Sea trout stock performance in Wales 2017

1. Introduction

- This report examines sea trout stock performance on the 33 principal sea trout rivers in Wales for 2017 (including the border rivers Severn, Wye and Dee). Assessment is based on compliance with Conservation Limits using methods equivalent or identical to those used on salmon in England and Wales. Such methods were first applied to sea trout in 2016.

- Assessment results for each of the principal rivers are given in Table 1 and Figs 1 and 2. As with salmon, these serve to evaluate the conservation status of individual river stocks and help ensure that Natural Resources Wales has appropriate fisheries management measures in place. The latter principally take the form of voluntary or mandatory controls on exploitation by net and rod fisheries as guided by the same Decision Structure used in salmon fisheries management (Appendix I).

2. Conservation Limits and compliance assessment

- Conservation Limits (CLs) are based on estimates of the sea trout producing capacity of individual catchments. They are expressed in terms of egg numbers and are set to help ensure that adequate numbers of fish go on to spawn.

- Compliance assessment involves (i) producing estimates (from rod catches or more direct methods e.g. use of traps or fish counters) of the numbers of sea trout returning each year and their likely egg contribution and (ii) undertaking formal statistical assessment of compliance status against the CL. The latter procedure is designed to achieve the 'management objective': that stocks meet or exceed their CL four years out of five, in the long-term.

- Compliance assessment is carried out on a rolling ten-year series of egg deposition estimates (ending with the latest year) and examines the linear trend in egg numbers (projected forward five years in time) as well as the likelihood that a river stock is statistically passing or failing its management objective in any one year.

- River stocks which are statistically passing or failing their management objective (i.e. there is a greater than 95% chance they are in one of these categories) are classed as 'not at risk' or 'at risk', respectively. River stocks in an intermediate position are classed as either 'probably not at risk' or 'probably at risk' depending on whether the likelihood of them passing their management objective is greater or less than 50%, respectively.

- In terms of the Decision Structure, it is the ‘at risk’ status projected 5-years beyond the current year which is the most important performance measure, as well as the upward or downward trend in egg numbers. These statistics, along with compliance status in the current year and angling catch-and-release levels, are summarised inTable 1, with risk status in the current year and projected status in 5-years time shown in Figs 1 and 2.

Table 1 Catch and release statistics, latest 10-year trends in egg numbers, and CL compliance status in the current year (2017) and projected in 5 years time (2022) for the 33 principal sea trout rivers in Wales.

