Proposed new salmon and sea trout rod fishing byelaws for the River Severn in Wales

Executive summary

This document reviews the status of salmon and sea trout stocks in the River Severn and recommends the introduction of appropriate fishery regulations, which reflect the current stock risk status, and are required to protect the reproductive capacity of these stocks. It is an interpretation for Wales of the technical case produced by the Environment Agency (EA).

Natural Resources Wales (NRW) has set an overall objective for salmon and sea trout stocks in Wales: -

> ***"To protect, through the application of best-practice science and management, the sustainability of our natural resource of wild salmon and sea trout stocks in Wales."***

The EA technical case that NRW has adopted for the Severn in Wales, describes the status of stocks in the River Severn, considers issues around the exploitation of salmon and sea trout stocks, and sets out the options for sustainable management.

In recent decades the status of most of our stocks of migratory salmonids in Wales has declined: the Severn is no exception. There is a complicated range of factors that contribute to this, including the reduced survival of fish at sea, pressures on freshwater habitats (including water quality), and historic unsustainable fishing effort in high seas and other interceptory fisheries, including some fisheries in home waters.

NRW's solution is a broad range of proposed measures to address the numerous, complex causes of this problem, and to ensure that land and water are managed sustainably (Read details of these measures in NRW's 'Plan of Action for Salmon and Sea Trout, 2020). The proposed byelaws are an integral component of this suite of measures as they would preserve vital breeding resources whilst other threats to relevant habitats are addressed.

Our position is that stocks may be exploited when they are sustainable, but that until they are, we must ensure that pressures are moderated or excluded in order to achieve this goal. In line with this position, we introduced the 'All Wales' and 'Cross border Dee and Wye (in Wales)' byelaws which came into force in January 2020, and mandate the release of all salmon caught by rod and net in Wales.

The EA technical case sets out the position and options for amended fishing controls to protect stocks of salmon and sea trout in the River Severn and presents concluding proposals for new byelaws to regulate fishing.

We recognise the need for a fully integrated approach for the catchments of our border rivers. NRW is working together with the EA to ensure that this happens in a practical and sensible way. Whilst NRW take the management lead for anadromous

fish in the cross-border rivers Dee and Wye, the EA take the same management lead for the River Severn.

The EA has carried out an identical consultation on the English part of the Severn. NRW has adopted the EA's technical case as the evidence used to support the proposed byelaws on the Severn in Wales. In this way, we seek to ensure that integrated and consistent arrangements are implemented across the whole catchment.

Previous time-limited regulations for salmon fishing on the River Severn in Wales need to be updated to ensure that salmon stocks are adequately protected. This is to ensure that those fisheries that continue to exploit these stocks do so in a sustainable manner that supports stock recovery.

The new proposed byelaws would supersede the current Emergency Byelaws mandating the release of all rod-caught salmon on the Severn and a prohibition on bait fishing before 16th June, that have been in place since 1st March 2021.

The proposals would bring in restrictions that are broadly aligned with the approach of the 'All Wales' byelaws that were introduced following a Local Inquiry in 2019 (read the outcome of the Local Inquiry 'All Wales Salmon and Sea Trout Byelaws') and 'Cross Border Dee and Wye (in Wales)' byelaws that were introduced in 2020. These both require the release of all salmon, place restrictions on bait fishing, and set requirements to use barbless hooks, hooks of defined sizes, and restrict the number and type of hooks on spinners and plugs to maximise survival of released fish.

The proposed measures for the River Severn, adopted by NRW for the Severn in Wales, have been designed to enable rod fishing to continue in a sustainable way to maximise the opportunity for salmon stock recovery and to protect the sea trout stock. The proposed measures recognise and take into account the fact that the use of certain types of angling methods and gear types can result in increased fish mortality following catch and release, thereby reducing spawning escapement.

