

Oceana recommendations on fishing opportunities for 2014

Baltic Sea Stocks



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Introduction

In advance of the next EU Commission proposal and Council decision on fishing opportunities in the Baltic Sea, Oceana would like to provide a constructive opinion on how total allowable catches (TACs) should be fixed for 2014. It is our hope that the EU Commission and EU Member States take into account the recommendations contained in this document and propose TAC levels that are in line with scientific advice, thereby balancing conservation and exploitation objectives.

This year, the TACs for the Baltic Sea will define a pivotal momentum for the TAC and quota negotiations as being the first to be adopted after the EU agreement for the future Common Fisheries Policy (CFP) on achieving Maximum Sustainable Yield by 2015.

The new CFP is expected to enter into force in January 2014, with only one year left to achieve MSY. The International Council for the Exploration of the Seas (ICES) has been presenting advice on how to transition to MSY by 2015 for several years now. Unfortunately, the Ministers have decided to only follow this advice for some stocks. This year's agreement on TACs will therefore reflect the willingness of the Ministers to implement what they have already agreed on.



Hanna Paulomäki, Baltic Sea project manager

State of resources

Fisheries resources in the Baltic Sea have improved in recent years with 6 out of 11 stocks at or above levels of Maximum Sustainable Yield (MSY). However, data is lacking for some stocks with a TAC and many commercial stocks in the Baltic Sea lack proper management, such as TAC or effort control, including for example most of the flatfish stocks as well as sea trout. Moreover, most of the

stocks in the Baltic Sea lack a long term management plan. Properly designed management plans, prioritising long term environmental sustainability, will alleviate the pressure on decision makers to set TACs based on short term economic interest rather than ensuring the sound management of public natural resources. The setting of TACs must guarantee the sustainable exploitation of resources as an unavoidable requirement for ensuring the long term economic viability of the fishing sector.

Recovering stocks to levels over MSY is essential to economic efficiency, as restoring stock productivity and ecosystem health will result in better revenues for fishers and will improve the welfare of fishing communities.

The future Common Fisheries Policy (CFP) defines a new scenario for TACs and quotas: "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". Reaching MSY by 2015 when possible should no longer be considered as an option but as an obligation for all those stocks where science has demonstrated that under the adequate measures, the target can be achieved. MSY should therefore be reached for all stocks without delay.

Oceana sees MSY management as a step in the right direction for the management of European fisheries. However in the longer term, fisheries management should go beyond MSY to ensure the long term environmental and economic sustainable exploitation of marine resources. In the future CFP, the MSY objective should therefore be seen as an upper limit for exploitation rather than a target.

Data-poor stocks

Currently around 41% of stocks subject to catch limits in the EU are not fully assessed, which means that implemented TACs can neither guarantee sustainable exploitation, nor can they guarantee reaching MSY. In the Baltic Sea, this is the case for the two stocks of plaice as well as herring in the Bothnian Bay. To remedy this situation the Commission has promoted the use of alternative assessment methods appropriate for data-poor stocks to provide quantitative catch recommendations.

Oceana welcomes the use of these methods as it will allow the use of best available scientific information to implement precautionary management measures and increase the number of stocks covered by scientific advice. However, Oceana is of the opinion that the assessments realized using qualitative analysis should only lead to maintaining the TAC at the same level or decreasing it, and only in select few cases should they lead to an increase in the TAC. In this way the precautionary approach will be applied and Member States will be encouraged to provide accurate information on fisheries to develop sound assessments. Oceana welcomes the progressive reduction of data-poor stocks, and encourages and hopes that this is a continuing trend.

Management plans

Oceana supports the Commission's intention to move from single-stock/species management plans towards multi-species management plans. This new type of multiannual plans (MAP) should not only focus on the target species but should also ensure that wider effects on the ecosystem be taken into consideration by integrating specific measures to minimize unwanted catches by using a best available technology approach, minimizing fishing impacts on marine habitats, ensuring an appropriate size, age and geographical distribution of fish stocks as well as protecting essential fish habitats. In this manner, they should also contribute to achieving the objective

under the Marine Strategy Framework Directive¹ to restore or maintain the good environmental status of marine waters by 2020.

Unfortunately, several MAPs, including the needed Baltic salmon MAP are currently blocked in institutional limbo. Oceana believes this must be urgently addressed and solved so as to facilitate the increase of the number of stocks managed through MAPs.

A multi-species plan for the Baltic Sea is currently under discussion in the European Union, and is aimed at developing joint management measures for cod, herring and sprat. Oceana believes that such a plan should ensure that long term environmental sustainability is prioritized and that wider environmental impacts apart from those affecting target species, are considered when defining the plan.

Oceana's principles for proposing TACs for 2014

The Commission has proposed the following principles to set fishing opportunities for 2014:

1. Apply harvest control rules consistent with what is contained in long-term management plans;
2. Implement TACs and other measures that have already been agreed with third countries;
3. Set TACs in accordance with scientific advice and with the ICES "MSY framework" to reach fishing mortalities in line with MSY by 2015;
4. Use qualitative analysis to set TACs for poor data stocks; and
5. Apply the precautionary approach where there is no scientific advice.

Oceana supports these guidelines and emphasises the urgent need to follow the ICES MSY framework, as a commitment to reduce overfishing and as an intermediate step towards rebuilding fish stocks to their most productive levels.