	% Rod released:							Current compliance	Projected compliance		
River	2012	2013	2014	2015	2016	2017		2017	2022	Trend	
Severn	83.3	88.2	82.4	76.5	95.0	94.1		Prob not at risk	Prob not at risk	Uncertain	+
Wye	94.4	95.1	89.7	98.8	100.0	100.0		Prob at risk	Prob at risk	Uncertain	-
Usk	84.1	64.9	89.9	82.5	84.5	87.3		At risk	At risk	Uncertain	- -
Rhymney*	75.0	100.0	66.7		0.0			Prob at risk	Prob at risk	Uncertain	- -
Taff & Ely	99.2	100.0	52.2	95.7	100.0	100.0		At risk	At risk	Uncertain	- -
Ogmore	85.6	89.1	89.6	92.2	77.9	87.4		Prob at risk	Prob at risk	Uncertain	+
Afan	77.7	56.9	66.7	89.9	72.5	92.7		Prob at risk	Prob at risk	Uncertain	- -
Neath	73.0	81.9	92.1	90.6	75.5	82.6		Prob at risk	Prob at risk	Uncertain	- -
Tawe	73.4	65.1	90.9	62.3	85.3	90.3		At risk	At risk	Uncertain	- -
Loughor	60.3	54.2	66.9	78.3	86.0	88.9		At risk	At risk	Uncertain	- -
Gwendraeth	64.0	50.0	71.9	76.7	94.4	80.0		At risk	At risk	Uncertain	- -
Tywi	58.4	69.4	72.5	75.5	74.6	70.8		At risk	Prob at risk	Uncertain	-
Taf	40.8	42.2	60.2	68.1	60.0	62.0		At risk	At risk	Uncertain	- - -
E&W Cleddau	65.7	84.1	72.8	81.3	82.4	86.2		At risk	At risk	Uncertain	- -
Nevern	52.5	44.3	56.4	60.3	49.4	63.7		Prob at risk	Prob at risk	Uncertain	-
Teifi	70.0	74.4	79.9	73.8	73.6	70.4		Prob at risk	Prob at risk	Uncertain	+
Aeron	32.6	43.3	46.8	58.0	73.9	59.1		Prob at risk	Prob at risk	Uncertain	+
Ystwyth	75.4	68.0	81.7	75.0	72.3	79.5		Prob at risk	Prob at risk	Uncertain	- -
Rheidol	85.5	89.0	88.7	83.8	77.9	87.3		Prob at risk	Prob at risk	Uncertain	++
Dyfi	75.4	76.2	78.3	72.1	78.4	79.9		Prob not at risk	Prob not at risk	Uncertain	++
Dysinni	83.8	88.1	89.0	85.8	86.7	81.4		Prob not at risk	Prob not at risk	Uncertain	+
Mawddach	78.4	78.3	86.3	78.3	86.2	79.8		Prob not at risk	Prob not at risk	Uncertain	+
Artro	71.4	62.5	56.0	29.4	27.8			Prob at risk	Prob not at risk	Uncertain	+
Dwyryd	55.9	21.6	78.2	35.9	80.0	84.2		Prob at risk	Prob at risk	Uncertain	-
Glaslyn	63.3	75.9	80.0	80.3	71.0	81.0		Prob at risk	Prob at risk	Uncertain	-
Dwyfawr	63.8	82.7	58.9	73.9	58.4	76.9		Prob at risk	Prob at risk	Uncertain	+
Llyfni	72.9	76.3	74.8	68.4	78.8	69.0		Prob at risk	Prob at risk	Uncertain	+
Gwyrfai*	40.0	60.0	57.1		77.8	100.0		Prob at risk	Prob not at risk	Uncertain	+
Seiont	45.5	45.5	63.2	60.0	87.4	63.3		Prob not at risk	Prob not at risk	Uncertain	++
Ogwen	63.4	57.3	67.5	62.2	69.3	69.0		Prob not at risk	Not at risk	Up	+++
Conwy	78.6	83.5	78.0	79.4	86.7	81.3		Prob not at risk	Prob not at risk	Uncertain	++
Clwyd	83.0	85.1	84.5	87.1	84.9	86.3		Prob at risk	Prob at risk	Uncertain	++
Dee	83.1	95.4	83.2	81.8	83.7	76.6		Prob at risk	Prob not at risk	Uncertain	+

Trend:	
p<0.05	---
p<0.10	---
0.10<=p<0.30	--
0.30<=p<0.50	-
0.70=>p>0.50	+
0.90=>p>0.70	++
p>0.90	+++
p>0.95	+++

