

## RECOMMENDATIONS TO BALTFISH FOR THE SETTING OF FISHING OPPORTUNITIES FOR BALTIC SEA FISH STOCKS IN 2016

25 August 2015

The Fisheries Secretariat supports the setting of Total Allowable Catches (TACS) for the Baltic Sea in 2016 according to scientific advice provided by the International Council for the Exploration of the Sea (ICES). Our recommendations are in line with international and EU commitments for sustainable management of fisheries resources. We urge BALTFISH to consider our summary recommendations below which are described fully in the attached annex.

The Western Baltic cod stock is severely overfished, and continued overfishing is substantial. The stock assessments are highly uncertain for Eastern Baltic cod and Bothnian Bay herring. Salmon stocks remain depressed across most of the Baltic and particularly in the Gulf of Finland. Fishing mortality for sprat has increased to unsustainable levels.

ICES advice<sup>1</sup> shows a commitment to implement Article 2 of the reformed Common Fisheries Policy (CFP) and specifically the CFP's Maximum Sustainable Yield objectives. The advice identifies total fishery removals (total catch) from a stock regardless of fishery type or management area, which is a new approach from previous years. The TAC for 2016 should be determined by deducting recreational fishing, and accounting for stock portions caught in adjacent management areas to avoid exceeding the total catch advised by ICES.

### RECOMMENDED TAC FOR 2016, IN TONNES (EXCEPT SALMON, NUMBER OF FISH)

Stock by management area, subdivision (SD)	Current 2015 TAC	Recommended 2016 TAC
Cod, Western Baltic, 22-24	15 900	*5 239
Cod, Eastern Baltic, 25-32	51 428	**29 220
Herring, Central Baltic, 25-29 & 32	163 451	176 527
Herring, Gulf of Riga, 28.1	38 780	32 963
Herring, Bothnian Sea and Bothnian Bay, 30-31	158 470	103 254
Sprat, Baltic, 22-32	213 581	205 000
Plaice, Baltic, 22-32	3 409	4 091
Salmon, Baltic, 22-31 (number of fish)	95 928	89 300
Salmon, Gulf of Finland, 32 (number of fish)	13 106	10 100

\* Total advised catch of 7797 tonnes minus 2558 tonnes of estimated recreational fishing mortality (see below). The TAC for SD 24 may be adjusted upward to account for cod stock mixing **only** if separate sub-TACs are allocated and managed for areas SD 22-23 and SD 24 (see below).

\*\* This TAC may be adjusted downward to account for E. Baltic Cod in area SD 24 **only** if separate sub-TACs are allocated and managed for areas SD 22-23 and SD 24 (see below).

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<sup>1</sup> ICES advice released 29 May 2015 (W. Baltic cod updated 16 July 2015) <http://www.ices.dk/publications/library/Pages/default.aspx>

*Recreational catch of Western Baltic cod*

Recreational fishing catch is considered significant on Western Baltic cod. Only one Member State currently provides adequate recreational fishery data, which alone represents over 20 % of the anticipated 2016 advised total catch. Until other adjacent Member States contribute recreational fishing data, the current estimate is most likely an underestimation of true mortality.

*Sub-TACs for areas SD 22-23 and SD 24*

ICES has identified significant mixing in SD 24 of the Eastern and Western Baltic cod stocks. Reallocating a portion of the Eastern Baltic cod TAC to SD 24 would account for this stock mixing, but only if the extra TAC is restricted exclusively to SD 24 where the stock mixing occurs. There is a risk of overfishing Western Baltic Cod in SD22-23 if the extra TAC is caught over the whole management area SD 22-24. Thus we support the ICES scenarios which deduct unchanged recreational fishing catch and create separate sub-TACs for SD 22-23 and SD 24, prioritising protection of the weaker Western Baltic cod stock.

