

and the Llyfni flowing out into Caernarfon Bay at Pont Llyfni. The Gwyrfai catchment covers an area of 53km² and the Llyfni catchment covers an area of 50km² and they drain a predominantly upland catchment. The main populated areas are Bontnewydd on the Gwyrfai and Penygroes on the Llyfni. Both catchments focus on agriculture, sheep farming being the main land use. The area is an important tourist location due to large sections of the catchment being within the Snowdonia National Park.

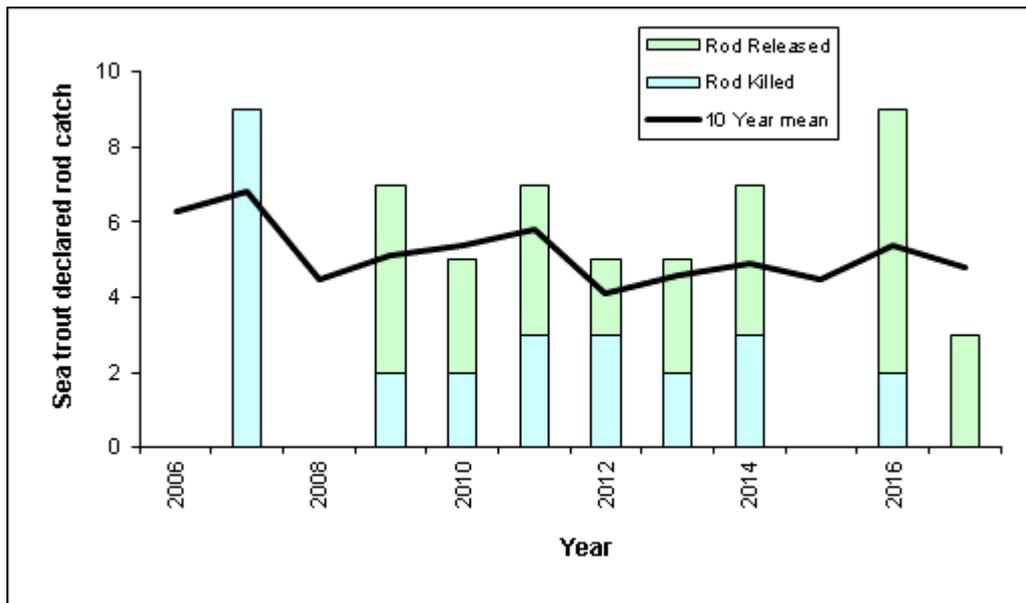
The bulk of Eryri's rocks are of Cambrian age, although Ordovician rocks are found in both the north and the south of the area. Igneous intrusions have metamorphosed many of these sedimentary shales, resulting in the formation of slate, which was once so important to the local economy.

The Gwyrfai & Llyn Cwellyn are a SAC area based upon its Salmon, Arctic Char, Otters & floating water plantain. Llyn Cwellyn hosts one of the three remaining native Welsh populations of Arctic Char (*Salvelinus alpinus*) a locally distinct relict species from the last Ice Age.

