

## A preliminary assessment of the status of the salmon stock in the River Usk for 2013

### 1. Purpose

- 1.1 Each year Natural Resources Wales (NRW) uses catch returns from salmon rod licence holders to assess the current and likely future status of stocks in the Usk and other rivers. That assessment helps determine the need for management action.
- 1.2 Due to the time required to obtain and analyse licence returns, the assessment based on the 2013 season will not be available until April 2014, delaying the implementation of any required management action.
- 1.3 This preliminary assessment uses catches recorded from major Usk fisheries to give early warning of the need for management action and to enable earlier implementation.

### 2. Estimation of the declared rod catch and egg deposition in 2013

- 2.1 The annual rod catches of salmon at Upper Llangybi, Lower Llangybi (David Addams-Williams, pers. comm.), Llanover (WUF website) and Merthyr Angling Association's waters (Tony Rees, pers.comm.) have been combined and related to the annual catches declared by licence holders for the last five years. Together, the catches at these fisheries have comprised a large proportion of the Usk's rod catch, ranging from 32% in 2011 to 48% in 2008, with an average of 40%.

	Salmon catch U&L LF,Llan,MAA	Declared Usk	Proportion of Usk catch
2008	555	1156	48%
2009	195	491	40%
2010	235	580	41%
2011	224	707	32%
2012	401	1014	40%
2013	187	390 to 584	32% to 48%

- 2.2 Applying that range and average to the 2013 catch at these fisheries indicates that the declared rod catch for 2013 from licence holders for the whole river will be between 390 and 580, and probably about 470.
- 2.3 The average weight of salmon caught at Upper Llangybi Fishery in 2013 was 9.7 lbs, similar to that declared for the whole Usk in 2011 when the rod catch was 707 and the estimated egg deposition was 137% of the Conservation Limit.
- 2.4 While the NRW calculation will be more precise, using 2011 as a guide the average weight and estimated declared catch for the Usk in 2013 indicates that egg deposition will be between 75% and 113% of the Conservation Limit, i.e.

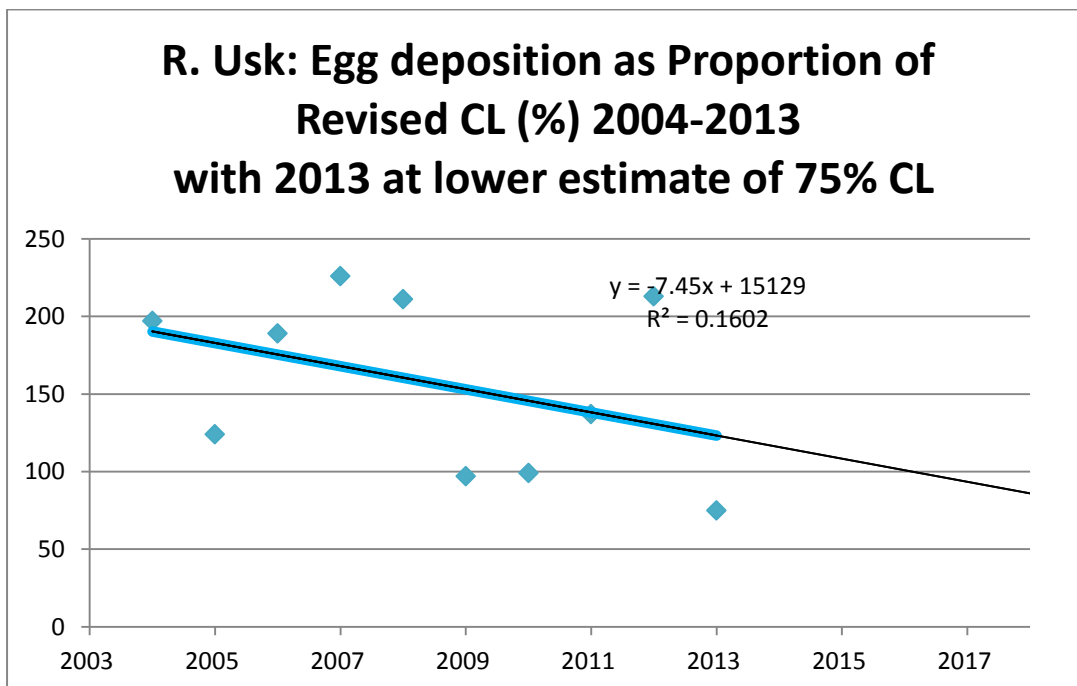
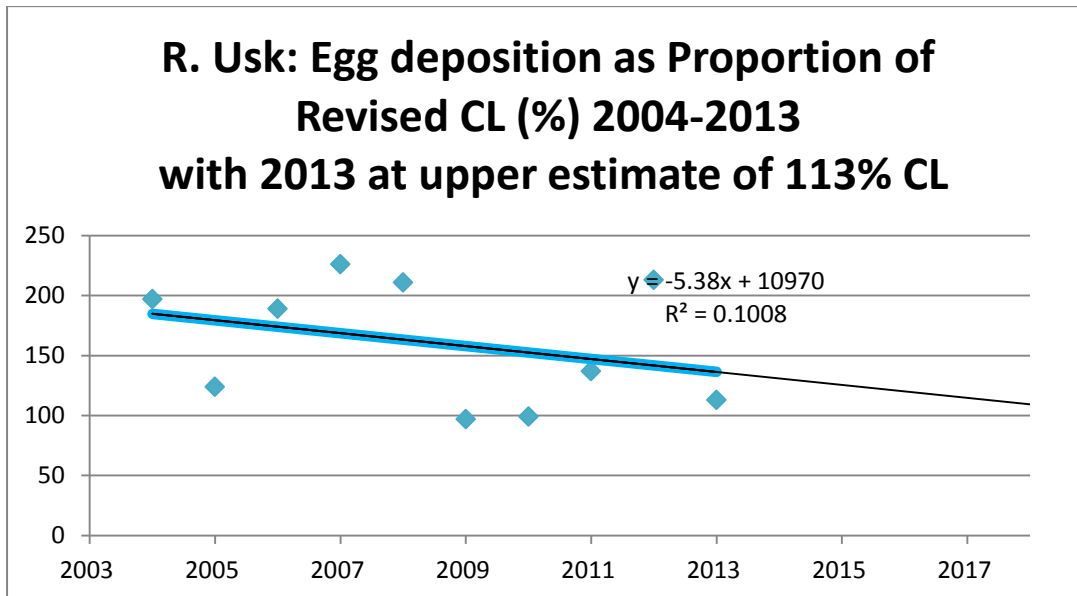
Egg deposition in 2013 = (% of CL in 2011/Usk rod catch in 2011) x Est. Usk rod catch in 2013