¹ Directive 2008/56/EC. Marine Strategy Framework Directive.

Oceana further encourages Member States to incorporate more species into the Baltic Sea TAC regime, starting with those for which ICES has already provided scientific advice on stock status and recommended catch limits.

Finally, Oceana considers that the allocation of fishing opportunities should give priority to fishermen applying the most environmentally sound practices, thus rewarding fishing methods that are the most selective and least destructive to the environment.

Oceana TAC proposal (in tonnes, except for salmon which is expressed as number of individuals) for Baltic Sea stocks. Brackets compare TAC difference in % from previous year

Species	Fishing area	TAC 2013	Stock Status	Commission proposal	Oceana proposal 2014
<i>Gadus morhua</i>	22-24	20 043 (-6%)	Above Bmsy (but F>Fmsy)	17 037 (-15%)	11 300 (-44%)
<i>Gadus morhua</i>	25-32	61 565 (-7%) ¹	Above Bmsy	65 935 (7%) ¹	70 301 (2%) ²
<i>Clupea herrungus</i>	22 – 24	25 800 (23%)	Below Bpa and Bmsy	19 754 (-23%)	19 754 (-23%)
<i>Clupea herrungus</i>	25-29 and 32	90 180 (15%) ¹	Above Bmsy	143 500 (59%) ¹	164 000 (82%) ² No fishing in area 25-26
<i>Clupea herrungus</i>	28.1	30 576 (0%)	Above Bmsy (F>Fmsy)	30 720 (0%)	25 800 (-16%)
<i>Clupea herrungus</i>	30-31	106 000 (0%)	Above Bmsy (30), unknown (31)	142 662 (35%)	142 662 (35%)
<i>Sprattus sprattus</i>	22-32	249 978 (11%) ¹	Above Bmsy	222 102 (-11%) ¹	247 000 (-1%) ² No fishing in area 25-26
<i>Pleuronectes platessa</i>	22-32	3409	Unknown but increasing (data poor stock)	3002 (-12%) (area 22-32) ³	3224 (including subdiv 21) ³
<i>Salmo salar</i>	22-31	108 421 (-11.3%)	N/A	108 421 (0%)	52 000 (-52%)
<i>Salmo salar</i>	32	15 000	N/A	7256 (-53%)	0 (-100%)

1. EU TAC only.

2. Including Russian part of the TAC, according to the ICES advice.

3. EU management areas and ICES assessment areas are not equivalent. The Oceana proposal includes the Kattegat part of the TAC, according to the ICES advice.

Cod (*Gadus morhua*)

Species description

This epibenthic, pelagic species can be found in a wide variety of habitats, from the coast to the deeper areas. It forms aggregations during the day. Cod is an omnivorous species and its diet consists of invertebrates and fish, including its own juveniles. The Baltic cod stocks are divided into the western and the eastern stock separated by the island of Bornholm.

State of the stocks

Cod stocks have been subject to a management plan since 2007², and while the eastern stock has shown significant signs of recovery since its inception, the western stock is still suffering from a fishing mortality above sustainable levels. The management plan is under revision and a proposal for a new multi species management plan is expected soon.

Cod in the western Baltic Sea, subdivisions 22-24: The western stock has been recovering slowly since the implementation of the management plan. The spawning stock biomass (SSB) has been above MSY and precautionary levels since 2012. According to ICES, the stock is at full reproductive capacity. However, fishing mortality (F) is above the target for MSY as well as the target of the management plan. There is currently a high discrepancy between the fishing mortality target in the management plan (0.6) and the estimation of FMSY (0.26). There is also a large variation in abundance between the subdivisions; in subdivision 24 the abundance of older cod is at a historically high level, likely as a result of spill over from the eastern stock, while the abundance of

² EC No 1098/2007 establishing a multiannual plan for the cod stocks in the Baltic Sea and the fisheries exploiting those stocks.

cod in subdivision 22 is low. Discards are estimated at 900 tones, approximately 4.5 % of total catches in weight.