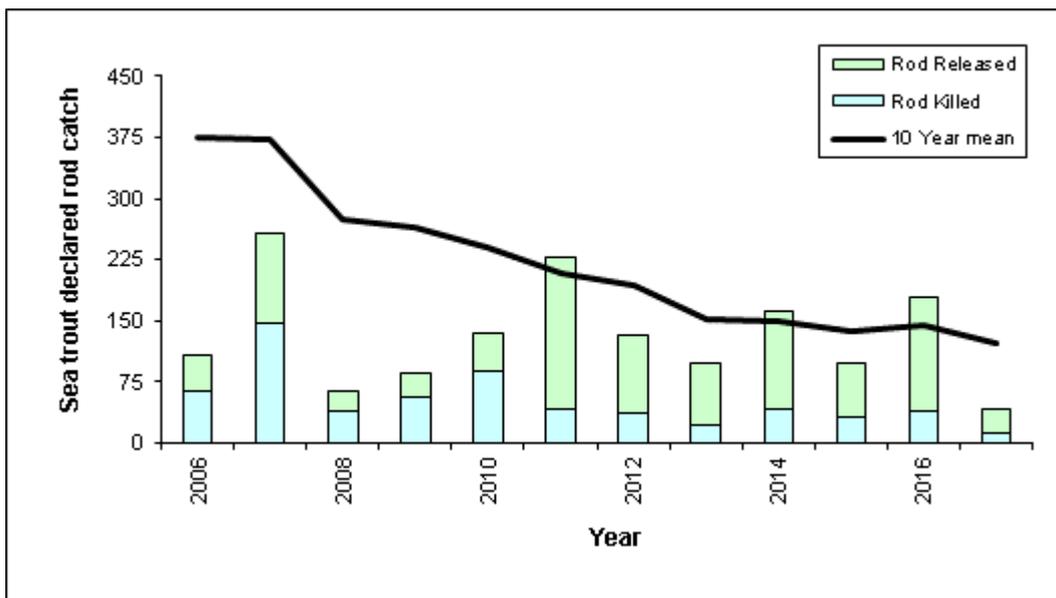
Rod catches

As the Gwyrfai/Llyfni are classed as major sea trout rivers rather than salmon, only the sea trout data has been included. Salmon catches are minor. The following graphs show the total declared rod catch for sea trout on the Gwyrfai/Llyfni.

Sea trout rod catch (Gwyrfai) – has decreased compared to last year and has fallen below the 10 year average. However the mean catch is low, and the effort is also low. The release rate in 2017 was 100% which is excellent and needs to continue to conserve stocks.



Sea trout rod catch (Llyfni) – has decreased compared to last year and is the lowest in the last ten years. Effort is low on this catchment. The release rate in 2017 has fallen compared to last year to 69%.

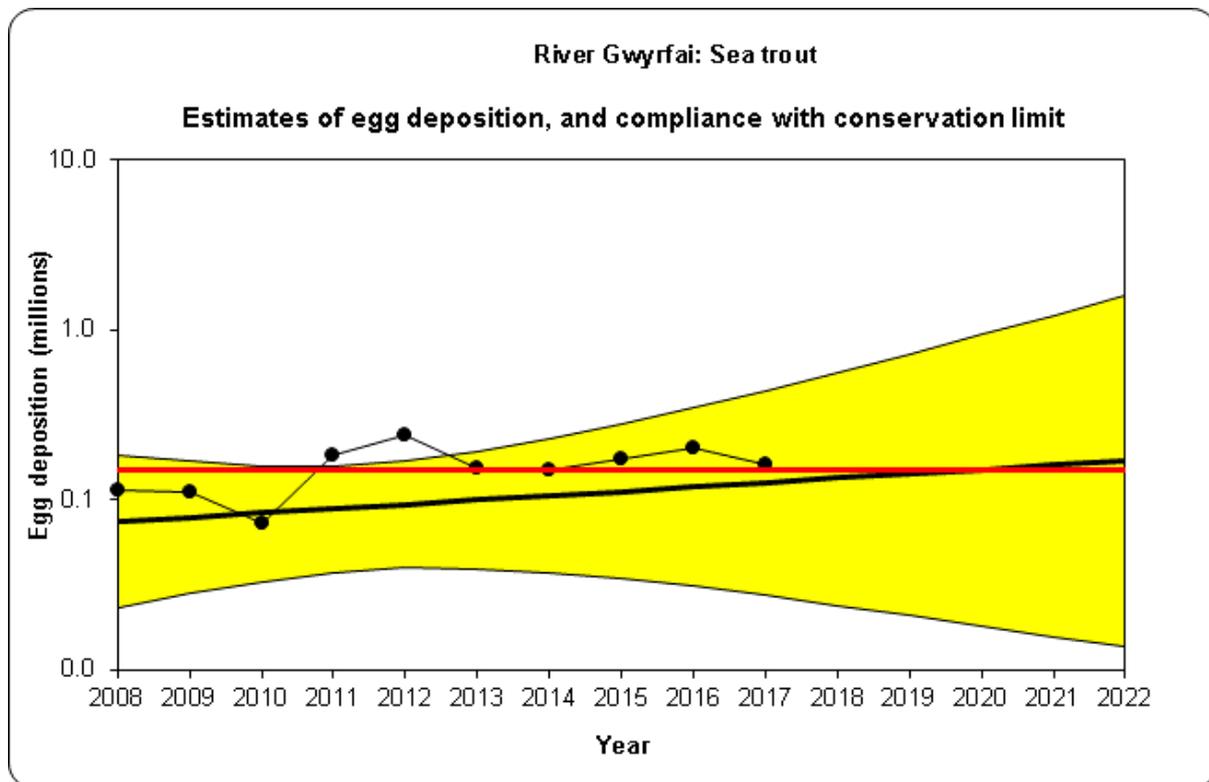


Conservation of Sea Trout

In contrast to salmon, no established methods of setting Conservation Limits or similar have been available for sea trout. In the absence of such analysis, NRW and the Environment Agency have, for several years, routinely applied a fishery based assessment to the principal sea trout rivers. This method – used previously in this report - utilises time-series' of angling catch per unit effort (CPUE) data ('catch per day') to examine sea trout performance on a river-by-river basis.

