NWWAC – NSAC Focus Group meeting on Seabass on 21th August.

The meeting aims to draft advice in response to an EC request on how to best take the recovery of this important stock forward both for commercial and recreational fisheries for 2019.

This document has been prepared by Dr Mike Pawson and provides information on;

-          State of the sea bass stocks in ICES Sub-areas IV, VII and VI

-          Current management measures

-          Updated ICES advice and implications for the recovery of the stock

**State of the stocks.**

ICES issued new advice in July 2018, which superseded the advice and assessment presented in October 2017 and on which the 2018 measures agreed at the December Council of Ministers were based. This new assessment (for Sea bass in Divisions 4.b–c, 7.a, and 7.d–h - central and southern North Sea, Irish Sea, English Channel, Bristol Channel, and Celtic Sea) appears to provide the best perspective on the state of the stocks.

The summary of the assessment results presented below indicate that SSB has been declining since reaching a peak of around 24,000 t in 2005 and fell below Blim in 2015. Fishing mortality (F) has increased, peaking in 2013 before a rapid decline to below FMSY. Recruitment was estimated to be poor between 2008 and 2012, though the 2013 and 2014 year-class estimates show average recruitment.

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**ICES advice**

In October 2017, ICES advised that, when the precautionary approach is applied, there should be zero catch - commercial and recreational - in 2018. However, following a request from the EC to provide an in-year update of catch advice for 2018, ICES carried out a benchmark assessment early in 2018, following which the perception of the current SSB has not changed (B< Blim). However, the current low F and the above-average recruitment in 2013 and 2014 indicates that SSB in 2019 and 2020 is predicted to be above Blim, allowing for some catches in 2018 and 2019.

Consequently, in July ICES advised that, when the MSY approach is applied, total removals (includes commercial catch and recreational removals, and taking mortality of released fish into account, estimated at approximately 5%) in 2018 should be no more than 880 t, based on rebuilding the stock to Blim by 2019.

ICES advises that total removals in 2019 should be no more than 1789 t. This catch forecast assumes that the actual catch in 2018 would be 1240 t (assuming that F in 2018 would the average fishing mortality for the commercial fleet in the period 2015–2017 and for the recreational fishery, in line with the management measures in place in 2018). SSB in 2020 would be around 10,000 t (MSY Btrigger is currently estimated at 13,465 t).

To understand Why ICES has changed its advice, it is useful to look at the results of the assessment carried out in 2017, shown below. This shows a much higher recreational catch estimate for 2016 (estimates from 2015 onwards now take into account the management measures), a similar recruitment pattern to the 2018 assessment, but with a continual decrease in SSB since reaching a peak of around 19,000 t in 2010 and a continual increase in F through 2016.



Note that no FMSY estimate was accepted in 2017 (when the level was disputed), and MSYBtrigger = Bpa was at a much higher level than in 2018.

The main change in the 2018 assessment is that F is now estimated to have been falling since 2013, to below the “new” FMSY level in 2016 and 2017. Note that ICES’s 2016 assessment also showed F declining after 2013. This was to be expected as the emergency measures introduced in 2015 reduced not only pelagic trawl catches of sea bass but also bycatch of sea bass in other fisheries. Despite this consistency, it is unreasonable to predict stock trends beyond 2020.

**Seabass in Divisions 6a, 7b, and 7j (West of Scotland, West of Ireland, eastern part of southwest of Ireland).**

The only information available for this stock unit is officially reported commercial landings (ICES cannot quantify total catches), which are low and fluctuate without any trends. A maximum of 9 t was reported landed in 2010, and most years landings are less than 5 t, most of which are from Division 7j.



 **ICES advice** is that when the precautionary approach is applied (there are no reference points for this stock, and no estimates of SSB or F), commercial landings should be no more than 4 t in each of the years 2018, 2019 and 2020.

Seabass landings by shore anglers in Ireland were estimated at 30 t in 2010 and 44 t in 2011, but a time-series of total catches cannot be calculated.

**Current management measures.**

There has been a moratorium on landings of seabass in commercial fisheries in the Republic of Ireland since 1990. The industry reports high sporadic catches which are discarded due to the moratorium. Recreational fisheries in Ireland are subject to bag limits of 2 fish per day, and a closed season from 15th May to 15th June.

The measures adopted by the EU for recovery of the sea bass stocks in the North Sea, Channel and along the west coast of the UK are split by metier, and the Table below shows the international catch taken by various gears in 2017 as estimated by ICES (July 2018).



Note that the total catch was 1362 t, when ICES advice had been that, when the precautionary approach is applied, there should be zero catch (commercial and recreational) in 2017. These catches were essentially by catch, apart from a one-fish per day bag limit for recreational anglers, who had to operate catch and release in January to June.