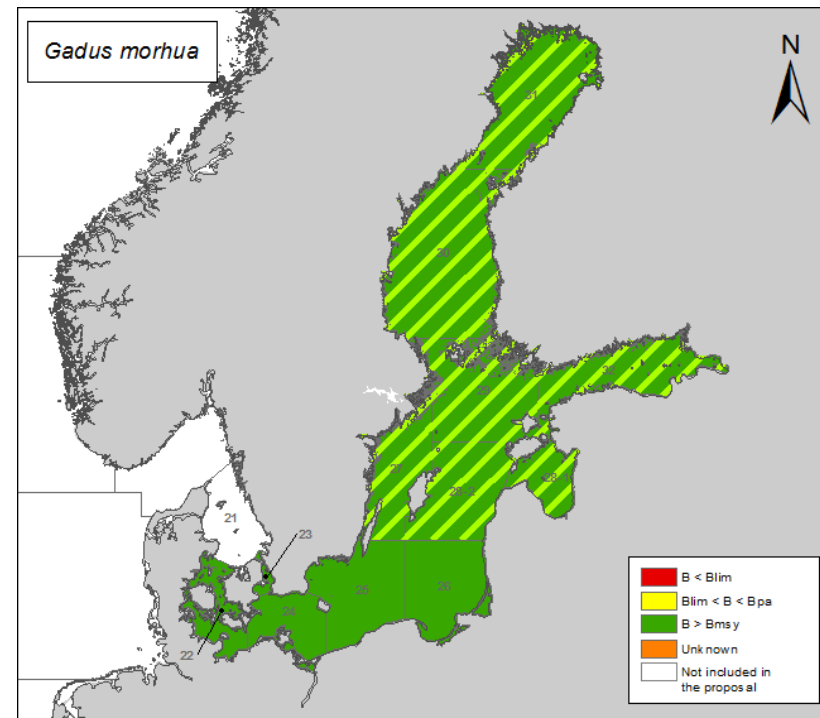


Figure 1. Cod stock status in ICES areas included in the proposal according to spawning stock biomass. NB: cod mainly occurs in subdivisions 22-26 and only scarcely occurs north of these subdivisions, despite the light green striped areas belonging to the eastern stock management area.

Recreational catches are high and estimated at around 10% of total catches and only parts of the catches have been included in the assessment. ICES recommends that the TAC in 2014 should be 17

037 tonnes in order to meet the target in the management plan. However, this should be complemented with additional management measures restricting catches in area 22 where the stock is particularly weak. ICES outlines three different options; 1) seasonal closure in the first quarter of the year; 2) a separate TAC for area 22; and 3) additional effort restrictions in area 22. In order to reach MSY in one year, a maximum TAC of 8 800 tonnes should be set. Reaching MSY by 2015 in an annual stepwise approach results in a TAC of total 11 300 tonnes.

Cod in the eastern Baltic Sea, subdivisions 25-32: The SSB of the eastern stock has improved significantly since the realisation of the management plan, which has led to cautious TAC setting, as well as improved fisheries control. The stock is considered to be harvested sustainably in relation to MSY, but is currently just above the management target. The spawning stock biomass is at full reproductive capacity. However, despite the increase in SSB in recent years, the stock is still limited to a rather small geographical area, mostly to area 25 where the only successful reproduction is taking place. Former spawning grounds are not inhabited due to the deteriorating environmental conditions of the Baltic Sea. Individual adult cod are reported to be very thin, likely as a result of scarce food availability in area 25. Coastal fishermen are reporting that the catches are still low despite the increase in SSB, and some fishermen are even calling for decreased TACs as a result. Moreover, SSB has been constantly overestimated during the last years and F has been underestimated. Discards are high, at around 12% of the total catch. ICES recommends that the TAC be set at 70 301 tonnes in order to fulfil the targets in the management plan. In order to reach MSY, total landings should not exceed 94 380 tonnes. The ICES recommendations include the Russian part of the TAC for this stock. It should be noted that this year, ICES has revised the MSY target from the previous proxy of 0.25 to 0.46. The new F target of 0.46 stems from modelling runs that provide a range of values between 0.27 to 0.54. Thus 0.46 is in the higher end of the range. ICES concludes that values in the higher end of the range will not increase yield substantially but will imply a higher risk of low SSB and that “managers might like to consider the risks and potential

benefits that are associated with different candidate values”. Cod cannibalism is given as one of the reasons for the higher F target, but at the same time, ICES also concludes that a reduction of fishing mortality on herring and sprat, the main feed for cod, in area 25 will likely improve growth conditions for cod and reduce cod cannibalism.

Oceana recommendations

Considering that cod in the Baltic Sea is slowly recovering and that there are signs that some stocks are still in rather poor condition, as the western stock is still only hovering just above Bpa and not fished in accordance with MSY and the eastern stock on the other hand showing a limited distribution and poor size composition, Oceana recommends that TAC setting remains cautious for the eastern stock and that management measures beyond the management plan are taken for the western stock. It is important to bear in mind that the 15% cap on TAC increases has had a great effect on the increase in SSB for the eastern stock as managers have had to apply cautious TAC increases despite the positive development in SSB. Oceana questions the MSY target chosen for the eastern stock. Out of a range of 0.27 – 0.54, a value of 0.46 was chosen, which is in the higher end of the range and far from its previous proxy of 0.25 as well as the Fmsy target of its neighbouring stock at 0.26, despite ICES concluding that higher Fs are unlikely to result in higher yields but would increase the risk of running into low SSB. One of the main arguments for the choice of a higher fishing mortality is that low fishing mortalities increase the risk of cod cannibalism. Oceana is of the opinion that out of precautionary reasons and in a multi species context, a value in the lower end should be chosen for Fmsy, and the issue of cannibalism should instead be solved by applying a zero fishing mortality to herring and sprat, the main food source for cod, in subdivision 25 and 26.

Cod in the western Baltic Sea, subdivisions 22-24: The TAC should not exceed 11 300 tonnes according to the ICES transition towards the MSY approach. This means diverging from the management plan, a necessary and urgent measure considering the international commitment to achieve MSY in 2015. Last year, the

ministers went further than the management plan, but not far enough, when setting the TAC. It is necessary to follow the ICES transition towards the MSY approach, considering that the 2015 deadline for MSY is approaching fast. Oceana also recommends that further restrictions be implemented on the catches in subdivision 22, where the stock is particularly weak. Fisheries during the spawning period should therefore be closed in this subdivision.

