specimens or number of incidents reported and bycatch rates (number of specimens/days at-sea or number of incidents per days at-sea) derived from a ICES WGBYC 2016 data call. Bycatch numbers and rates are grouped by ecoregion, taxa, métier and species. Data collected will be use to inform management measures aimed at reducing the impact of pelagic trawling on non-target species and the physical environment.

Non-target species

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The 2013 revision of the CFP introduced a landing obligation to ensure that all catch, including bycatch, of species managed through TACs and quotas is landed in EU fisheries. This obligation is being introduced on a fishery-by-fishery basis and has been applicable in the Baltic sprat fishery since 1 January 2015. The decision to apply the landing obligation as early as possible was made in consultation with industry groups and on the advice of scientific organisations. Herring is caught mixed with sprat, as in most pelagic fisheries in the Baltic. Bycatch in pelagic trawling gear is of little concern at this time. Generally, this gear catches herring and occasionally sprat, all of which is counted against quotas. Other species are sometimes retained incidentally but are landed and monitored.

Ecosystems

The ICES WGBFAS stock annex (2016) for Central Baltic herring includes a section examining the ecosystem components of fishery management. This section primarily considers the effects of the ecosystem on herring populations, in particular environmental influences on spawning and recruitment, and the impact of cod predation on natural mortality rates. Herring and sprat are the major prey for cod and trophic interactions between cod, herring and sprat can periodically have a strong impact on the state of the fish stocks in the Baltic. The potential increase in cod and changes in sprat stocks should be taken into account in herring management: a cod increase will also increase predation, and a simultaneous sprat decrease will worsen the scenario for herring. In their 2017 ICES assessment predatory changes by cod and other stocks were taken into account.

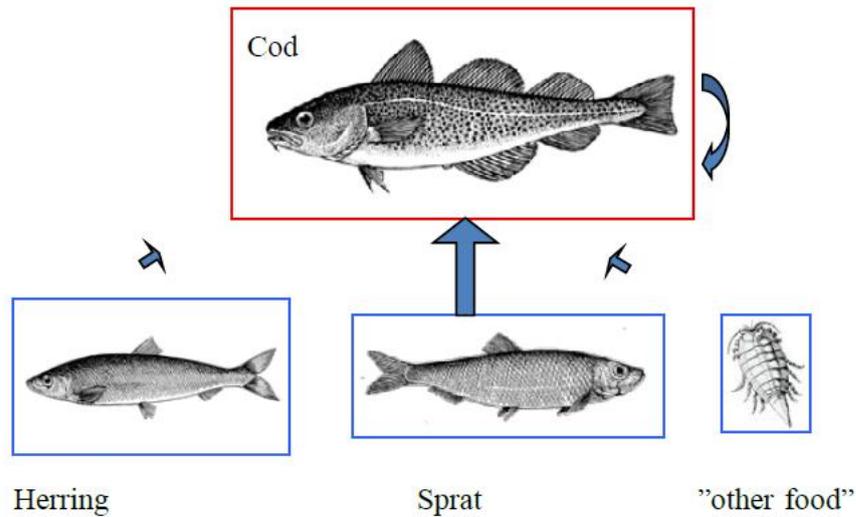


Figure 5 The main Baltic Sea foodweb. R27

Differences in the distributions of cod and herring and sprat imply that an increase in eastern cod landings will not necessarily result in a major increase in herring and sprat stock sizes (and hence catching opportunities). A reduction of herring and sprat landings in the central Baltic Sea is likely to have a positive impact on growth and condition of cod, and perhaps also reduce cod cannibalism. An increase in herring and sprat landings in the northeastern Baltic areas (Subdivisions 27–32, **Figures 1, 3**) is unlikely to negatively affect the eastern cod stock but may have a positive impact on the growth rates of herring and sprat.

ETP species

Marine mammals and seabirds in EU waters are currently protected by a set of directives, conventions (e.g. Bern Convention and the Habitats Directive) and multilateral international agreements. The Baltic marine mammals are limited to grey (*Halichoerus grypus*), ringed (*Phoca hispida*) and harbour seals (*Phoca vitulina*) and harbour porpoise (*Phocoena phocoena*) although all are reported to have decreased in numbers since the last century.