**The attached annex provides more details of the ICES advice and rationale for the recommended TACs.**

You can also find the annex and this letter on our website, at the following link:

<http://www.fishsec.org/position-papers/>

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## **ANNEX**

### **RECOMMENDATIONS TO BALTFISH FOR THE SETTING OF FISHING OPPORTUNITIES FOR BALTIC SEA FISH STOCKS IN 2016**

25 AUGUST 2015

Here we provide a summary of the latest advice from the International Council for the Exploration of the Sea (ICES) regarding the exploitation of the Baltic Sea fish stocks for 2016.<sup>1</sup> We provide recommendations to BALTFISH for the setting of fishing opportunities in 2016 based on this advice.

#### **ADVICE ACCORDING TO THE NEW CFP**

ICES conducts stock assessments and provides advice according to the objectives of the reformed EU Common Fisheries Policy (CFP) – importantly Article 2.2:

*The Common Fisheries Policy shall apply the precautionary approach to fisheries management, and shall aim to ensure that exploitation of living marine biological resources restores and maintains populations of harvested species above levels which can produce the maximum sustainable yield.*

*In order to reach this objective of progressively restoring and maintaining populations of fish stocks above biomass levels capable of producing maximum sustainable yield, the maximum sustainable yield exploitation rate shall be achieved by 2015 where possible and on a progressive, incremental basis at the latest by 2020 for all stocks.*

This objective is also in line with the EU commitment made in Johannesburg in 2002.<sup>2</sup> Rather than focusing on avoiding an undesired outcome – as is the case with the precautionary approach – the Maximum Sustainable Yield (MSY) framework strives at achieving a desired outcome: a high sustainable long-term yield.

#### **TOTAL CATCH AND TOTAL ALLOWABLE CATCH (TAC)**

The “total catch” expressed in ICES advice is not always synonymous with Total Allowable Catch (TAC).

ICES advises the total catch for a stock whenever possible. Total catch represents the total fishing mortality for a stock from all types of fishing and across the stock’s full range. The range of a stock may cross multiple management areas. ICES notes where the data, and therefore the advice are uncertain. For some data-limited stocks, ICES may be unable to estimate total catch and advises total landings only.

According to the European Commission, a TAC applies to specific management areas and only to commercial fisheries. For fisheries under the landing obligation, the corresponding TAC represents total commercial catch. For fisheries not yet under the landing obligation, the corresponding TAC represents only commercial landings. ICES may suggest ways to

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<sup>1</sup> Full ICES advice, including 16 July 2015 updates, is available at <http://www.ices.dk/publications/library/Pages/default.aspx>

<sup>2</sup> Johannesburg Declaration, WSSD, 2002.

distribute this catch between areas and user groups, but holds no preference for any distribution method other than preventing total fishing mortality from exceeding their advised total catch. We have noted where stocks cross management areas and used ICES advice to calculate corresponding TACs.

**Difference between ICES advised total catch and TAC**

	<b>total catch (ICES)</b>	<b>Total Allowable Catch (TAC)</b>
Framework	scientific	management, informed by science
Constraint	stock range	management area
Stakeholder	all	commercial
Fishing Mortality	total	dependent on landing obligation

**DEFINITIONS AND BASIS FOR ADVICE**

The fishing mortality rate (F), or exploitation rate, is a metric for the number of fish killed by fishing. Exploitation rates ( $F_{MSY}$ ) in line with the MSY approach are estimated to maximise the average long-term catch within the prevailing ecosystem considerations. The only way to sustainably fish at  $F_{MSY}$  is if the fish stock is large enough on average to support that level of fishing mortality. This corresponding average stock level, measured in Spawning Stock Biomass (SSB), is termed  $B_{MSY}$ . The SSB, measured in tonnes, represents only those fish mature enough to reproduce.