Cod in the eastern Baltic Sea, subdivisions 25-32: The management plan for this stock should be followed, meaning a

maximum TAC of 70 301 tonnes (including the Russian part of the TAC), which is in the framework of MSY management and is expected to allow the SSB to increase further. In the future, decision makers and managers must ensure that the long term ecosystem health is given the highest priority when setting management targets for this stock.

Table 1. Comparative table of cod TACs (in tonnes) in ICES areas registered in the proposal, Council decision for 2012 and 2013, and stock status and Oceana proposal for 2014. Brackets compare TAC difference from previous year (in %). Russian part of the TAC is included for the eastern stock.

Fishing area	Name area	TAC 2012	TAC 2013	Stock Status	Oceana proposal 2014
22-24	Western stock	21 300 (13%)	20 043 (-6%)	Above MSY (but $F > F_{msy}$)	11 300 (-44%)
25-32	Eastern stock	74 200 (15%)	68 700 (-7%)	Above MSY	70 301 (2%)

Herring (*Clupea harengus*)

Species description

Herring is found throughout the Baltic Sea and constitutes a major part of the ecosystem. The species is distributed from the western Baltic Sea up to the Bothnian Bay. The western herring stock migrates between areas IIIa and IVa in the North Sea and the western part of the Baltic Sea. Herring biomass is dependent on the size of the cod stock, which is its main predator, and on the size of the sprat stock, with which it competes for food. For herring there are large differences in growth rates between regions: individuals are small in the northern areas and larger in the south.

State of the stocks

Herring in division IIIa and subdivisions 22-24: Recruitment for this stock is estimated with great uncertainty according to ICES. The SSB of this stock is about one third of what it was in the 1990's when the time series began, and has been decreasing since 2006 with the lowest level observed in 2011. Since then, it has increased somewhat but is still below MSY and exploited above Fmsy. The TAC for this stock is decided at two different times, first in October with the Baltic TACs (area 22-24) and then together with the North East Atlantic TACs (area IIIa) in December. The ICES advice on the basis of the transition to the MSY approach is that catches in the whole distribution area should be no more than 41 602 tonnes, for subdivisions 22-24 this means a TAC of 19 754 tonnes.

Herring in central Baltic, excluding Gulf of Riga, subdivision 25-29 and 32: This stock is harvested sustainably according to ICES with the SSB currently above Bmsy. The SSB has been stable over the past few years. It should be noted however, that the SSB is only about half the size it was in the 1970's when the time series began. The abundance of herring in subdivision 25 is crucial to the development of the eastern cod stock as it prevents the problem of cannibalism, according to ICES. ICES advises, on the basis of the

MSY approach, that the maximum TAC in 2014 should be 164 000 tonnes. The ICES recommendations include the Russian part of the TAC for this stock.

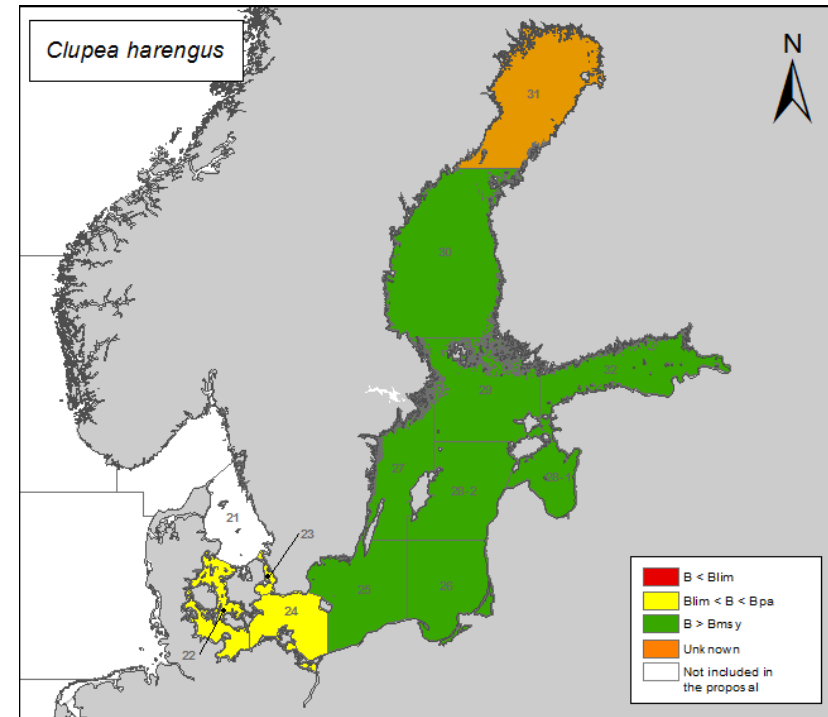


Figure 2. Herring stock status in ICES areas included in the proposal according to spawning stock biomass.

Herring in the Gulf of Riga, subdivision 28.1: This stock is harvested above Fmsy but the SSB has remained above Bmsy since the 1980's. ICES advises, on the basis on the MSY approach, that the TAC should be no more than 25 800 tonnes.