* Mean rod catch <20

Fig 1 Main sea trout rivers in Wales: Risk status 2017

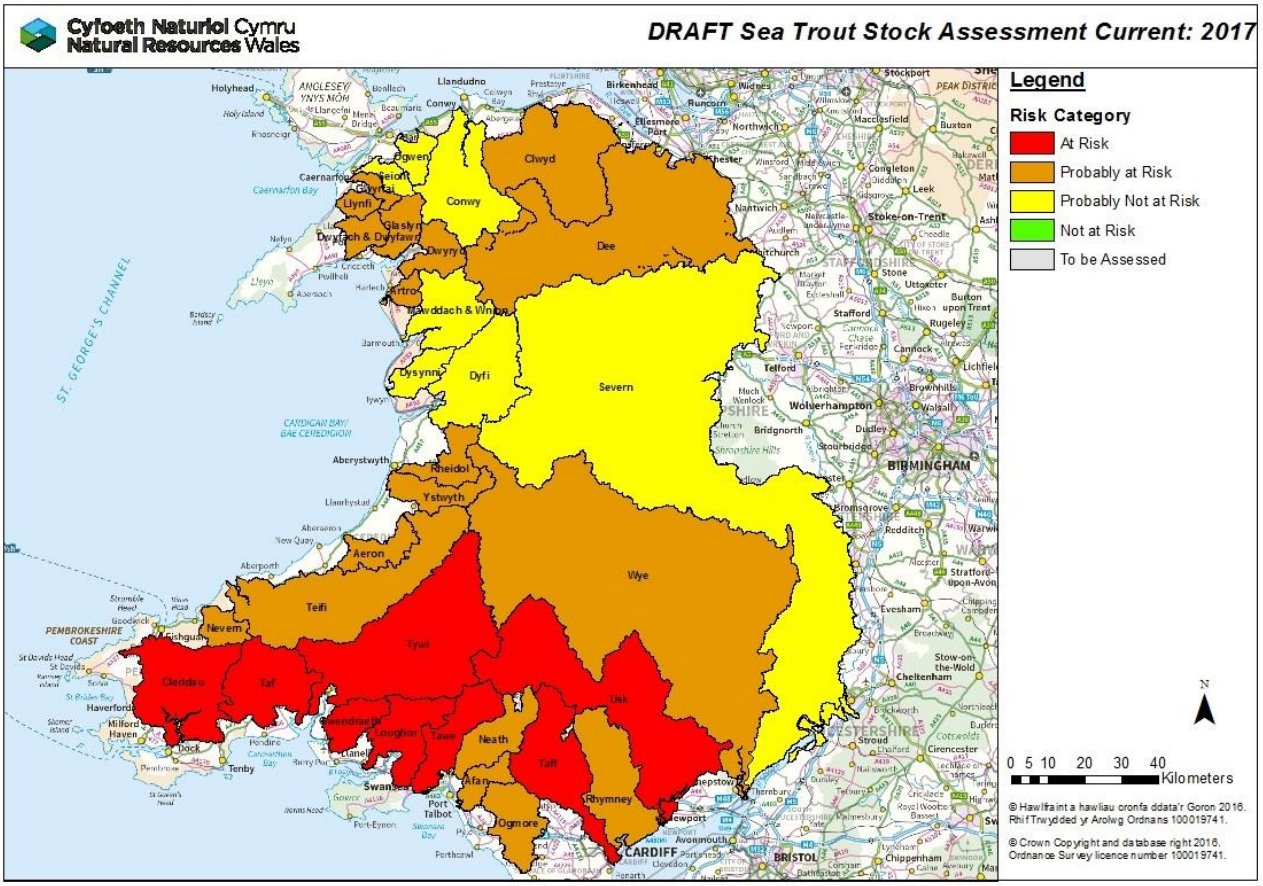
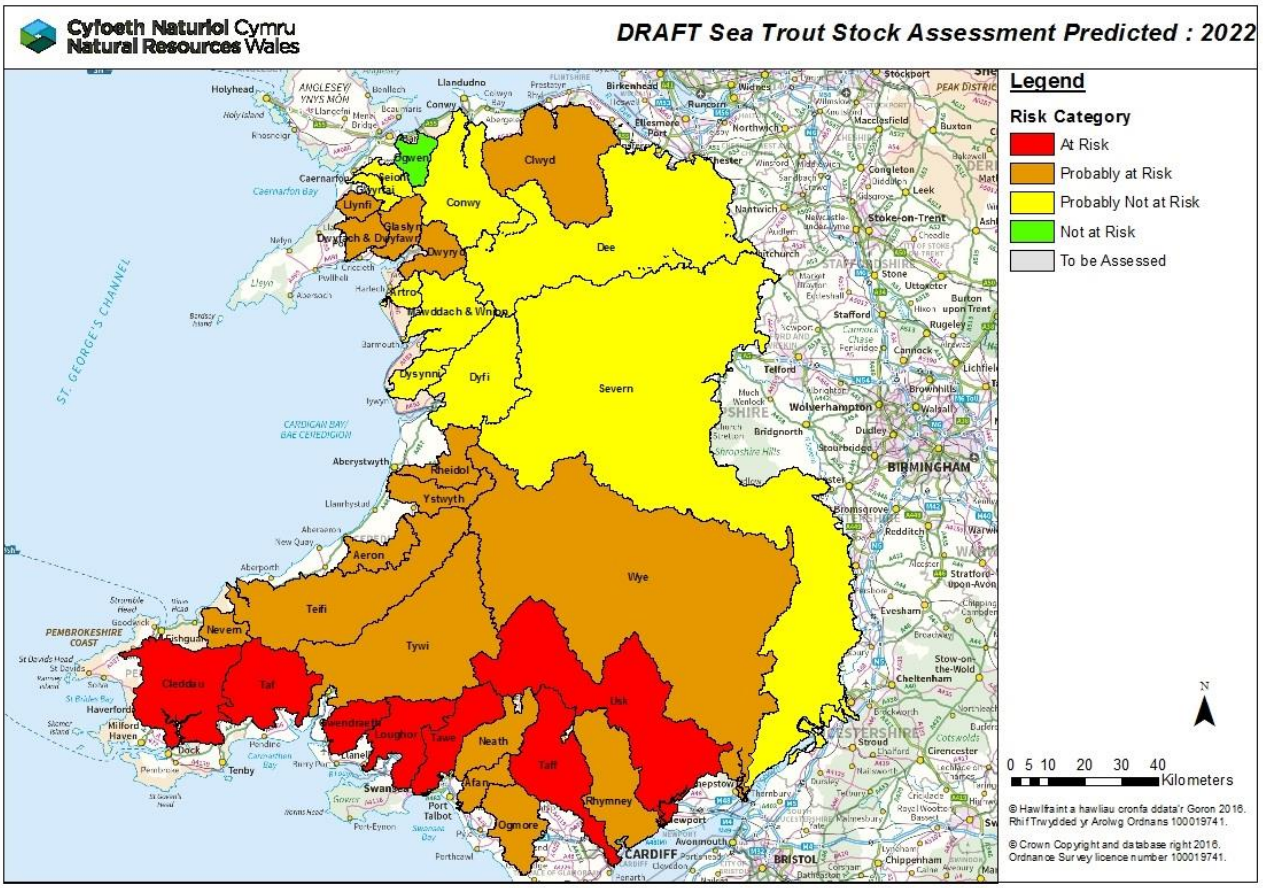


