

This report summarises the findings of the 2017 juvenile salmonid monitoring on the Clwyd catchment. A more detailed assessment of the stocks will be available in 2018 when the Know Your Rivers reports are published.

Juvenile Salmonid Monitoring Programme

In 2017 the temporal (annual) programme consists of 5 sites on the Clwyd. The temporal data is used to look at trends in juvenile salmon and trout densities giving an idea of spawning across the whole catchment.

Due to the exceptionally poor results across Wales in 2016 additional funding has been supplied to investigate the issue further. The Clwyd spatial programme (6 yearly programme) was added to this investigation. This meant an additional 32 sites were planned in 2017.

Key Points

The monitoring season was hindered in 2017 by wet weather. This led to several of the main river sites not being completed due to high flows on the Clwyd catchment. Three of the temporal sites were completed, with the Aled and Elwy being un-fishable. The sites monitored for the investigation were also incomplete with 7 sites un-fishable on the Aled and Elwy.

The Clwyd was exceptionally poor for salmon fry again with only 5 out of 29 sites recording salmon fry, and these were at low densities. This links directly to the poor rod catch in 2016 with only 12 adult salmon caught across the Clwyd catchment. Only one salmon parr was caught across the entire catchment and this links directly to the exceptionally poor salmon fry results in 2016.

Trout fry densities were much improved compared to 2016, some spatial sites recorded their highest densities on record, however many sites remained consistent with the historic data. Juvenile trout densities are very positive considering sea trout rod catch was slightly down in 2016 compared to historic data. The improved densities of trout fry will be due to the more settled winter between 2016/17. This will have led to increased egg survival.

The poor 2016 trout fry recruitment has led to a slight decline in trout parr densities in 2017. The overall picture for trout in 2017 is good.

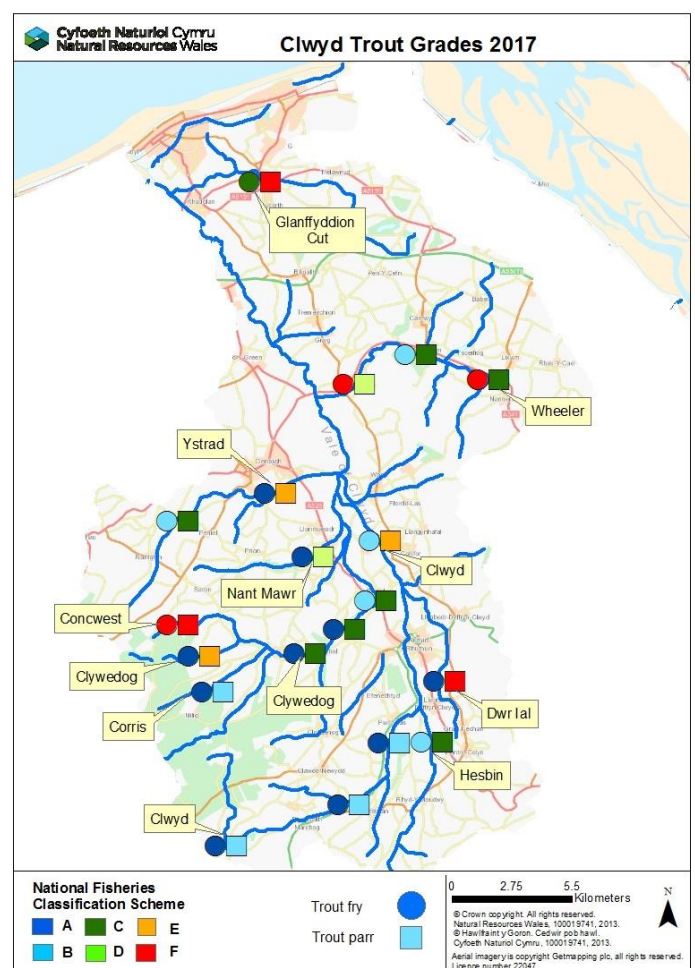
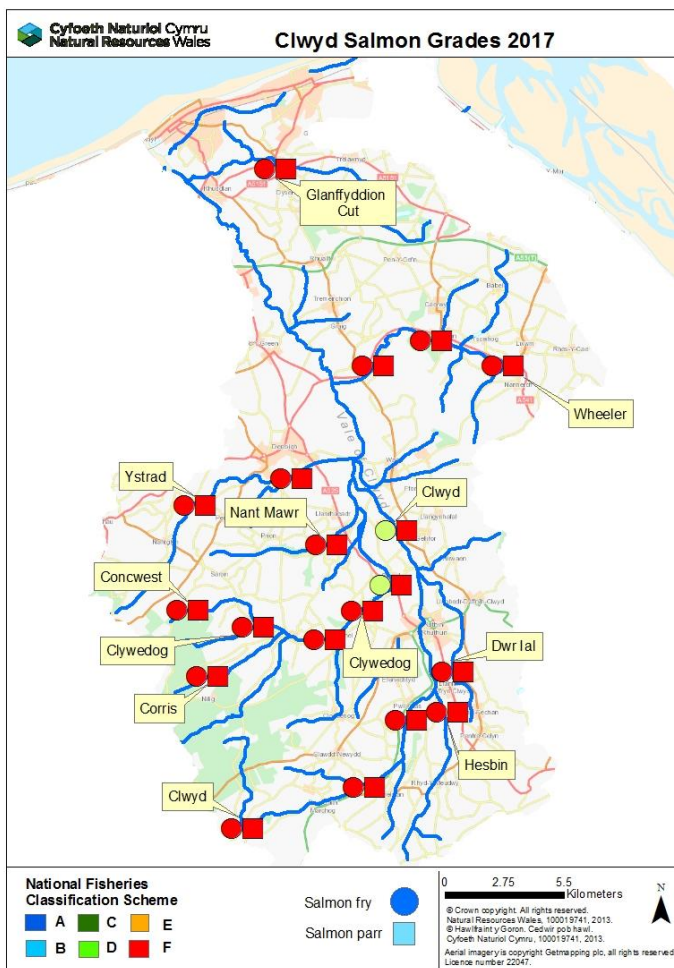
Salmon and Trout Classifications