Herring in the Bothnian Sea and the Bothnian Bay, subdivisions 30 and 31:

The herring stock in subarea 30 has doubled in size since the early 2000 and tripled since the 1980's and is now at a record high level, but the mean weight in body size has declined over the past 20 years. However, the estimates are highly uncertain according to ICES. According to the ICES MSY approach, they suggest that landings be no more than 138 345 tonnes, a vast increase from last year. It should be noted that this stock is managed together with the stock in subarea 31 for which ICES has not performed any analytical assessment and ICES advises, on the basis of their approach for data -poor stocks, that catches be no more than 4317 tonnes, which is an increase compared to last year's advice, as ICES estimates the stock to have increased by more than 20% between 2011 and 2012.

Oceana recommendations

Considering that herring and sprat are the major food source for cod, Oceana strongly recommends that multi species considerations be carefully taken when setting the TAC for this species. The density of cod in subdivision 25 is at a historical high, but the distribution of

high biomasses of sprat and herring are limited to areas outside of the distribution area for cod. Sprat and Herring fisheries in area 25-26 may therefore lead to increased food deprivation of cod.

All directed fisheries for herring in subdivision 25-26 should therefore be closed and ICES recommendations on total landings should be applied to areas outside of subdivision 25-26. For herring this means that total landings should not exceed 19 754 tonnes in **subdivision 22-24**, according to the transition to MSY approach, 164 000 tonnes in **subdivision 25-29 and 32** (including the Russian part of the TAC), and 25 800 tonnes in **subdivision 28.1**, according to the MSY approach. In subdivision **30 and 31** it is important to bear in mind that the two stocks are in different shape and that the quality of the assessments differs significantly between them. Total landings in these two subareas should not exceed 142 662 tonnes, according to the MSY approach, and catches in the Bothnian Bay should not be increased by more than 20% according to the ICES approach for data-poor stocks. Oceana further recommends that the two areas be managed separately.

Table 2. Comparative table of herring TACs (in tonnes) in ICES areas registered in the proposal, Council decision for 2012 and 2013, and stock status and Oceana proposal for 2014. Brackets compare TAC difference from previous year (in %). Russian part of the TAC is included for the central Baltic stock.

Fishing area	Name area	TAC 2012	TAC 2013	Stock Status	Oceana proposal 2014
22 - 24	Western Baltic	20 900 (32%)	25 800 (23%)	Below Bpa and msy	19 754 (-23%)
25-29 and 32	Central Baltic excluding Gulf of Riga	78 000 (-27%)	90 180 (15%)	Above Bmsy	164 000 (82%) No fishing in subdiv 25-26
28.1	Gulf of Riga	30 600 (-6%)	30 600 (0%)	Above Bmsy (F>Fmsy)	25 800 (-16%)
30-31	Bothnian Sea and Bothnian Bay	106 000 (1%)	106 000 (0%)	Above Bmsy (30), unknown (31)	142 662 (35%)

Sprat (*Sprattus sprattus balticus*)

Species description

Sprat is found throughout the Baltic Sea and constitutes a major part of the ecosystem. It is distributed from the Western Baltic to the Bothnian Sea. Its biomass is dependent on the stock status of cod, its main predator, and on the size of the herring stock, with which it competes for food.

State of the stocks

Sprat in subdivision 22-32: The stock is harvested sustainably, at MSY, and the SSB declined from a historical high in the late 1990's and is now above MSY and considered to be at full reproductive capacity according to ICES. The development of the sprat stock is highly dependent on the cod stock through predator-prey interactions. As the cod stock is particularly weak in the northern areas (subdivisions 27-32) this is where the sprat stock has increased significantly since the 1990's. ICES is recommending that landings should not be higher than 247 000 tonnes, according to the MSY approach. ICES further recommends that a spatial plan be developed with the aim of limiting the fisheries in subdivisions 25-26 where the eastern Baltic cod is distributed. The ICES recommendations for this stock includes the Russian part of the TAC.

Oceana recommendations

As with herring, sprat should be considered in a multi species context since it is the major food item for cod. The density of cod in subdivision 25 is at a historical high, but as in the case of herring, the distribution of high biomasses of sprat is limited to areas outside the distribution area for cod. Sprat fisheries in area 25-26 may therefore lead to increased food deprivation for cod.

Oceana therefore recommends that **all directed sprat fisheries in area 25-26 are closed** and that the ICES recommendations on total landings be applied to areas outside of subdivision 25-26. For **sprat in subdivision 22-32** the TAC should not exceed 247 000 tonnes, according to the MSY approach (including the Russian part of the TAC).