HELCOM (Baltic Marine Environment Protection Commission - Helsinki Commission) agreed in 2006 on a Recommendation of the ‘Conservation of seals in the Baltic Sea’. The Recommendation is a regional agreement on joint management principles, management units for the different seal populations, limit reference levels for the respective management unit, and coordinated monitoring programmes. Two indicators are measured for all seal species:

- i) Population trends and abundance of seals (counted as numbers of hauled out individuals during the moult) and,
- ii) Distribution of Baltic seals.

Grey seals are additionally assessed by a further two indicators:

- i) Nutritional status of seals (measured by evaluation of the blubber thickness of a specimen of the population in relation to a minimum threshold value)
- ii) Reproductive status of seals (measures the proportion of adult grey seal females being pregnant or giving birth over the age of 6 years during July to February in relation to a minimum threshold value).

There is currently no operational indicator for the harbour porpoise. HELCOM is developing indicators on the abundance and distribution of harbour porpoise, as well as on the number of drowned mammals caught in fishing gear. However, at present there are no defined threshold levels against which the status can be assessed, and so it has been assessed descriptively (HELCOM, 2018):

Harbour porpoise trends are uncertain but the Baltic Proper sub-population is on the HELCOM Red list of critically endangered species and the Kattegat-Belt Sea-Western Baltic sub-population is assessed as vulnerable. Bycatch in fisheries has been identified as potentially the greatest source of mortality affecting the population in particular from gillnets and other static gears.

In a study published by the OSPAR Commission (2009) ASCOBANS advised that the maximum annual anthropogenic induced mortality for harbour porpoise should not exceed 1.7% of total population size. This data should be used to inform future management action to protect this population.

With regard to seals, ringed seal do not occur in the area fished. Grey seals and harbour seals show increasing population sizes. However, whilst the grey seal population is above its Limit Reference Levels, low reproductive and nutritional condition have been observed. This is considered to be connected to density dependent effects as the population is thought to be approaching its ecological carrying capacity. The harbour seal management unit that overlaps with the area fished does not meet the threshold values for one or both performance indicators. Seal status is considered not good in most parts of the Baltic Sea according to HELCOM’s integrated assessment (HELCOM, 2018). Fishing for herring could be impacting seal and porpoise nutrition, but the magnitude compared with other factors is unknown.

The Baltic is an important overwintering ground for seabirds and sea ducks and nine of nineteen species breeding in the area are decreasing in numbers, while the status of many of the rest is uncertain. Ecosystem changes have impacted on the breeding success of the common guillemot whereas bycatch in fishing gear, particularly set nets, has impacted on the numbers of long-tailed ducks (*Clangula hyemalis*), velvet scoters

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(*Melanitta fusca*), black scoters (*M. nigra*) and eiders (*Somateria mollissima*). Discarding in Baltic fisheries also affects seabird populations, with up to 50% of discards consumed by seabirds. Surface feeding and pelagic feeding birds have been assessed as of good status during both the breeding and wintering seasons.

Further information available on these indicators, monitoring undertaken to date and assessment of ETP species status is available in HELCOM’s State of the Baltic Report was updated in 2018 and is available at <http://stateofthebalticsea.helcom.fi/biodiversity-and-its-status/>

Physical environment

Abrasion of the seabed by mobile bottom-contacting fishing gears has been investigated to describe the extent, magnitude, and effects of fishing on benthic habitats. Mobile bottom-contacting gears are primarily used in the southern areas of the Baltic Sea. Pelagic trawling is generally considered to have virtually no impact on the benthic environment, although some interactions have been reported.

R2,R7-R8,R12, R18, R25

E. IMPLEMENTATION

LEVEL OF COMPLIANCE

E1. There should be a framework for sanctions of violation of Laws and regulations.

LOW	A framework for sanctions of violation of Laws and regulations do not efficiently exist.
MEDIUM	A framework for sanctions of violation of Laws and regulations do exist but do not work efficiently.
HIGH	A framework for sanctions of violation of Laws and regulations exists and is proven to be efficient.

Determination: A framework for sanctions of violations exists and is generally considered to work efficiently.

H

To ensure that fishing rules are applied in the same way in all member countries, and to harmonise the way infringements are sanctioned, the EU has established a list of serious infringements of the rules of the common fisheries policy. EU countries must include in their legislation effective, proportionate and dissuasive sanctions, and ensure that the rules are respected.

