

Know Your River – Aeron Salmon & Sea Trout Catchment Summary

Introduction

This report describes the status of the salmon and sea trout populations in the Aeron catchment. Bringing together data from rod catches, stock assessments and juvenile monitoring, it will describe the factors limiting the populations and set out the challenges faced in the catchment.

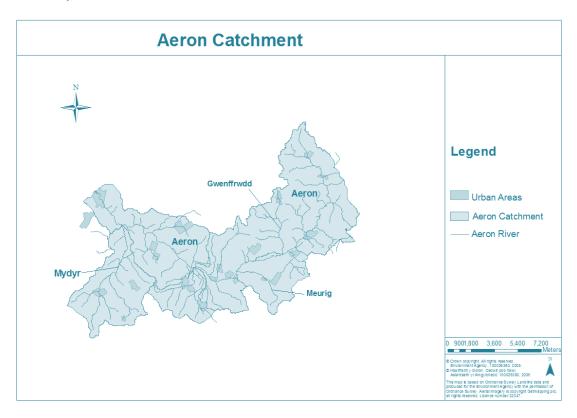
Action tables set out habitat improvements to restore freshwater productivity of salmon and sea trout populations. These tables also include some work which will be carried out by our partner organisations, not just Natural Resources Wales (NRW).

NRW has a duty, defined in the Environment (Wales) Act 2016 to have Sustainable Management of Natural Resources (SMNR) at the core of everything that we do. By applying the principles of SMNR in all of our activities - from agriculture, forestry and flood defence to development planning - we are undertaking catchment-wide initiatives that will deliver for fish stock improvements. Our reports highlight the importance of considering the whole catchment when identifying and addressing fisheries issues; and of working with partners.

NRW is committed to reporting on the status of salmon stocks in all principal salmon rivers where, in the past, Salmon Action Plans have been produced, and/or, in SAC rivers, where condition assessments have been undertaken under the Habitats Directive. In addition, the status of various fish species in all our rivers is reported as part of Water Framework Directive (WFD) assessments. This report refers to these commitments. Its purpose is to provide, for our customers, an informative and useful summary of stock status and remedial work planned - specifically for anglers, fishery and land owners; as well as other partners.

Catchment

The River Aeron rises from its source in Llyn Eiddwen in the Mynydd Bach hills and then flows in a westerly direction to Cardigan Bay. The catchment area is predominantly rural in nature, with the main centres of population concentrated around Felinfach and Aberaeron. The Aeron supports a locally important sea trout (sewin) fishery. Sea trout are the principal salmonid, with a limited number of salmon also present.



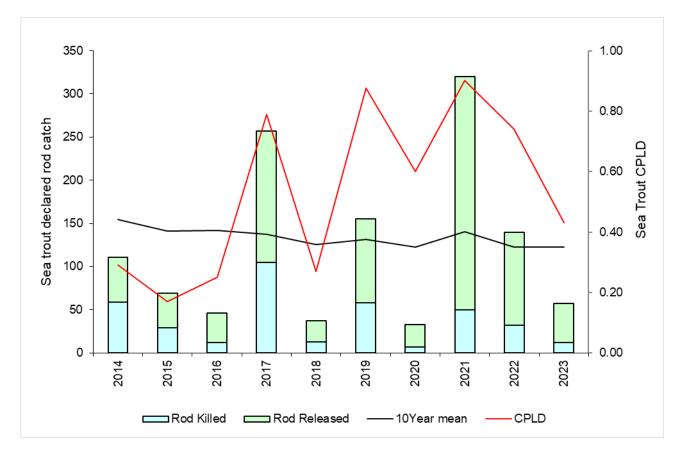


Rod Catches

The following table/graph below shows the total declared rod catch for sea trout on the Aeron. Salmon rod catches are very low on the Aeron, and as the catchment is not classed as a principal salmon river we have not included this data. One salmon was caught on the Aeron in 2022 and zero were caught in 2023.