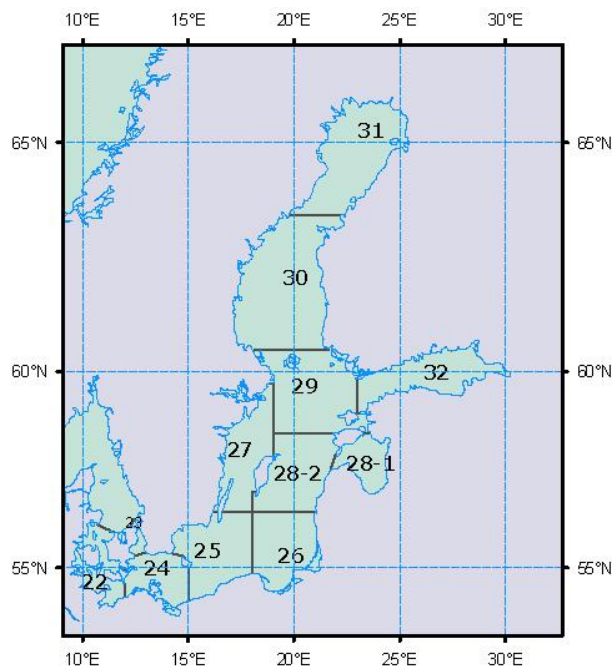
ICES applies different SSB reference points within the MSY framework to represent biomass levels necessitating a management response. A healthy SSB will naturally fluctuate around  $B_{MSY}$ . The lower bound of this fluctuation is  $B_{trigger}$ , below which ICES advises a more conservative F to allow the fished stock to rebuild. In extreme cases stocks could be depressed through natural or fishing mortality to the lowest reference point,  $B_{lim}$ . This represents the SSB below which a fish stock will experience recruitment failure. Fishing a stock to such a low level is disastrous for the fished stock and for dependent fishing communities. Recognising this danger, coupled with fisheries stock assessment uncertainty, ICES developed a precautionary buffer called  $B_{pa}$ . Generally  $B_{pa}$  is  $B_{lim}$  scaled up by a multiplier, representing a slightly larger SSB to provide managers response time to reduce fishing mortality. In practice  $B_{trigger}$  is often set at  $B_{pa}$  even though the two concepts have a different basis.

In 2012, ICES developed a framework for quantitative advice regarding data-limited stocks. The framework categorises all stocks into six different categories from data-rich to data-poor. Data-limited advice is essentially based on a combination of biomass indices and landings data (depending on what is available) and a  $\pm 20\%$  “uncertainty cap” applied to the previous years’ advice or so-called *status quo* landings. Although ICES considers all data categories precautionary, ICES references the precautionary approach specifically when providing advice on data limited stocks, and the MSY approach when providing advice on data-rich stocks.

## DETAILED SUMMARY OF RECOMMENDATIONS FOR BALTIC FISHING OPPORTUNITIES

ICES provides total catch advice applicable to a stock across that stock’s total range. The Commission applies a TAC to a stock by management area. Both ICES and the Commission identify stocks by the management area subdivisions (SD) which contain the bulk of the stock.

### Map of the Baltic Sea showing subdivisions (SD) used for management<sup>3</sup>



### COD

Since 2004, the Baltic Sea cod (*Gadus morhua*) has been managed as two separate stocks, the Eastern and the Western stock, with advice provided per fishing zone regardless of stock mixing. Although biologically distinct, significant mixing of the Eastern and Western stocks in SD 24 has challenged ICES to refine their advice. Based on the 2015 cod benchmarking exercise, ICES advice is more thorough concerning stock in SD 24 and includes several scenarios to manage this stock overlap.

In late 2014 the Baltic experienced its third largest recorded inflow event, receiving 198 cubic metres of oxygenated, highly saline water and ending a decade-long stagnation in the central Baltic.<sup>4</sup> This will have a positive impact for the productivity of cod and other species in the Baltic, although seeing the impact in fishery productivity may take a year or two to develop.

In the context of the landing obligation we applaud the Commission’s statement in its 2016 fishing opportunities proposal COM 2015 (239) that adjustments of fishing opportunities to account for fish previously discarded will not be done at the cost of reaching MSY. Owing to the current lack of effective monitoring and limited proof of compliance with the landing obligation, any increase in Total Allowable Catch (TAC) could potentially result in a further increase in both landings and discards.