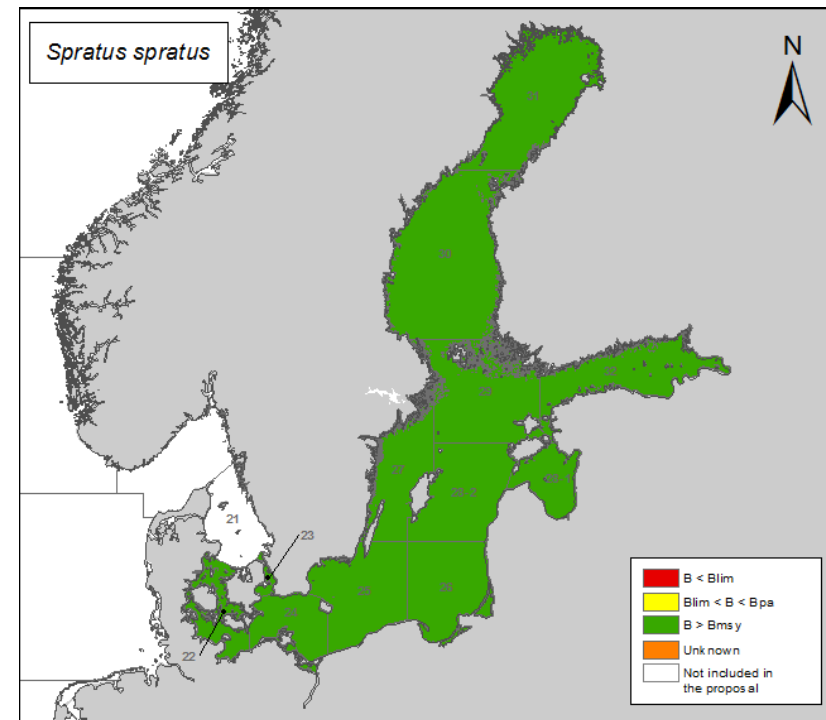


Figure 3. Sprat stock status in ICES areas included in the proposal according to spawning stock biomass.

Table 3. Comparative table of sprat TACs (in tonnes) in ICES areas registered in the proposal, Council decision for 2012 and 2013, and stock status and Oceana proposal for 2014. Brackets compare TAC difference from previous year (in %). Russian part of the TAC is included in the proposal.

Fishing area	Name area	TAC 2012	TAC 2013	Stock Status	Oceana proposal 2014
22-32	Baltic Sea	225 000 (-22%)	249 978 (11%)	Above Bmsy	247 000 (-1%) No fishing in area 25-26

Plaice (*Pleuronectes platessa*)

Species description

Plaice is distributed from the Belts and Sound in the west to the east, towards the Gulf of Gdansk, and is sporadically found north, in the Gotland area³. Salinity levels largely determine its distribution. Nursery areas are located in shallow waters, down to a depth of 10 m, and spawning is known to occur in areas with higher salinity, such as the Bornholm and Arkona basins. Stock boundaries are not well understood due to potentially large connectivity between areas occurring during spawning migration, larval drift and juvenile homing, but three separate stocks have been identified.

State of the stocks

The availability of data is scarce, making the knowledge of the exploitation rates limited and stock sizes uncertain. As with many other stocks in EU waters, the management areas do not match the stock areas. This is the first year that ICES has given advice on separate stocks.

Plaice in the Kattegat, Belts and the Sound, subdivisions 21-23:

This is a data limited stock, but ICES estimates that its SSB is increasing and that fishing mortality is steadily dropping and estimated to be below the Fmsy proxy. ICES estimates that this stock has increased by 76% between 2009 and 2011, and therefore recommends that landings be increased by a maximum of 20% compared to last year, translating into a TAC of 2 224 tonnes. The TAC has not been fully utilized in recent years.

³Report of the ICES/HELCOM Workshop on Flatfish in the Baltic Sea (WKFLABA). Available online at: <http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2010/WKFLABA/WKFLABA%202010.pdf>

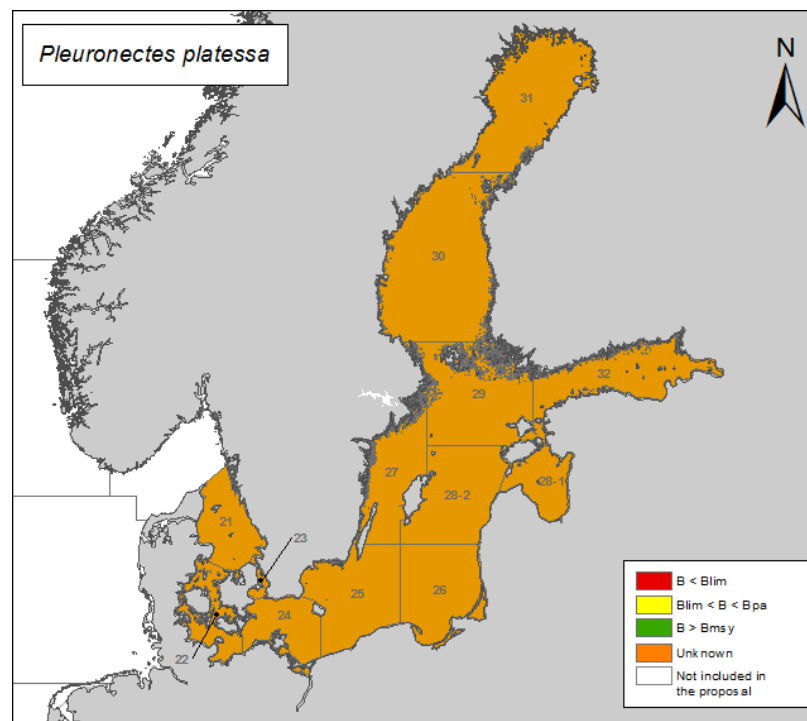


Figure 4. Plaice stock status in ICES areas included in the proposal according to spawning stock biomass.