In essence, the measures for 2017 agreed at **December Council 2016** included:

* A by-catch provision for trawlers and seines at 3% per day. This was an increase from 1% per trip in 2016, intended to minimise bass discards, but with a new cap introduced of 400 kg per month.
* A limit for bass catches by fixed gill nets of 250 kg per vessel per month, with a closed season of February-March, and no provision for other forms of netting;
* Setting the limit for hook and line fisheries at 10 t per annum (spread across ten months of the year).;

**The EU Tacs and quotas regulation for 2018** responded to October 2017 scientific advice (based on the now superseded assessment) that the seabass stock in the Celtic Sea, Channel, Irish Sea and southern North Sea (ICES divisions 4b, 4c and 7a, 7d–7h) continued to decline, and that the measures taken in previous years had not delivered the desired reduction in commercial fishing mortality (only – 17 % instead of the expected – 50 %). Recreational fishing mortality was estimated to have exceeded that from commercial sources in 2016. Therefore, fishing mortality of the Northern stock has to be decreased significantly in order to allow for a small increase in the biomass. On this basis, **directed** fish for European seabass in ICES Divisions 4b and 4c, and in ICES subarea 7 by EU fishing vessels, and commercial fisheries from shore, is prohibited, and it is prohibited to retain on board, tranship, relocate or land seabass caught in that area.

By derogation, apart from in February and March 2018, EU fishing vessels in ICES Divisions 4b, 4c, 7d, 7e, 7f and 7h and in waters within 12 nautical miles from UK baselines in ICES Divisions 7a and 7g may fish for seabass, and retain on board, tranship, relocate or land European seabass caught in that area with the following gears and within the following limits:

(a) using demersal trawls, for unavoidable by-catches not exceeding 100 kg per month and 1 % of the weight of the total catches of marine organisms on board caught by that vessel in any single day (400kg per month and 3% per day in 2017, intended to minimise bass discards);

(b) using seines, for unavoidable by-catches not exceeding 180 kg per month and 1 % of the weight of the total catches of marine organisms on board caught by that vessel in any single day (400 kg per month and 3% per day in 2017);

(c) using hooks and lines, not exceeding 5 t per vessel per year (10 t per year in 2017);

(d) using fixed gillnets, for unavoidable by-catches not exceeding 1.2 t per vessel per year (250kg per month in 2017 = 2.5t per year – 10 mo.)

These derogations shall apply to EU vessels that have recorded catches of seabass over the period from 1 July 2015 to 30 September 2016: in point (c) with recorded catches using hooks and lines, and in point (d) with recorded catches using fixed gillnets.

Member States may allow the derogation to apply to another (replacement) fishing vessel provided that the number of EU fishing vessels subject to the derogation and their overall fishing capacity do not increase. The catch limits set in paragraph 2 shall not be transferable between vessels and, where a monthly limit applies, from one month to another. For EU fishing vessels using more than one gear in a single calendar month, the lowest catch limit for either gear shall apply.

Member States shall report to the Commission all catches of seabass per type of gear not later than 15 days after the end of each month.

In recreational fisheries, including from shore, in ICES Divisions 4b, 4c, 7a to 7k, only catch-and-release fishing for seabass shall be allowed ( one-fish per day bag limit in 2017, with catch and release in January to June). It shall be prohibited to retain on board, relocate, tranship or land seabass caught in that area.

**Updated ICES advice and implications for the recovery of the stock**

In summary, the stock has been subject to increasing levels of F, as its biomass improved until 2005 and then declined, with no control on fishing (until 2015), and there had been relatively low recruitment from 2008 until 2013 and 2014. These two year classes will recruit to the fishery in 2018 and 2019, and should lead to increased catches even with the same level of fishing effort, and an increase in SSB.

The measures outlined above for 2018 are commensurate with the intention of limiting F in 2018 to around 0.25 (recent mean value, based on the October 2017 ICES advice.) with a total catch annual of c. 1800 t.

However, the updated assessment shows F in 2016 and 2017 to have been lower, at 0.15 and 0.12, with corresponding catches of 1,500 t and 1,200 t respectively. This suggests that the measures have been effective in reducing F, and SSB appears to have levelled out, though it was estimated to be still below Blim (9618 t) at spawning time in 2018. With FMSY currently estimated at 0.20, this indicates that the stock will recover at current levels of fishing mortality, though ICES considers that MSY Btrigger (13,465 t) cannot be achieved in 2019 or 2020, even with zero catch in 2018 and 2019.

Note that the total catch of c. 1,800 t for 2019 remains the same whether the October 2017 or July 2018 advice is applied. This is because the assessments are based mainly on catch data, and it is estimates of F and SSB that are most strongly influenced in the models used.

From a management perspective, therefore, ICES advice based on the MSY approach is consistent, but the perception of the rate of recovery of the stock depends on the model used. Nevertheless, any changes in the management measures that lead to increased catches will delay recovery of the stock.