<sup>3</sup> UN Food and Agricultural Organisation (FAO) major fishing areas, <http://www.fao.org/fishery/area/Area27/en>

<sup>4</sup>Mohrholz V., Naumann M., Nausch G., Krüger S. and U. Gräwe. 2015. Fresh oxygen for the Baltic Sea – An exceptional saline inflow after a decade of stagnation. *Journal of Marine Systems*, 148: 152-166.

While we applaud the Commission's effort in the forthcoming Technical Measures Framework, **action is urgently required to curb unreported discarding and improve selectivity in the fisheries already under the landing obligation, particularly in the fisheries for Baltic cod.**

*Cod in Subdivisions 22–24, Western Baltic*

ICES revised their advice on the Western Baltic cod stock on 16 July 2015 and the new figures are presented here.

Western Baltic cod is severely overfished. Fishing mortality is well above  $F_{MSY}$ . The Spawning Stock Biomass (SSB) has hovered below  $B_{LIM}$ , near collapse, for eight years. Even with the expected growth of this stock in 2016 to levels just above  $B_{LIM}$ , the stock will still be under  $B_{PA}$ , outside of safe biological limits. While ICES anticipate growth in SSB will continue, the Baltic ecosystem is highly variable and cod stock productivity can change dramatically in a short time. There is a risk of recruitment failure in this stressed stock.

Western Baltic cod belong to possibly three spawning populations: the Sound (SD 23), the Belt Sea (SD 22) and the Arkona basin (SD 24). Spawning occurs during different periods of the year. A recent study indicates that local measures should be taken to protect cod spawning in the Sound.<sup>5</sup> ICES urges extra control of fishing pressure on the Western Baltic cod through a sub-TAC for SD 22-23, to no more than 65% of the total Western Baltic cod TAC, a maximum limit of 3 405 tonnes for 2016, to protect locally spawning cod.

Stock mixing of the Eastern and Western Baltic cod stocks has become a significant problem in subdivision (SD) 24. ICES considers this mixed stock catch exclusively an offshore commercial phenomenon, with inshore recreational fisheries only catching cod from the Western stock. Reallocating a portion of the Eastern Baltic Cod TAC to SD 24 would account for this stock mixing, but there is a risk of overfishing Western Baltic cod in SD 22-23 unless the extra TAC is fished exclusively in SD 24. ICES provides several scenarios for dividing the total catch of this stock into a commercial TAC, but does not take a preference on any one specific scenario.

**The most important consideration when allocating Western Baltic cod TAC is precaution. In the setting of commercial TAC, the advised total catch must first be reduced by the estimated recreational fishing effort (7 797 tonnes minus 2 558 tonnes) to avoid exceeding the total catch advised by ICES.**

**We urge precaution in the allocation of Western Baltic cod TACs and ask BALTFISH to view ICES advice, no more than 5 239 tonnes after the removal of estimated recreational fishing effort, as an upper limit for fishing opportunities. The Western Baltic cod TAC for SD 24 may be adjusted upward to account for cod stock mixing only if separate sub-TACs are allocated and managed for areas SD 22-23 and SD 24.**

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<sup>5</sup>Lindegren M., Waldo S., Nilsson P.A., Svedäng H. and A. Persson. 2013. Towards sustainable fisheries of the Öresund cod (*Gadus morhua*) through sub-stock-specific assessment and management recommendations. ICES Journal of Marine Science, 70: 1140–1150.

*Cod in Subdivisions 25–32, Eastern Baltic*

Following their 2015 benchmarking exercise, ICES maintains that Eastern Baltic cod is data-limited. Key issues in the analytical assessment include the failure to confidently age cod, changes in cod growth which ICES has not been able to quantify, and a recent dramatic decrease in older cod without a clear picture of the fishing mortality for these ‘megaspawners’. These issues, among others, increase the current assessment’s uncertainty to such a degree that the full analytical assessment is unusable. Over the past two years, based on an indexed trawl survey, ICES estimates that the Eastern Baltic cod SSB has decreased by more than 20%.