Plaice in subdivisions 24-32: For this stock, ICES reports that there is insufficient information to estimate the current level of fishing mortality. There is also a lack of information on the magnitude of discards making estimations of total catches difficult. Nevertheless, ICES survey trends show that this stock is increasing steadily, and has seen a fivefold increase since the early 2000's. Since ICES estimates that this stock has increased by more than 20% in relation to the average landings over the past 3 years, it advises, on the basis of data-poor stocks, that landings not be increased by more

than 20% from last year, meaning a maximum TAC of 1 000 tonnes. The TAC has not been fully utilized during recent years.

Oceana recommendations

Since these are data-poor stocks, Oceana is of the opinion that TAC-setting should follow the precautionary approach, meaning that despite indications that these stocks have seen a strong increase over the latest years, landings should not be increased by more than 20% of the amount from last year, meaning a total catch of 2224 tonnes for plaice in the **Kattegat, the Belts and the Sound subdivisions 21-23** and **1000 tonnes in the Baltic Sea, subdivision 24-32**.

Table 4. Comparative table of plaice TACs (in tonnes) in ICES areas registered in the proposal, Council decision for 2012 and 2013, and stock status and Oceana proposal for 2014. Brackets compare TAC difference from previous year. NB: the ICES assessment areas and the EU management area for this stock area not equivalent. The EU manages plaice in area 22-32.

Fishing area	Name area	TAC 2012	TAC 2013	Stock Status	Oceana proposal 2014
21-23	The Kattegat, the Belts and the Sound	N/A	N/A	Increasing (data poor stock)	2242
24-32	Baltic Sea	2889 (subdiv 22-32)	3409 (subdiv 22-32)	Increasing (data poor stock)	1000

Salmon (*Salmo salar*)

Species description

Atlantic salmon is an anadromous species, they are born in fresh waters in rivers and migrate to the sea to eventually return to their natal river to reproduce. The juvenile phase is spent in the rivers, usually around one to four years, after which it normally spends one to three years on a feeding migration, mainly feeding on herring and sprat in the sea before returning to its natal river to spawn.

State of the stocks

Salmon reproduce in rivers all over the Baltic Sea catchment area and there are many river specific populations. The majority of rivers are in poor condition leaving a few productive rivers in the Baltic Sea, with the strongest ones located in the Gulf of Bothnia. Despite the many different river specific populations, salmon is only divided into two different management areas: the Main Basin and the Gulf of Bothnia, Subdivisions 22–31 and the Gulf of Finland, Subdivision 32. Loss of habitat due to river damming and other environmental deterioration, together with overfishing have left salmon populations in poor condition. The populations suffer from very poor post smolt (the first year in the sea) survival, the reason for which is currently unknown. Open sea fisheries take place on mixed populations, making it difficult to protect the weaker populations. Currently there is no management plan in force for salmon, as the former plan adopted by the International Baltic Sea Fishery Commission ceased to exist in 2005, and the current Commission proposal (COM/2011/0470 final), is waiting for adoption by the Council. One way to distinguish between farmed and wild salmon is to through finclipping, a practice that has been mandatory in Sweden since 2005, but which is less frequently used in other Baltic Member

States⁴. Note that the TAC for salmon is expressed in number of individuals and not in tonnes.

Salmon in the Baltic, subdivisions 22-31: ICES uses the Potential Smolt Production Capacity (PSPC) to evaluate the current status of wild salmon stocks, meaning the production capacity of smolts calculated for each river on the basis of relevant river-specific parameters. MSY is estimated at 75% of the PSPC. **Twenty-seven rivers were evaluated by ICES and the MSY target is only estimated to have been reached in two rivers.**

In order to estimate the future status of the stocks, ICES has run five different scenarios based on commercial fishing efforts. The scenario with the highest likelihood of reaching MSY, results in a TAC of 52 000 individuals, which is close the advice that ICES provided over the last two years⁵. However, this year ICES concludes that this would imply a fishing effort that is unrealistic and therefore suggests a TAC of 78 000 salmon. ICES also states that even with a TAC as low as 52 000 individuals, there is a risk that the stocks could remain in their current bad state and even continue to worsen.

Salmon in the Gulf of Finland, subdivision 32: According to ICES, stocks in this area are in very poor condition and the only wild stocks currently found are located in three Estonian rivers. In the rest of the area the stocks consist of a mixture of farmed and wild populations. According to ICES, there should be no fishing on wild populations and the TAC should be maximum of 8000 salmon. In order to avoid

⁴ ICES WGBAST REPORT 2013 3–12 April 2013. Pg 20 “From 2005 it is mandatory in Sweden to finclip all salmon. All reared Estonian salmon smolts were finclipped in 2012. In Poland all salmon smolts (70 601) released into Subdivision 26 (rivers Drweca and Reda) were adipose finclipped. A majority of salmon smolts released in Russia, Finland, Lithuania and Latvia in 2012 were not finclipped” Available online at: http://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2013/WGBAST/wgbast_2013.pdf

⁵ In order to reach MSY ICES recommended a TAC of 54 000 individuals in 2011 and 2012.

catches of wild salmon, ICES suggests that fisheries be relocated away from rivers and river mouths supporting wild stocks, and efforts be made to ensure protection of wild salmon from poaching.