NRW have concluded, in light of the status and spawning deficits of Severn salmon and sea trout stocks which consequently are deemed unsustainable with risks of ongoing decline to unsafe stock levels, that the proposals are necessary, proportionate and reasonable.

Evidence

We have considered 2 principal sources of evidence in concluding our preferred option for management change:-

1. The status of adult stocks of salmon and sea trout
2. The status of juvenile salmon

Salmon

Conservation Limits serve as a 'limit' reference point below which further reductions in spawner numbers are likely to result in a significant fall-off in smolt production.

Compliance procedures require that spawning levels are above the Conservation Limit in four years out of five, (*i.e*. 80% of the time) for a stock to meet its 'Management Objective' (MO). The associated 'Management Target' (MT) (a 'target' reference point) defines the average stock level required to achieve this.

Estimates are produced annually and compliance tested each year. The position of the trend line and its confidence limits in relation to the Conservation Limit determines the risk status of the stock.

River Severn salmon populations have declined in recent years and egg deposition now falls well below the Conservation Limit (CL) (Figure 1). Achievement of this stock target is deemed necessary to sustain the population at a healthy and sustainable level. The Severn salmon stock has regularly failed to achieve its CL and is now classified as being "Probably at Risk" and is predicted to remain so in five years' time (Figure 2).

The current egg deposition figure equates to 875 spawning adult females whilst the number of spawning females equivalent to the CL is 1720: this therefore indicates a shortfall of 845 spawning females in 2019.

To offer greater protection to the stock, we set a Management Target (MT) which requires that, in the long run, the stock should exceed the CL in at least 4 years out of 5: this is the Management Objective (MO). Severn salmon stock assessments had been on an improving trend up to 2017, being classified as "Probably Not at Risk" at that time, but reduced stock assessments in 2018 and 2019 have meant that the classification has declined to the "Probably at Risk" category, and the ten-year trend is now declining.

The annual egg deposition, CL and MT for the Severn salmon stock for the last ten years are presented in Figures 1 and 2 below. The stock assessment indicates that the Severn salmon stock has only exceeded its CL in three of the last ten years, declining since 2015, to now only achieving a little over 50% of the CL in 2019.

Figure 1 Egg deposition estimates relative to the conservation limit and management target for the River Severn between 2010 and 2019.