ICES estimates total Eastern Baltic cod catch in 2014 at 45 657 tonnes, which includes 11 310 tonnes of discards. Much of the cod catch in 2014 was below the minimum landing size, possibly due to the decreased growth rate of cod in this particularly stressed ecosystem.

We call for coordinated scientific assessments for the entire Baltic Sea region to be undertaken in order to address concerns identified in the advice thus validating an analytical assessment for next year at the latest.

**We urge BALTFISH to support ICES advice and allocate a TAC for Eastern Baltic cod of no more than 29 220 tonnes. This TAC may be adjusted downward to account for Eastern Baltic Cod catch in SD 24 only if separate sub-TACs are allocated and managed for SD 22-23 and SD 24.**

HERRING

The Baltic herring (*Clupea harengus*) is managed in four separate areas: Central Baltic Sea, Gulf of Riga, Bothnian Sea and Bothnian Bay. Management of Baltic herring is evolving in the forthcoming Baltic multiannual multi-species management plan for cod, sprat, and herring, currently in negotiation.

The Central Baltic and Gulf of Riga herring stocks overlap in area 28. ICES provides its primary advice on the total catch of these stocks, then identifies the proportion of stock mixing and the resulting TAC for each management area.

Stock boundaries for Bothnian Bay and Bothnian Sea herring are still under debate.

*Herring in Subdivisions 25–29 and 32, Central Baltic Sea, excluding Gulf of Riga*

This is the largest of the Baltic herring stocks, composed of a number of local populations. Following a SSB decline below  $B_{lim}$  in the late 1990s, the stock has shown a steady increase and is now well above  $MSY B_{trigger}$ . Fishing mortality has remained below  $F_{MSY}$  since 2004.

The assumed 2016 commercial catch of this stock in the Gulf of Riga, outside of the Central Baltic, is 4 620 tonnes. The assumed 2016 commercial catch from the Gulf of Riga herring stock in the Central Baltic is 220 tonnes. The corresponding TAC for the Central Baltic management area would recognise the mixing of these two stocks. We support an industry proposal presented at the Baltic Sea Advisory Council (BSAC) to reduce the advised TAC to account for Russian catch.

**In line with the MSY approach and ICES advice, and reduced in agreement with industry representatives as BSAC, we urge BALTFISH to support a Central Baltic Herring TAC of 176 527 tonnes.**

*Herring in Subdivision 28.1, Gulf of Riga*

The Gulf of Riga is a semi-enclosed ecosystem of the Baltic Sea and the low salinity restricts the occurrence of marine species. Herring is the dominant species in the Gulf, and predation mortality is low for the Riga herring.

The assumed 2016 commercial catch of this stock in the Central Baltic, outside of the Gulf of Riga, is 220 tonnes. The assumed 2016 commercial catch from the Central Baltic herring stock in the Gulf of Riga is 4 620 tonnes. The corresponding TAC for the Gulf of Riga management area would recognise the mixing of these two stocks. Through a compromise with industry during a BSAC meeting, and given the health of this stock and stock mixing with Central Baltic herring, we support a slightly higher TAC than advised.

**Given the relatively good state of this stock, we urge BALTFISH to support a 15% reduction from the currently implemented TAC, as proposed by BSAC, resulting in a Gulf of Riga herring TAC of no more than 32 963 tonnes.**

*Herring in Subdivisions 30-31, Bothnian Sea & Bothnian Bay*

Although ICES assesses these as two independent stocks with separate assessments, Council normally allocates a combined TAC. The entire area TAC is considered precautionary due to uncertainty in the Bothnian Bay herring assessment.

Bothnian Sea herring is slow-growing and relatively small due to low salinity and mean temperature. Spawning stock biomass tripled in the late 1980s, only to then drop by 40% by 1999. Since 2003, this stock's SSB has grown to the highest levels assessed in 20 years. While still high, ICES has dramatically revised the stock's estimated SSB downward due to a necessary change in the assessment to handle ongoing uncertainty concerns. These concerns should diminish over time as the acoustic survey time-series grows. Due to the lower SSB, ICES has decreased its advised catch by nearly 50% from 181 000 tonnes in 2015 to 96 613 tonnes for 2016.