Oceana recommendations

The fact that ICES states that even a low TAC of 52 000 salmon may not ensure sufficient recovery is worrying. Salmon is listed as a species under the Habitat's Directive, inter alia obliging Member States to ensure that its exploitation is compatible with favorable conservation status⁶. The obligations are limited to freshwater environments. However, considering that the species migrates between freshwater and marine environments, the TAC setting will inevitably affect its conservation status. Oceana is of the opinion that the TAC for **subdivisions 22-32** should be a maximum of 52 000 salmon and that open sea fisheries on mixed stocks should be phased out. Oceana also recommends that management measures be urgently taken to improve habitats and remove migration barriers. Allocated funds for compensatory restocking from hydropower companies for example, should be used to improve habitats instead as these kind of restocking measures, which add little or no improvement, and may even be harmful to the Baltic Sea salmon stocks⁷⁸.

For salmon in the **Gulf of Finland** Oceana recommends that fisheries should be closed since it is currently not possible to distinguish between wild and reared salmon, as the practice of finclipping is currently not adequately applied.

⁶ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. Annex V.

⁷ See e.g. Anna Palmé et al Compromising Baltic salmon genetic diversity conservation genetic risks associated with compensatory releases of salmon in the Baltic Sea, Havs- och vattenmyndighetens rapport 2012:1. Available online at: <http://www.popgen.su.se/BaltSal/compromising-baltic-salmon-2012-18.pdf>

Table 5. Comparative table of salmon TACs (in number of individuals) in ICES areas registered in the proposal, Council decision for 2012 and 2013, and stock status and Oceana proposal for 2014. Brackets compare TAC difference from previous year (in %).

Fishing area	Name area	TAC 2012	TAC 2013	Stock Status	Oceana proposal 2014
22-31	Baltic Sea	123 000 (-51%)	109 000 (-11%)	N/A	52 000 (-52%)
32	Gulf of Finland	15 000	15 000	N/A	0 (-100%)

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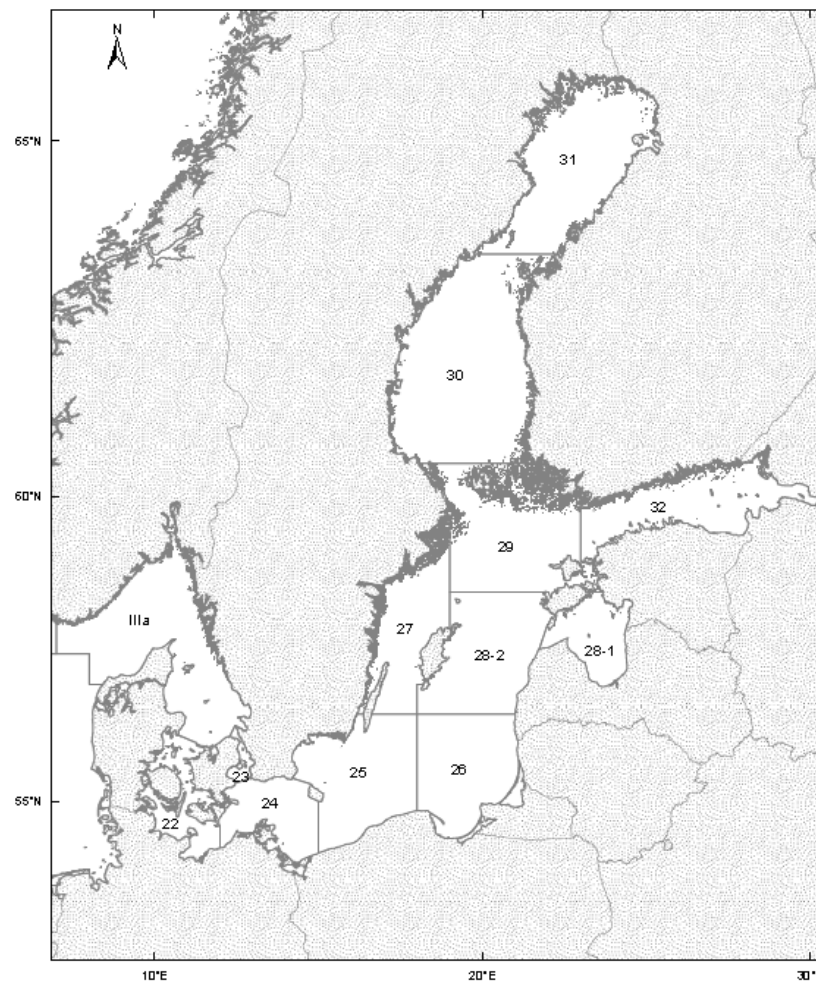
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Description of ICES areas

Subarea	Division	Subdivision	Description
III			Skagerrak, Kattegat, Sound, Belt Sea, and Baltic Sea, the Sound and Belt together known also as the Transition Area
	III a		Skagerrak (West) and Kattegat (East)
	III b,c		Sound and Belt Sea or the Transition Area
		22	Belt Sea
		23	Sound
	III d		Baltic Sea
		24	Baltic West of Bornholm
		25	Southern Central Baltic – West
		26	Southern Central Baltic - East
		27	West of Gotland
		28	East of Gotland or Gulf of Riga
		29	Archipelago Sea
		30	Bothnian Sea
		31	Bothnian Bay
		32	Gulf of Finland





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