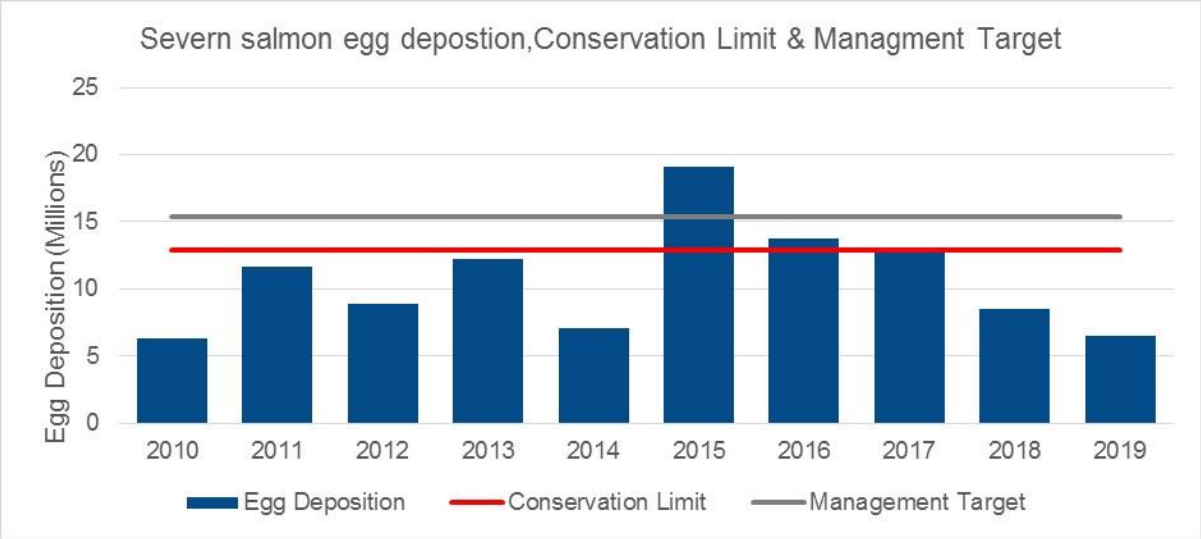
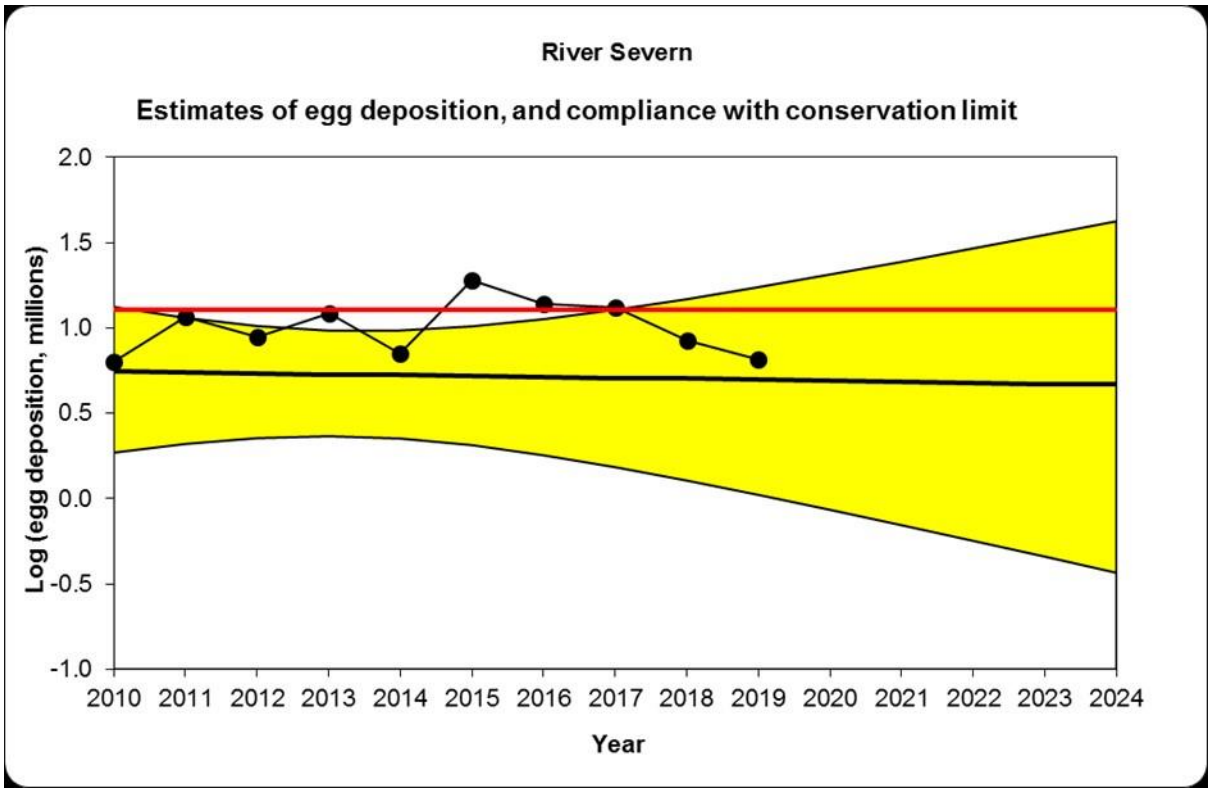


Figure 2 River Severn salmon spawning compliance assessment 2019.