Bothnian Bay herring is a small stock at the species' most northerly range under relatively extreme environmental conditions. A combination of low salinity, long winters, ice cover and cool summers affect this stock's growth. ICES categorises Bothnian Bay herring as data-limited and bases its 2016 advice on an exploratory assessment. Although uncertain, the survey index shows an increasing trend in excess of 20% which permits a precautionary increase in advice to 6 641 tonnes.

**We urge BALTFISH to support a combined TAC of no more than 103 254 tonnes for Bothnian Sea and Bothnian Bay herring, which corresponds to ICES advice and the precautionary approach.**



## SPRAT

*Subdivisions 22-32*

Sprat (*Sprattus sprattus*) is managed as a single stock across the Baltic Sea. Declining to below  $B_{lim}$  in the early 1980s, sprat has since recovered to well above  $B_{trigger}$  reaching a maximum assessed SSB in 1996 of 1.9 million tonnes. Sprat stocks have since declined, approaching but still above  $B_{trigger}$ . At present sprat is being harvested unsustainably according to ICES estimates of fishing mortality. Since 2006 sprat stocks have not been under a management plan, but sprat is incorporated in the forthcoming Baltic multiannual multi-species management plan for cod, sprat, and herring, currently in negotiation.

Cod and clupeid stocks (including sprat and herring) share a strong predator-prey relationship. Higher cod SSB in the early 1980s contributed to lower sprat populations. As cod declined, sprat recovered. At present sprat is more abundant in areas outside of the cod's range. ICES estimates that 47% of the total 2014 sprat catch was taken in the southern Baltic, SD 25 and 26. Decreasing fishing effort on sprat in SD 25 and 26 would make more sprat available as feed for cod, improving cod growth. Increasing effort northward in the Baltic to SD 27–32 would also optimize the yield and growth of sprat and herring by reducing competition within these stocks for prey. Because of this skewed geographic distribution, species interactions between cod and clupeids, and possible management concerns to improve cod condition, ICES suggests, but does not specifically advise, that a spatial management plan be devised and implemented for clupeid stocks.

**We urge BALTFISH to support a Baltic-wide sprat TAC of no more than 205 000 tonnes, which corresponds to ICES advice and the MSY approach.**

## PLAICE

*Subdivisions 22-32*

Plaice (*Pleuronectes platessa*) is common in the western Baltic and extends eastwards to the Gulf of Gdansk and northwards to the Gotland area; it is sporadically found farther north. There are at least two plaice populations. According to the annual scientific trawl survey, plaice stocks appear to be increasing strongly. Due to an increase in data quality for the western stock from last year, ICES applied the MSY approach for the 2016 advice. ICES categorises the Eastern stock as data-limited, which limits increases in advice to 20%. Both stocks are subject to high levels of discarding as bycatch.

**We urge BALTFISH to support a Baltic-wide plaice TAC of no more than 4 091 tonnes, which corresponds to ICES advice and the precautionary approach.**

## SALMON

The last Baltic-wide management plan for Baltic salmon (*Salmo salar*) ended in 2006. The European Commission proposed a new plan in 2011 (COM(2011)470) which is still in negotiation. The lack of an approved long-term management plan for Baltic salmon is particularly serious as Baltic salmon is listed under the Habitats Directive, obliging Member States to ensure “favourable conservation status”. It is also covered by targets in the Water Framework Directive and the Marine Strategy Framework Directive.

ICES advises on Baltic salmon catch within two management areas: the Main Basin and the Gulf of Bothnia (SD 22–31), and the Gulf of Finland (SD 32). Within these management areas Baltic salmon exist in a large number of river-specific populations ranging from healthy to vulnerable. In many parts of the Baltic Sea region, particularly in the South, natural salmon populations have declined or even disappeared.