Fig 2 Main sea trout rivers in Wales: Projected risk status 2022



3. Management response

- In line with the Decision Structure, steps should be taken to significantly reduce or even eliminate net and rod fishery exploitation (i.e. the numbers of fish killed) on those rivers projected to be “at risk’ in 5 years time (i.e. 2022 in the current assessment), or “probably at risk with a downward trend”. Where possible (principally on rod fisheries), voluntary measures to control exploitation should be promoted in the first instance before considering mandatory action. Given that the assessment methodology for sea trout is less established than that applied to salmon, and is still under evaluation, application of the Decision Structure to sea trout fisheries management should be more tentative than in the case of salmon.

- For rivers which have been in the “not at risk” category for 5 consecutive years, consideration should be given to relaxing fishing controls - including on net fisheries, where these exist.

- Recovering rivers should considered as “at risk” unless assessment information is available and indicates otherwise. Voluntary C&R levels of 100% should be encouraged at the same time as working on the necessary environmental improvements. If these rivers have the potential to develop rod fisheries with average catches of >20 salmon, then mandatory measures may need to be considered.

- Water Framework Directive (WFD) Good Ecological Status (GES) assessments for trout (where available) for catchment water bodies should be considered alongside CL compliance results and other sources of evidence as part of the management decision making process.

Appendix I: Developing fishing controls for salmon fisheries in England & Wales ("The Decision Structure")