Recently an alternative stock-based assessment method has been developed by NRW and is applied here. This utilises angling catch data to derive run and egg deposition estimates for sea trout in much the same way that similar data sets are used in Conservation Limit compliance procedures for salmon assessment.

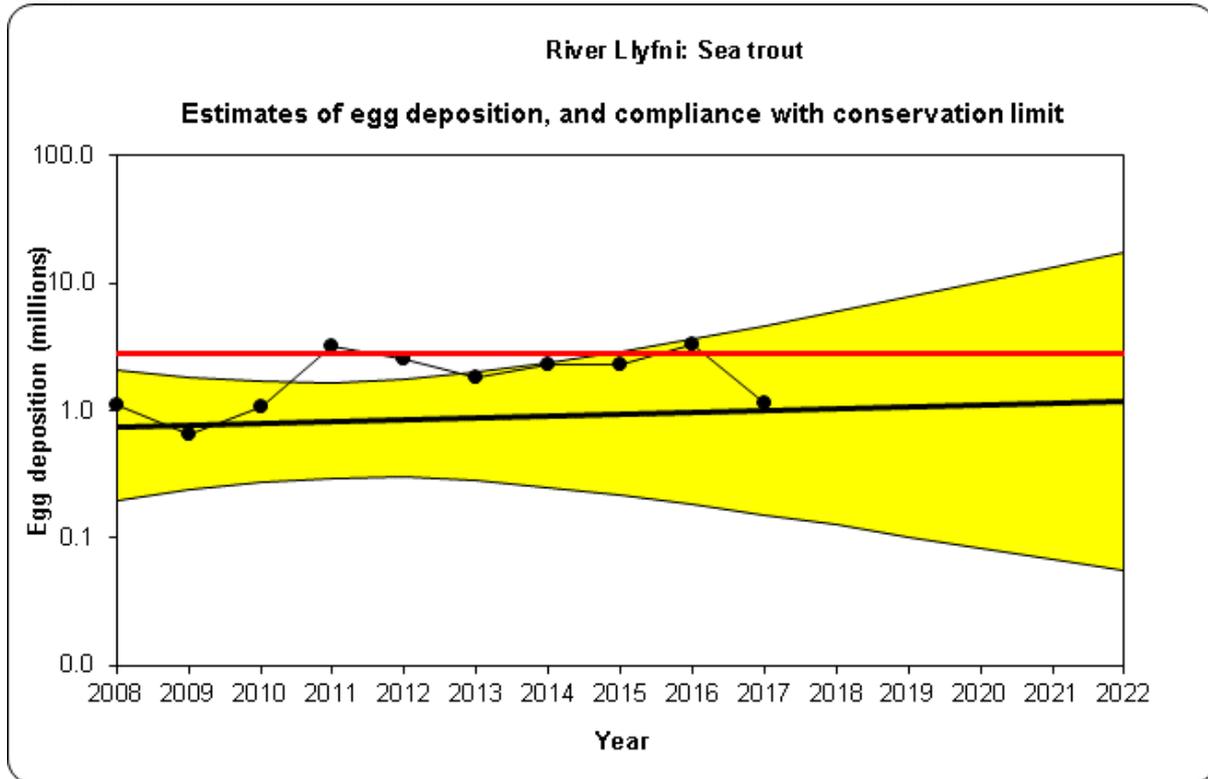
Further details on this method are given in the recent Technical Case supporting net and rod fishery byelaw proposals on all rivers in Wales and the cross-border rivers Wye and Dee (see: <http://naturalresourceswales.gov.uk/media/682258/technical-case-structure-final.pdf>)



Are enough sea trout eggs being deposited to conserve stocks in the catchment?

The red line represents the number of eggs required to be deposited to sustain a healthy sea trout stock. The black trend line and its confidence limits (the yellow band) is fitted to the most recent 10-year series of egg deposition estimates (2008-2017).

- Current number of eggs being deposited puts stocks **probably at risk**
- In 5 years' time the predicted status of salmon stocks will be **probably not at risk**
- Based on current data, and the projection of the graph, sea trout stocks will continue to **improve (uncertain)**



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Juvenile Monitoring

The monitoring season was hindered in 2017 by wet weather and high flows. This led to the temporal site on the Dwyfor not being completed. This was also the case for most temporal sites in Gwynedd and Meirionnydd.