Despite some positive developments, such as improved habitats in both spawning and nursery areas and subsequent increases in natural reproduction, the wild salmon in several rivers have not recovered. Juvenile salmon suffer higher than expected mortality. The reasons for this low survival are still largely unknown.

Baltic salmon stocks remain depressed due to a combination of environmental factors, fishing mortality, substantial misreporting, low post-smolt survival and poor reproduction of some populations. Fisheries in open sea areas or coastal waters pose a greater threat to depleted stocks than fisheries in estuaries and rivers. ICES advises that management of salmon fisheries should be based on the status of individual river stocks, and that fisheries on mixed stocks should be reduced as they present particular threats to stocks that do not have a healthy status.

#### *Salmon in Subdivisions 22–31, Baltic Sea excluding Gulf of Finland*

ICES assesses 29 rivers divided into 5 assessment units based on salmon biology and genetics. Since 1997 wild smolt production has increased substantially from very low values, particularly in the North. Smolt production in the Southeast shows no signs of improvement. Increases in production are mainly due to increases in 2–3 rivers. The situation in the southernmost rivers is unchanged or deteriorating.

To evaluate the status of specific salmon runs, ICES uses the smolt production in 2014 relative to projected natural smolt production capacity on a river-by-river basis. The target for rebuilding stocks is to reach at least 75%<sup>6</sup> of the estimated potential smolt production for each river. As an interim objective for weak stocks, 50% of the potential smolt production is used. Out of 29 stocks assessed, only 4 rivers show a high probability of reaching the 75% target in the near future, while 18 rivers are less than 30% likely to reach this goal. Of those rivers, 7 are less than 30% likely to meet even the interim goal.

The rivers Rickleån, Kågeälven, and Öreälven in the Gulf of Bothnia, Emån in southern Sweden, and several other rivers in the Southeastern Main Basin are especially weak and desperately need longer-term stock-specific rebuilding measures.

ICES advises a total commercial catch at sea of 116 000 individuals, including an estimated 10% unwanted catch and 90% wanted catch. ICES estimates the fishery will correctly report only 77% the total commercial salmon catch. ICES estimates that the remaining wanted catch will be 6% misreported and 7% unreported. Recreational fishing at sea will catch an estimated 19 000 more salmon, and river catches an additional 39 000 more salmon. Our TAC recommendation is reduced to account for incorrect reporting.

**We urge BALTFISH to support a salmon TAC in the Baltic Sea, excluding the Gulf of Finland, of no more than 89 300 individual fish, which corresponds to ICES advice and the MSY approach.**

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<sup>6</sup>In the HELCOM Baltic Sea Action Plan, the target is 80 % of potential smolt production.

*Salmon in Subdivision 32, Gulf of Finland*

This area contains a few small, wild populations with mixed reared and wild salmon caught in some rivers. The wild salmon populations are genetically distinct from each other, which indicate that these still are original salmon stocks, meaning that they have not reproduced with reared salmon. Reared salmon are easily identified by their missing adipose fin. This fin is removed before releasing a reared salmon into the wild.

ICES considers salmon stocks in the Gulf of Finland data-limited and advises using the precautionary approach. Very little data on wild smolt production is available for the assessment, consisting mainly of limited electrofishing surveys. Recreational sea and river catch is uncertain. In ICES expert judgement, all wild salmon rivers in the Gulf of Finland are well below the 75% potential smolt production target and generally not showing signs of recovery.

According to ICES, a reduction in the TAC alone would most likely not safeguard wild populations from exploitation. Instead, ICES advises the development of more selective harvesting methods that target reared salmon.

Assuming a similar amount of restocking to previous years, ICES advises a total commercial catch at sea of 11 800 reared salmon, including an estimated 10% unwanted catch and 90% wanted catch. ICES estimates the fishery will correctly report only 83% the total commercial salmon catch leaving 7% unreported. Our TAC recommendation is reduced to account for incorrect reporting.

**We urge BALTFISH to support a Gulf of Finland salmon TAC of no more than 10 100 individual reared fish, with 0 catches of wild salmon, corresponding to ICES advice and the precautionary approach.**

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