Cyfoeth Naturiol Cymru
Natural Resources Wales

Briefing Note
Issued to Local Fisheries Groups, 2.9.16

Annual fisheries monitoring programme reveals unprecedented reduction in salmon fry abundance across Wales

Background
Each year NRW carries out a programme of fisheries monitoring to record the distribution and abundance of fish – notably juvenile salmon and trout – in many of our rivers. The data are used to assess stock performance and status and, over the period since monitoring commenced in 1986, long-term trends in fish densities. This monitoring therefore has an important role to play in the sustainable management of our natural resources as it helps us to understand, protect and manage our fish stocks.

The fish population surveys predominately use electric fishing procedures in which fish are temporarily stunned and caught – a process which is harmless to the fish. We record the numbers of fish caught, the species and their individual lengths. This data is essential in classifying rivers and water bodies under the Water Framework Directive (WFD).

This years' results
This year our initial fisheries surveys on the rivers, Clwyd, Usk and Tywi have demonstrated a very concerning and unprecedented decline in the abundance of salmon fry in sites where they have always been present:

> In the Tywi catchment our survey has shown salmon fry to be absent from 27 of the 31 sites monitored (they were present in 28 of these sites during the last survey).
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> On the Usk, our survey showed salmon fry to be absent in 8 of the 12 sites where they are usually present in good numbers. There were no fry at all at another 9 sites surveyed for eel.
>
> On the Clwyd 5 sites were fished and although these have always had good numbers of fry, none were found this year.

Surveys on other rivers, including the Wye, Tawe and Glaslyn have found normal numbers of fry.

Our experienced fish survey staff report that these findings are unprecedented over the period of 30 years since fisheries monitoring commenced.

What is the current position?
At this stage it is important that we complete the survey programme to build a picture of the status of fish populations across Wales. Whist this is underway we are consulting with the Environment Agency on the position in England and with Welsh Government, and we are also discussing the results and their potential cause and implications, with Cefas (fisheries advisors to the UK Government). We are examining river flow and temperature data and considering other factors that might be implicated.

We also assess salmon stocks each year by comparing estimated egg deposition with catchment targets. We note that, although adult salmon stocks in 21 of our 23 principal salmon rivers are currently assessed as 'At Risk' (including the Clwyd and Tywi) or 'Probably at Risk' (including the Usk) of failing to meet their spawning targets, estimated egg depositions in 2015 were broadly unexceptional.

There is also some evidence, notably for the Clwyd, that trout fry populations are also much lower than in recent years.

What are the possible reasons?
It is presently too early to be clear what has caused the severe lack of fry in the three rivers highlighted here. We have considered a possible failure of fish to disperse to spawning tributaries, possibly due to flow, and the potential for disease or pollution to be the causative factor, however it is far too early be certain. However we also note that December 2015 was the hottest December on record and consequently we are assessing water temperature records.

What can fishermen do?
Whilst we complete our monitoring programme and further investigate the reasons for the collapse in fry numbers, it is important that all those involved with fisheries do what they can to help maximise the number of fish spawn this autumn/winter and in subsequent years.

It is now more important than ever that anglers return all their fish to maximise the numbers that can spawn, and that the fishing methods used ensure that released fish have the best chance of survival by considering:

- De-barbing the hooks so that fish can be released more easily and quickly
- Not removing the fish from the water whilst unhooking. **This is one of the key ways to improve survival.** Keeping a fish in the air for 30-60 seconds literally halves their chance of survival.
- Not using treble hooks - especially flying C type lures
- Not using bait.

Conclusion
These results are unprecedented and appear to be evident in some, but not all, rivers across Wales.

We will complete our monitoring programme, whilst we continue to investigate the causes and seek a remedy.

In the meantime it is crucial as many salmon as possible spawn this year. We are appealing to anglers to put all the salmon they catch back, and to try to influence others to do the same. There simply aren't enough fish spawning to sustain stocks.

footnote:
Catch and Release guidelines can be found on the Wye and Usk Foundation web site.
http://www.wyeuskfoundation.org/fishing/catchandrelease.php
http://www.wyeuskfoundation.org/files/C&R_2013.pdf