Key to graph in figure 2

•	Annual egg deposition estimates
	20th Percentile trend line
	Conservation Limit
	Upper and lower boundaries of the Bayesian Credible Interval

Sea trout

The sea trout stock of the Severn is relatively small, with no historic records of substantially higher abundance, and no targeted fisheries for this species. Notwithstanding this apparent low stock level, we would not wish to see any increased exploitation of sea trout by the Severn fisheries at this time. For this reason, and also to avoid any possible mistaken identification between species, sea trout have been included in the proposed regulations.

Juvenile Salmonids

The average population densities of juvenile salmon recorded from fisheries surveys conducted in the upper Severn catchment were at their lowest recorded levels in the 2019 survey. This is likely to reflect reduced numbers of spawning adult salmon in the preceding two years, and also suggests that smolt production might be reduced in 2020 and 2021 with consequent reduced adult salmon returns in 2022 and 2023.

Average trout fry (0+) densities at upper Severn sites also tend to be low, ranging from one to four fry per one hundred square metres of stream.

Average trout parr (>0+) densities have also been relatively low across the upper Severn catchment in these surveys, rarely exceeding three parr per one hundred square metres of stream. Although low abundance of juvenile trout have been recorded in the past 8 years, the numbers appear relatively consistent.

Our Approach

Our aim for stocks in the “Probably At Risk” category is to recover these to the “Probably Not At Risk” category within 5 years. The continued killing of salmon by fisheries in such situations, and with such large spawning stock deficits, is not compatible with our aim of improving stock status, particularly when the prevailing stock trend is downwards.

Relatively small numbers of fish can be crucial in order to aid recovery of a stock, and it is noted that there will be cumulative benefit over time. It is therefore essential that spawning stocks are maximized if populations are to have the best chance of recovery.

If protective byelaws are not in place from the 2022 season onwards, then there would be reduced protection of the vulnerable salmon and sea trout stocks in the Severn (in Wales) when the current Emergency Byelaws lapse in March 2022.

In evaluating management options, conservation and sustainability of the salmon and sea trout resources should take precedence, following the principle of sustainable management of natural resources. The proposals are set in the context of maximising spawning escapement and promoting stock recovery towards improved resilience and sustainability.

The proposals would, if confirmed, implement byelaws requiring statutory catch-and-release fishing for all salmon and sea trout caught by rod and line on the River

Severn (in Wales) throughout the season. This would complement the proposed arrangements for the Severn in England.

Our proposals

NRW is proposing to seek confirmation of new byelaws for rod fishing on the River Severn in Wales. We propose the following measures to run from the date of confirmation until 31st December 2031, a date selected to synchronise with dates for the English catchment.

NRW is now seeking views on these proposals.

The proposed fishery management options for the River Severn rod fisheries, are as follows: -

- mandatory catch and release of all salmon and sea trout caught by rod and line;
- implementation of byelaws that control fishing methods, namely: -
    1. prohibition of bait fishing for salmon and sea trout;
    2. the use of barbless (or de-barbed) hooks only for fly fishing for salmon and sea trout;
    3. the use of single, barbless (or de-barbed) hooks with a maximum hook gape of no more than 13mm to be used with any artificial lures and spinners used to target salmon and sea trout;
    4. no more than 3 single, barbless (or be-barbed?) hooks with a maximum hook gape of 13mm to be fitted to wobbling or jointed plugs used to target salmon or sea trout;
    5. barbless (or de-barbed?) single, double or treble hooks used in conjunction with a fly for salmon and sea trout. The maximum hook gape of any double or treble hook used in conjunction with an artificial fly shall be no greater than 7mm, and 13mm for single hooks.

Your response

We would like your views on our proposals and invite you to submit these using the form designed for the purpose which is available via our consultation hub.

Respond to the consultation on proposed Severn in Wales byelaws {LINK}

Hard copies of the documents can be requested by emailing fisheries.wales@naturalresourceswales.gov.uk

Or by writing to:

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