2.5 The central estimate, based on a rod catch of 470, would be for egg deposition at 91% of the Conservation Limit.

2.6 It is likely that egg deposition this winter will be the worst since 2003, when it was 89% of the Conservation Limit, and possibly the worst since the early 1990s.

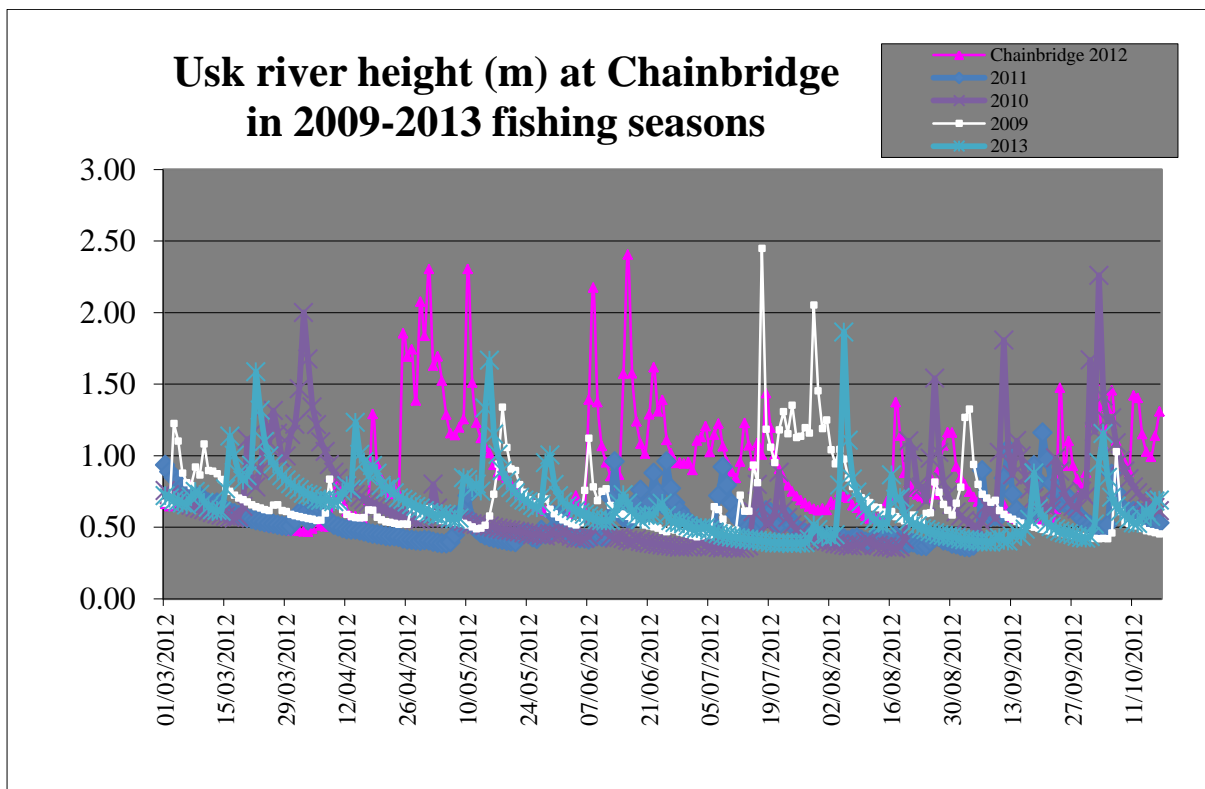
### 3.0 Assessment of stock status

3.1 The trend of spawning escapement over the last decade is negative, regardless of whether the highest or lowest estimate is used for 2013.



3.2 At both the central and lowest estimates, the trend would be for average annual spawning escapement to fall below the CL by 2018.

- 3.3 The downward trend is unlikely to be statistically significant. Nonetheless, it seems probable that when NRW has done the full, more precise, stock assessment in March 2014, the Usk will, as in 2009, 2010 and 2011, be projected to be 'Probably at Risk' in five years of failing its management target. Indeed, it is more than possible that the projection for the Usk in 2018 will be in the worst category, namely 'At risk'.
- 3.4 Without the relatively high catch in 2012, the downward trend would be more severe. 2012 was an exceptionally wet season; rainfall in Wales from April to September was 165% of the long-term average. Elevated flows gave largely unrestricted opportunities for salmon to enter and migrate up the river, with abstraction having a minimal impact. 2012 might therefore be considered atypical.



- 3.5 The relatively high proportion of multi-sea-winter salmon in 2012 and high flows meant that most of the stock probably entered during the fishing season. The rod catch may therefore give an over-favourable impression of stock abundance.
- 3.6 The River Dee in north Wales has the same fishing regulations as the Usk and a similar pattern of salmon runs. As an index river for salmon, it is closely monitored. In 2012, the rod catch was numerically quite good, the 7th highest since 1992 when the monitoring programme started. The catch per hour for anglers was also quite good, the 8th highest. However, the total run was estimated to be one of the worst (17th in the time series of 20). This was largely due to the smaller number of fish (mainly grilse) running after the end of the season. The 2012 declared rod catch on the Usk was the 5th highest since 1992.

#### **4.0 The need for action**

- 4.1 If these preliminary projections are correct and NRW applies its Decision Structure for fishing controls, it will need to identify options for action. These must increase spawning escapement sufficiently, if applied now, to take the river out of the 'Probably at Risk' category within five years.
- 4.2 Under the EU Habitats Directive, action is also required for the Usk to be in favourable condition, or moving towards it, in 2015 as a Special Area of Conservation under the Habitats Directive. The Usk salmon stock is a primary reason for designation of the river. The Directive requires a precautionary approach to be taken. This preliminary assessment suggests that by 2015, the salmon feature will not only have an unfavourable status but be in decline.

#### **5.0 Recommendations**

- 5.1 Outstanding habitat issues affecting the salmon stock should be addressed as a matter of urgency, notably but not exclusively, the impact of abstractions on both smolt and adult salmon migration. Voluntary measures should be negotiated with major abstractors for 2014 in advance of changes in licences.
- 5.2 NRW should start work with fisheries interests immediately to identify voluntary actions for the 2014 season that will reduce salmon mortality associated with fishing. It should also consult on mandatory measures that could be brought in for 2015, depending on the full assessment and if voluntary measures are inadequate or not widely adopted.
- 5.3 The reductions in fishing mortality, together with action on abstraction and other issues must be sufficient for spawning escapement to:
- have a consistently positive trend;
  - be 'Probably Not at Risk' of failing the management target within 5 years;
  - deliver the longer term goal, within 10 years, of being 'Not at Risk'.

Guy Mawle, Wye & Usk Foundation

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