| Year | Caught | Rod Killed | Rod Released | 10 Year mean | Percentage released | Catch per license day |
|------|--------|------------|-----------------|-----------------|------------------------|-----------------------------|
| 2023 | 57 | 12 | 45 | 122.5 | 70 | 0.430 |
| 2022 | 140 | 32 | 108 | 122.8 | 77 | 0.74 |
| 2021 | 320 | 50 | 270 | 140.1 | 84 | 0.901 |
| 2020 | 33 | 7 | 26 | 122.5 | 60 | 0.600 |
| 2019 | 155 | 58 | 97 | 131.8 | 41 | 0.876 |
| 2018 | 37 | 13 | 24 | 125.9 | 65 | 0.270 |
| 2017 | 257 | 105 | 152 | 137.3 | 59 | 0.790 |
| 2016 | 46 | 12 | 34 | 142.2 | 33 | 0.250 |
| 2015 | 69 | 29 | 40 | 141.1 | 58 | 0.170 |
| 2014 | 111 | 59 | 52 | 154.7 | 47 | 0.290 |

Sea trout rod catch





Stock status

Conservation of Sea Trout

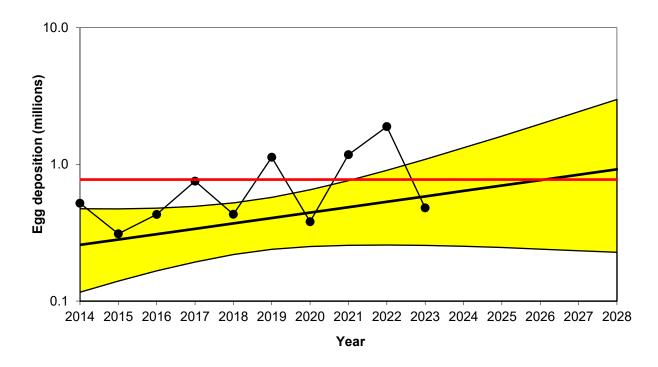
In contrast to salmon, no established methods of setting Conservation Limits or similar have been available for sea trout. In the absence of such analysis, NRW and the Environment Agency have, for several years, routinely applied a fishery-based assessment to the principal sea trout rivers. This method – 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: <u>Technical case for fishing controls to protect salmon and sea trout</u>).

River Aeron: Sea trout

Estimates of egg deposition, and compliance with conservation limit



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 tenyear series of egg deposition estimates (2014-2023).

• Current number of eggs being deposited puts stocks probably at risk



- In five years' time the predicted status of sea trout stocks will be probably not at risk
- Based on current data, and the projection of the graph, the stocks of sea trout on the Aeron will continue to **improve (uncertain trend)**

Juvenile Salmonid Monitoring Programme

In 2024 the temporal (annual) programme consisted of two sites on the Aeron. The temporal data is used to look at trends in juvenile salmon and trout densities giving an indication of how successful spawning has been across the whole catchment. It is believed that the Meurig may have partially dried out prior to our surveys, this has led to poor trout results compared to the historic data.

Salmon and Trout Classifications

The tables/maps below show the results of the routine juvenile salmonid population surveys on the Aeron in 2024.

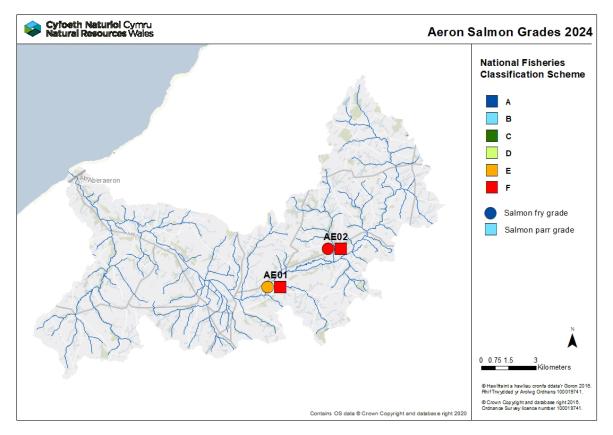
The symbols display the National Fish Classification Scheme (NFCS) grades which have been developed to evaluate and compare the results of fish population surveys in a consistent manner. The NFCS ranks survey data by comparing fish abundance at the survey sites with sites across Wales and England where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