The following maps show the results of the routine juvenile salmonid population surveys from 2017 on the Clwyd

The symbols display the National Fish Classification Scheme (NFCS) grades which have been developed to evaluate and compare the results of fish population surveys in a consistent manner. The NFCS ranks survey data by comparing fish abundance at the survey sites with sites across Wales and England where juvenile salmonids are present. Sites are classified into categories A to F, depending on densities of juvenile salmonids at the site.

The following table shows the values and classification of NFCS.

Grade	Descriptor	Interpretation
A	Excellent	In the top 20% for a fishery of this type
B	Good	In the top 40% for a fishery of this type
C	Fair	In the middle 20% for a fishery of this type
D	Fair	In the bottom 40% for a fishery of this type
E	Poor	In the bottom 20% for a fishery of this type
F	Fishless	No fish of this type present

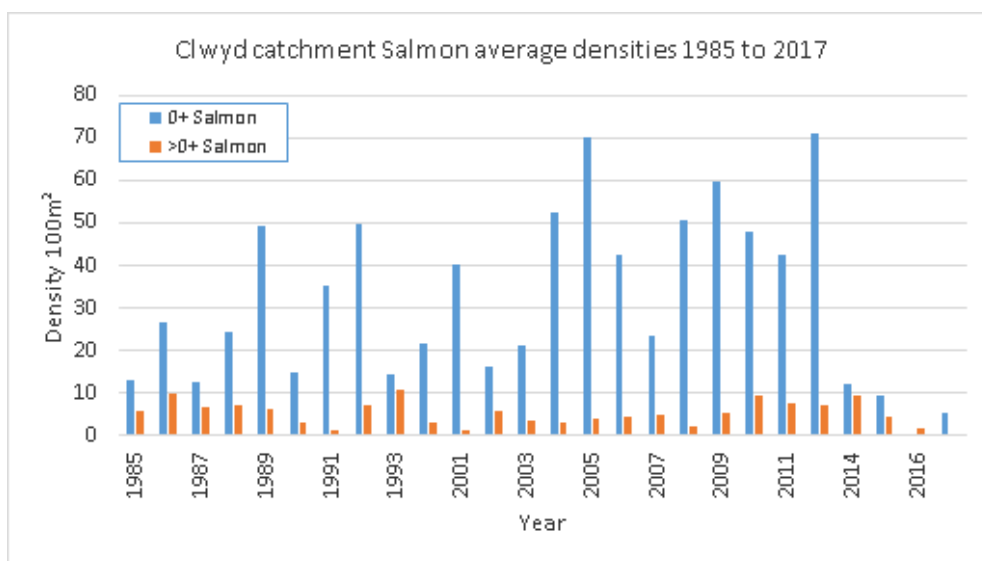




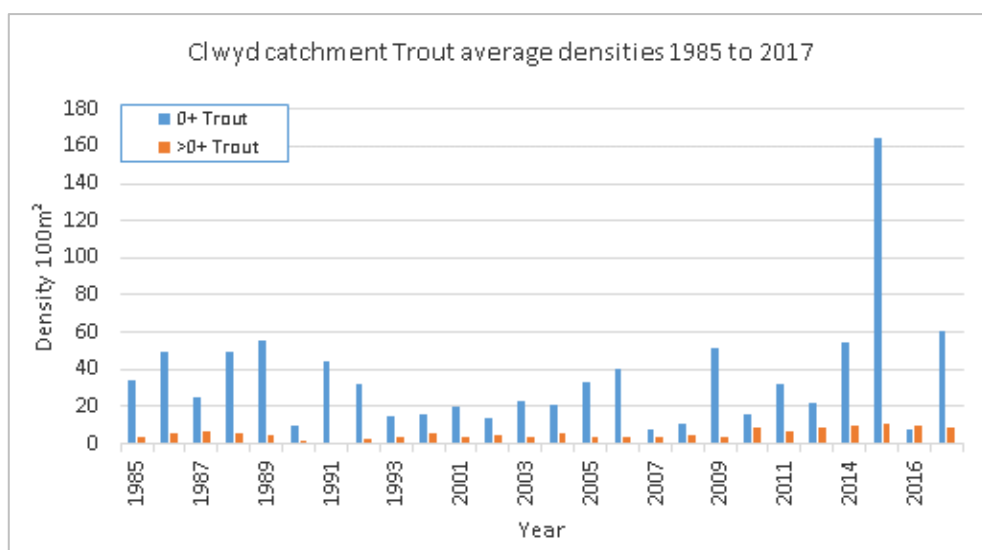
Catchment Population Trends

The graphs below show a simple comparison of average salmon and trout densities across the temporal sites on the Clwyd catchment since surveying began in 1985. NB – the data shown here are from Quantitative and Semi Quantitative surveys, not every site in the programme was done annually, and no surveys were done from 1994 to 1996, 1998 to 2000 and 2012. Historic catch efficiency data allows semi quantitative results to be comparable with quantitative.

Salmon fry and parr densities have fluctuated since monitoring begun but there appeared to be an improving trend up until 2013. From 2014 onwards there has been a decline that is in line with the rod catch.