Since 1 January 2012, EU countries have been required to have a point system for serious infringements. Under the scheme, national authorities:

- assess alleged infringements involving vessels registered under its flag, using standard EU definitions;
- impose a pre-set number of penalty points on vessels involved in serious infringements (points are recorded in the national registry of fisheries offences);
- suspend the vessel’s licence for 2, 4, 8 or 12 months when a pre-set number of points have been accumulated in a 3-year period.

Points are attributed to the fishing licence that is linked to a vessel, so they will stay with the vessel even when it is sold on to a new owner. Monitoring the number of cases detected and the nature and the level of the sanctions imposed is a key part of the Commission's task of ensuring a level playing field for all EU fishers.

Council Regulation (EC) No 1005/2008 established a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing. Through EU Fishery Policy and Regulations, Member States must apply effective, proportionate and dissuasive sanctions against natural or legal persons engaged in IUU activities. A maximum sanction of at least five times the value of the fishery products obtained is provided for with regard to the committing of the said infringement.

In the event of a repeated infringement within a five-year period, the Member States shall impose a maximum sanction of at least eight times the value of the fishery products obtained by committing the

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serious infringement.

Infringements of CFP rules are dealt with by the Member State concerned. In Denmark the Danish Agrifish Agency is the competent authority with responsibility of enforcement of sanctions and penalties with respect to the prosecution of fishery rules. In Sweden, it is the Swedish Agency for Marine and Water Management. In Latvia the State Environmental Service (SES), part of the Ministry of Environmental Protection and Regional Development, carries out fishing control.

In Latvia, an action plan was agreed with the EU in 2013 to address shortcomings in its national fisheries control system. Latvia has successfully implemented the plan and has undertaken further improvements beyond the plan.

Latvian competent authorities have jurisdiction on fisheries control matters, issue fishing licences, operate a vessel monitoring satellite centre and monitor landings. A Latvian Administrative Penalty Code exists and is applied for violations of fishing rules. Penalties for single offences include fines of €140 up to €4,300 (depending on the severity of the infringement), confiscation of fishing gear and suspension of the fishing license of up to one year can be applied.

Where repeated violation of fishing regulations occurs or fishing occurs without authorisation, in a prohibited place or with prohibited gear fines are higher (ranging from 700€ up to 14,000€), gear can be confiscated and fishing licenses can be suspended for up to three years. Information on the number of successful prosecutions were not readily available at the time of writing of this report, although there is evidence of sanctions being applied (see section E2).

R3-R4, R11, R14-R16, R25

LEVEL OF COMPLIANCE	
<i>E2. A management system for fisheries control and enforcement should be established.</i>	
LOW	A management system for fisheries control and enforcement is not established.
MEDIUM	A management system for fisheries control and enforcement is established but do not work efficiently.
HIGH	A management system for fisheries control and enforcement is established and work efficiently.

Determination: Management systems for fisheries control and enforcement are established and are generally considered to work effectively.

H

To ensure that the rules of the CFP are followed in practice, the policy also includes a control system with the necessary tools to enforce them. This system is designed to:

- ensure that only the allowed quantities of fish are caught
- collect the necessary data for managing fishing opportunities
- clarify the roles of EU countries and the Commission
- ensure the rules are applied to all fishers in the same way, with harmonised sanctions across the EU
- ensure that fisheries products can be traced back and checked throughout the supply chain, from net to plate

The system was laid down in the Control Regulation (Council Regulation (EC) No 1224/2009) which entered into force on 1 January 2010. Europe-wide coordination of control and enforcement activities is provided by the European Fisheries Control Agency (EFCA), which aims to ensure the uniform and effective application of the rules of the CFP by the Member States.

In practice, CFP control as carried out by the Member States' control authorities can be broken down into three broad areas: conservation, structures, and markets.

- 1) Conservation measures cover issues such as quota management or the implementation of technical

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measures (e.g. mesh sizes). Inspections are used to ensure that the fishing gear on board vessels meets official norms and that the information entered in log-books.

- 2) Structural policy plays a key role in the search for a balance between the fishing capacity of Member States, the fishing effort actually deployed, and the available fish resources. Checks are therefore necessary to establish that allocated days-at-sea have not been exceeded.
- 3) Finally, national inspections are not limited to the catching sector, but also include all operations from landing and marketing to storage and transportation. Operators must, at all times, be in possession of proper documentation detailing the origin, nature, quantity and quality of fish involved in transactions, so that it can be cross-checked with data in log-books and from other sources, such as fish auctions.