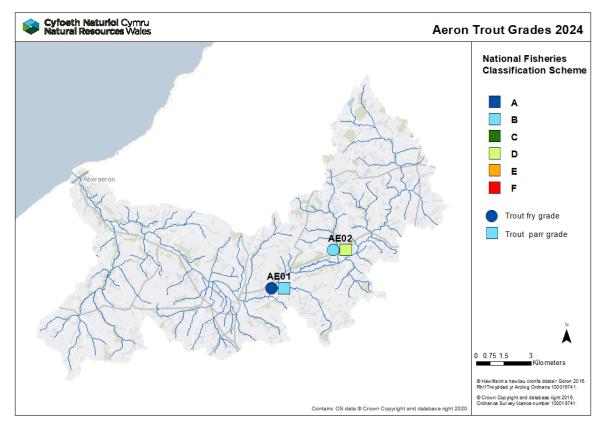
| Grade | Descriptor | Interpretation | | | |
|-------|------------|--|--|--|--|
| Α | Excellent | In the top 20% for a fishery of this type | | | |
| В | Good | In the top 40% for a fishery of this type | | | |
| С | Fair | In the middle 20% for a fishery of this type | | | |
| D | Fair | In the bottom 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 | Site code | Year | Salmon fry grade | Salmon parr grade | Trout fry grade | Trout parr grade |
|-----------|-----------|------|---------------------|-------------------------|--------------------|---------------------|
| Meurig | AE01 | 2024 | E | F | А | В |
| Gwenffrwd | AE02 | 2024 | F | F | В | D |



Maps of Juvenile Salmonid Results





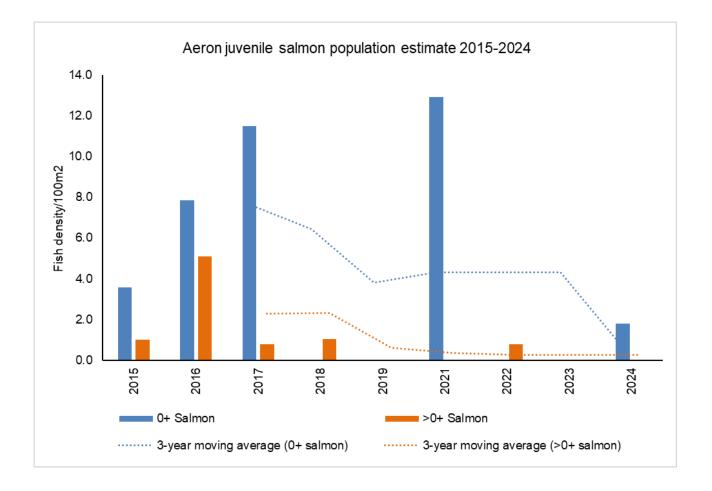


Catchment Population Trends

The tables/graphs below show the average salmon and trout densities from the temporal sites across the Aeron catchment since 2015. NB - no surveys were carried out in 2020 due to covid restrictions. NA stands for not applicable.

Salmon population trend - Note: Geometric mean has been used to better represent 'normal' densities. One or two high values were making more recent mean values (average) look better than the true picture of low densities. The true picture is now better illustrated.