Brown trout fry and parr densities on the Clwyd catchment have remained consistent over the years up until 2015, where there were exceptionally high densities of trout fry. This improvement was followed by one of the lowest trout fry densities on record in 2016, believed to be due to weather conditions. Results from 2017 have seen trout fry densities return to their historic average. Trout parr densities have remained consistent.



The following table shows a simple comparison of the catchment average density of juvenile salmon and trout from 2017, and compares this against 2016, and the 5-year average. NB - The five year average has been set from 2011 to 2015 as 2016 was a poor year

	0+ Salmon	>0+ Salmon	0+ Trout	>0+ Trout
2017 average density	5.3	0.0	60.4	8.4
2016 average density	0.0	1.7	7.6	10.1
Percentage difference to 2016	100%	-100%	699%	-17%
5-yr average (2011-15)	33.8	7.2	68.3	9.0
Percentage difference to 5-yr average	-84%	-100%	-11%	-7%

Although there has been a small improvement in salmon fry compared to 2016 the overall salmon densities are concerning compared to the five-year average. Trout fry densities have greatly improved since 2016. Against the five year average the 2017 results are slightly lower, but this average includes the exceptional year of 2015, so it is fair to say 2017 is a good year for trout fry on the Clwyd. Due to the poor trout fry densities in 2016 we would have expected a large decline in trout parr, so the 2017 results are positive.

Further investigation

Due to the poor results on the Clwyd for salmon once again in 2017, we intend to repeat this monitoring in 2018. Delivery of this work will depend on additional funding. Reports from anglers have been more positive in 2017, with a slight improvement in salmon rod catch across the Clwyd catchment.

Additional redd monitoring is being carried out to highlight where salmon/sea trout have spawned this winter. Juvenile surveys in these areas will then provide evidence on survival. Further investigations are being carried out on the catchment with regards to the salmon decline.