As with the application of sanctions, the bodies responsible for control and enforcement are set up by the individual EU states; in Denmark the responsible authority is the Danish Agrifish Agency, in Sweden it is the Swedish Agency for Marine and Water Management and in Latvia it is the State Environmental Service.

The European Fisheries Control Agency (EFCA) is a European Union body established in 2005 to organise operational coordination of fisheries control and inspection activities by the Member States and to assist them to cooperate so as to comply with the rules of the Common EU Fisheries Policy in order to ensure its effective and uniform application. EFCA has its official seat in Vigo, Spain.

Table 3 summarises activity carried out as a joint campaign in the Baltic Sea JDP operational area. The report provides summary information concerning joint control activities that were carried out as from 6th of January-21st March 2014:

Table 3: Baltic Sea Joint Deployment Plan 2014

Table: quantities of fish inspected ashore per species

Species	quantity
<i>salmon (SAL)</i>	<i>521 indiv.</i>
<i>cod (COD)</i>	<i>1081 t</i>
<i>herring (HER)</i>	<i>2788 t</i>
<i>sprat (SPR)</i>	<i>5251 t</i>
<i>others</i>	<i>435 t</i>

Table: quantities of fish inspected at sea per species

species	quantity
<i>salmon (SAL)</i>	<i>5 indiv.</i>
<i>cod (COD)</i>	<i>245 t</i>
<i>herring (HER)</i>	<i>839 t</i>
<i>sprat (SPR)</i>	<i>1556 t</i>
<i>others</i>	<i>61 t</i>

From this JDP a total of 20 infringements were detected from at sea inspections and a total of 22 infringements detected from land-based inspections. The most common infringements detected at sea were failures to comply with catch reporting obligation while incidents of falsifying catch documentation (landing declarations, sales notes and transport documents) were detected from the land-based inspections. All evidence was transmitted to the flag state for follow-up by each competent authority.

R11, R16

7. KEY STAKEHOLDERS

8. REFERENCES

R1- Image of Clupea harengus
<http://fishbase.org/photos/PicturesSummary.php?StartRow=0&ID=24&what=species&TotRec=13>

R2 -REGULATION (EU) 2016/1139 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 6 July 2016 establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks, amending Council Regulation (EC) No 2187/2005 and repealing Council Regulation (EC) No 1098/2007 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&from=EN>

R3- Fisheries control authorities in the Baltic Sea area
https://ec.europa.eu/fisheries/cfp/control/who_does_what/baltic_sea_authorities_en

R4 - CFP_Regulation_1380_2013 https://ec.europa.eu/fisheries/cfp_en

R5 – ICES <http://www.ices.dk/community/groups/Pages/WGBFAS.aspx>

R6 - STECF: <https://stecf.jrc.ec.europa.eu/>

R7- ICES. 2016. Report of the Baltic Fisheries Assessment Working Group (WGBFAS), 1219 April 2016, ICES HQ, Copenhagen, Denmark. ICES CM 2016/ACOM:11. 594 pp

<http://ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2016/WGBFAS/01%20WGBFAS%20Report%202016.pdf>

R8- ICES advice 2017 Herring (*Clupea harengus*) in subdivisions 25–29 and 32 (central Baltic Sea, excluding Gulf of Riga) <http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2017/2017/her.27.25-2932.pdf>

R9 -Report 2015. DRAFT EUROPEAN PARLIAMENT LEGISLATIVE RESOLUTION
<http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+REPORT+A8-2015-0128+0+DOC+XML+V0//EN>

R10- ICES, 2011a. Report of the ICES Advisory Committee on Fishery Management, Advisory Committee on the Marine Environment and Advisory Committee on Ecosystems, Book 8: The Baltic Sea. 8.4.4 Herring in Subdivisions 25-29 and 32 (excluding Gulf of Riga herring), 8 pp.
<http://www.ices.dk/committe/acom/comwork/report/2011/2011/Her-2532-Ex-Go.pdf>

R11 -Facts and Figures on the Common Fisheries Policy
https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/pcp_en.pdf

R12- Stock Annex (2016): Herring (*Clupea harengus*) in subdivisions 25–29 and 32 (central Baltic Sea, excluding the Gulf of Riga) http://ices.dk/sites/pub/Publication%20Reports/Stock%20Annexes/2016/her-2532-gor_SA.pdf