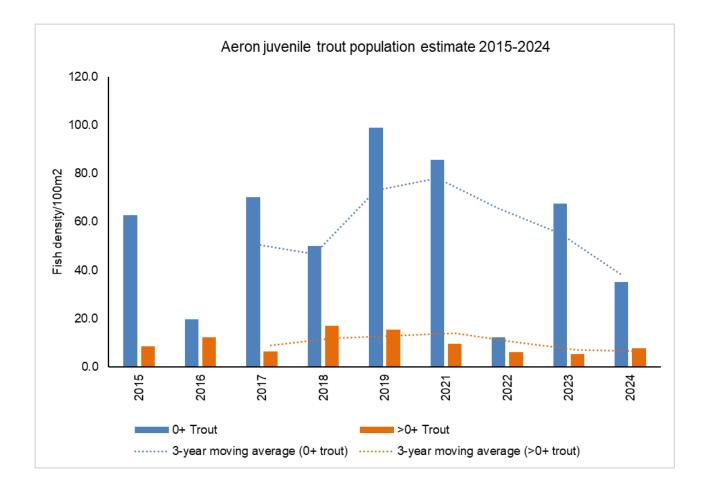
| Year | 0+ Salmon | 3-year average (0+ salmon) | >0+ Salmon | 3-year average (>0+ salmon) |
|------|-----------|-------------------------------|------------|--------------------------------|
| 2024 | 3.6 | 7.6 | 1.0 | 2.3 |
| 2023 | 7.9 | 6.4 | 5.1 | 2.3 |
| 2022 | 11.5 | 3.8 | 0.8 | 0.6 |
| 2021 | 0.0 | 4.3 | 1.1 | 0.4 |
| 2019 | 0.0 | 4.3 | 0.0 | 0.3 |
| 2018 | 12.9 | 4.3 | 0.0 | 0.3 |
| 2017 | 0.0 | 0.6 | 0.8 | 0.3 |
| 2016 | 0.0 | NA | 0.0 | NA |
| 2015 | 1.8 | NA | 0.0 | NA |





Trout population trend - Note: Geometric mean has been used to better represent 'normal' densities. One or two high values were making more recent mean values (average) look better than the true picture of low densities. The true picture is now better illustrated.

| Year | 0+ Trout | 3-year average (0+ trout) | >0+ Trout | 3-year average (>0+ trout) |
|------|----------|------------------------------|-----------|-------------------------------|
| 2024 | 62.6 | 50.8 | 8.4 | 9.0 |
| 2023 | 19.6 | 46.6 | 12.3 | 11.9 |
| 2022 | 70.2 | 73.0 | 6.3 | 12.9 |
| 2021 | 50.0 | 78.2 | 17.0 | 14.0 |
| 2019 | 98.8 | 65.6 | 15.4 | 10.4 |
| 2018 | 85.6 | 55.1 | 9.5 | 7.1 |
| 2017 | 12.3 | 38.3 | 6.3 | 6.4 |
| 2016 | 67.4 | NA | 5.4 | NA |
| 2015 | 35.2 | NA | 7.6 | NA |





Aeron Fisheries Action Table

| Planned actions | Benefits | Lead | Partner(s) | Timescale for delivery |
|--|---|------|---|---------------------------|
| Strategic Allocated Fund (SAF): Partnership with Afonydd Cymru and West Wales Rivers Trust delivering projects to remove barriers to fish migration and improve habitat at sites identified for improvement in Fisheries Habitat Restoration Plans. | More natural river system, increased connectivity, reduced siltation, increased flow diversity, improved spawning gravels and juvenile habitat. Measures should increase spawning success and juvenile production. | NRW | AC WWRT | On-going |
| Water Framework Directive: Continue to work to ensure no deterioration, monitor the status of the environment and investigate the causes of failures. Together with our partners we will look to put in place measures that protect and improve the status of the water environment | Waterbodies protected and improved WFD waterbodies achieving Good Status/Potential AMP strategies to improve water company intakes protecting migratory species such as eel. | NRW | NRW/EA WWRT Wildlife Trusts Local authorities Landowners DCWW | On-going |
| Enforcement: Action to reduce illegal activity on information provided and investigations. Active enforcement team patrolling river banks. | Reduce illegal activity, more fish remain in the system. | NRW | Angler Stakeholder Groups Angling Trust Voluntary Bailiff Service Dyfed-Powys Police | On-going |



| Sustainable Fisheries Projects: Reinvestment of rod licence fees to improve fish habitat and access to angling. E.g. installation of disabled angling platforms, gate/stile replacement, vegetation clearance for access | Improved access to and engagement with recreational angling for individual and community health and wellbeing. Improved facilities for existing anglers and fishing clubs. Engagement, where possible, with citizen science relating to fish habitat and/or WQ. Delivery of 'Reconnecting People & Place' – Mid Wales AS theme. | NRW | Angling Clubs Ceredigion Local Fisheries Group | Ongoing |
|--|---|-----|---|---------|
|--|---|-----|---|---------|