R13 - Initial Appraisal of a European Commission Impact Assessment. Impact Assessment (SWD (2014) 291, SWD (2014) 290 (summary)) of a Commission proposal for a Regulation of the European Parliament and of the Council establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks, amending Council Regulation (EC) No 2187/2005 and repealing Council Regulation (EC) No 1098/2007 (COM (2014). January 2016.
[http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/528811/EPRS_BRI\(2015\)528811_REV1_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/BRIE/2015/528811/EPRS_BRI(2015)528811_REV1_EN.pdf)

R14 - Danish Agrifish Agency <http://agrifish.dk/fisheries/fishery-control-and-enforcement/>

R15 – The Swedish Agency for Marine and Water Management <https://www.havochvatten.se/en/swam/policy-regulation/commercial-fishing.html>

R16- EFCA joint campaign details BALTIC SEA 2014
<http://www.efca.europa.eu/sites/default/files/atoms/files/THE%20BALTIC%20SEA%20JOINT%20CAMPAIGN%20-%202003%20MONTHLY%20REPORT%20-%20JDP-BS-2014-01.pdf>

R17 - ICES. 2017b. Report of the Baltic Fisheries Assessment Working Group (WGBFAS). Page 503.
<https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2017/WGBFAS/01%20WGBFAS%20Report%202017.pdf>

R18 - HELCOM. 2017a. First version of the “State of the Baltic Sea” report – June 2017 – to be updated in 2018.
<http://stateofthebalticsea.helcom.fi>

R19 – The Fisheries Department, Ministry of Agriculture, Republic of Latvia
<http://www.zm.gov.lv/en/statiskas-lapas/zemkopibas-ministrija/statiskas-lapas/fisheries-department?id=4225>

R20 – EC European Maritime and Fisheries Fund (EMFF) - Latvia
https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/op-latvia-fact-sheet_en.pdf

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R21 – The State Environmental Service (SES), Ministry of Environmental Protection and Regional Development, Republic of Latvia

<http://www.vvd.gov.lv/eng/about-us/>

R22 – LFPO Pelagic Trawl Sprat (*Sprattus sprattus*) Final Report, April 2017. Prepared by: Bureau Veritas Iberia

<https://fisheries.msc.org/en/fisheries/lfpo-pelagic-trawl-sprat-sprattus-sprattus/@assessments>

R23 – The Fishery Law, Republic of Latvia

www.vvc.gov.lv/export/sites/default/docs/LRTA/Citi/Fishery_Law.doc

R24 – Latvia ahead of schedule on improving fisheries control

https://ec.europa.eu/fisheries/latvia-ahead-schedule-improving-fisheries-control_en

R25 – HELCOM, 2018. State of the Baltic Sea – Second HELCOM holistic assessment 2011-2016.

<http://stateofthebalticsea.helcom.fi/>

R26 – ICES 2018 advice Herring <http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2018/2018/her.27.25-2932.pdf>

R27 – ICES (2018) Fisheries Overviews Baltic Sea Ecoregion 23pp

http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2018/2018/BalticSeaEcoregion_FisheriesOverviews_2018_November.pdf

R28 – ICES WGBFAS REPORT 2018 Herring in the Baltic Sea 115pp

<http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2018/WGBFAS/06%20WGBFAS%20Report%202018%20-%2004%20Herring%20in%20the%20Baltic%20Sea.pdf>

R29 – Hentati-Sundberg, J., Hjelm, J., and Österblom, H. 2014. Does fisheries management incentivize non-compliance? Estimated misreporting in the Swedish Baltic Sea pelagic fishery based on commercial fishing effort. ICES Journal of Marine Science, 71(7): 1846–1853. DOI: <https://doi.org/10.1093/icesjms/fsu036>

R30 – ICES Baltic sea sprat advice, May 2018:

<http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2018/2018/spr.27.22-32.pdf>

R31 - ICES REPORT WGBYC 2018 ICES ADVISORY COMMITTEE ICESCM 2018/ACOM:25 130pp

http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2018/WGBYC/wgbyc_2018.pdf

R32 - OSPAR Commission (2009) Background Document for Harbour porpoise *Phocoena phocoena* 33pp

https://www.ascobans.org/sites/default/files/document/OSPAR_Harbour-porpoise_background-doc_2009.pdf

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