



# Fisheries Annual Report 2017 to 2018 Devon, Cornwall and the Isles of Scilly

We are the Environment Agency. We protect and improve the environment.

We help people and wildlife adapt to climate change and reduce its impacts, including flooding, drought, sea level rise and coastal erosion.

We improve the quality of our water, land and air by tackling pollution. We work with businesses to help them comply with environmental regulations. A healthy and diverse environment enhances people's lives and contributes to economic growth.

We can't do this alone. We work as part of the Defra group (Department for Environment, Food & Rural Affairs), with the rest of government, local councils, businesses, civil society groups and local communities to create a better place for people and wildlife.

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# Foreword

In each of our 14 areas we carry out a wide range of work in order to protect and improve fisheries. Below are some examples of what has been happening in the Devon, Cornwall and the Isles of Scilly (DCS) Area, much of which benefits fisheries from funding from both fishing licence fees and other sources. For a wider view of the work we do across the country for fisheries please see the national Annual Fisheries Report.

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# 1. Fishing licence checks and prosecutions

During the 2017 to 2018 financial year (the last complete year of data) a total of 64,702 fishing licence checks were carried out by our fisheries enforcement staff across the country. Our checks show us that evasion was relatively low with a national average of 3.97%. Below are details from DCS:



# 2. Illegal fishing

Illegal fishing remains a threat to game and coarse fish stocks in England and the fisheries they support. The Environment Agency uses a combination of covert and overt patrols to deter and detect poachers, as well as responding to reports of illegal fishing where there is a credible threat to fish stocks and where we have a realistic chance of apprehending the alleged offenders. We cannot respond to every report of illegal fishing so we must prioritise where we focus our efforts. For DCS:

72 illegal fishing incidents were reported to our incident hotline (0800 80 70 60)



#### Illegal fishing incident

During September 2016, the Environment Agency and Marine Management Organisation (MMO) focussed on a joint operation around the Camel Estuary. The purpose of the operation was to observe fishing activity taking place in the early hours of the morning and then, through boarding vessels and inspections at sea or shore, ensure that freshwater and sea fisheries legislation was being complied with. A situation arose where highly suspicious activity was observed in the area. Officers from the EA) & MMO were diverted to dealing with this situation and seized a gill net and a box of bass. Following this intervention a full investigation took place the fisherman in question was offered a Financial Administrative

Penalty (FAP). The offender did not pay so the case was escalated to Bodmin Magistrates Court.

MMO fisheries law enforcement officers attended Bodmin Magistrates Court on Thursday 12th April 2018 to present the case.

The outcome at Bodmin Magistrates Court was as follows, the FAP was upheld £1,000 and an additional penalty of £1,000 was imposed upon the offender who pleaded guilty on arrival. This case is one of many we have progressed with our partners in recent years through our principles of collaboration and sharing.

The River Camel holds sensitive stocks of salmon and sea trout and joint action such as this will without doubt make a substantial difference in making illegal fishers think twice about setting illegal gill nets.



**Camel Estuary** 

Operation jetsam:

This joint EA and D&C Police Operation continued with joint marine patrols conducted on-board the EA vessel Morteg concentrating on the south coast of Cornwall and Plymouth areas. The purpose of the operation is to deter or detect marine crime and illegal fishing.



Joint boat patrol

# 3. Incident management

Responding to fish kills and other environmental incidents is a vitally important part of what we do. We respond to thousands of substantiated incidents annually. Members of the public report incidents through our Incident Hotline (0800 80 70 60) and we are able to respond 365 days a year and on any day, at any time, providing an effective and proportionate response.

All incidents are categorised according to potential and actual impact on the environment and the impact on our resources. We can then break this figure down into categories of incident as shown below. Category 1 is the most serious and Category 4 is a reported incident with no impact.



Devon and Cornwall Incident Management

#### Incident management

August 2017 – The River Ottery suffered a slurry incident and fish kill. The fish kill assessment was led by Fisheries, Biodiversity and Geomorphology (FBG) and Fisheries enforcement officers.

March 2018 – River Deer pollution and fish kill. A category 1 incident, suspected to have killed fish over a 15Km stretch. Fisheries Enforcement & FBG officers led on the fish kill assessment and aspects of the evidence gathering for the pollution event.



Incident recovery, evidence of fish kill

#### Incidents

April – August 2017. Significant numbers of ruffe found to be dying in Colliford Reservoir. This fish is not native to Cornwall and it is not known why they were in the reservoir. Samples of live and dead fish were sent to the EA labs at Brampton to ascertain the cause of the mortalities. Initially this was thought to be due to spawning stress but the mortalities continued throughout the summer months. The fish were aged up to 3+ and it is believed that they simply bred beyond the resources within the reservoir.



Recovered ruffe

May 2017 – Joint operation led by MMO with assistance from Natural England and EA (Fisheries Enforcement). The operation was to remove non-native pacific oysters from the Helford Estuary. We supplied staff and a vessel.

Salmon Netting – Audits conducted on the Camel & Tamar salmon net fisheries with no infringements found.

#### November 2017 – River Camel emergency byelaw introduced

The River Camel had a comprehensive, catchment wide juvenile fish survey carried out in 2017. This survey showed a drastic reduction in both salmon fry and parr, with 75% of survey sites showing a complete absence. This dramatic reduction in juveniles required swift decisive action. The fisheries team implemented an Emergency Byelaw which required the cessation of salmon netting and implemented 100% mandatory catch and release for anglers (along with other protective measures designed to maximise salmon survival). Though the byelaw was unpopular we felt it was critical to protect the remaining salmon stock from further exploitation. The fisheries team are now leading on catchment wide investigations and improvements.

Fisheries patrols increased on the river to monitor compliance with the new byelaw. Very few anglers were seen after the byelaw was introduced and no infringements found.



#### Drift Net

### Devon & Severn inshore Fisheries Conservation Authority (IFCA) estuary and coastal netting byelaw

In March 2018 the Devon and Severn IFCA introduced a new sea fisheries byelaw with the specific intention of protecting seaward life-stages of salmon and migratory trout from accidental interactions with sea fishing activities such as drift netting. The need for the byelaw, which introduces new restrictions on net fishing for sea fish species in key estuaries and insure water areas, was strongly evidenced and driven by local and national EA

fisheries staff, with proposals supported strongly by local angling interests. These new regulations significantly increase the protection afforded to migratory salmonids in all of Devon's estuaries and inshore waters and greatly contribute towards efforts to improve salmon numbers in local rivers.

More details on the new regulations can be found here: https://www.devonandsevernifca.gov.uk/Enforcement-Legislation/Permit-Byelaws-Permit-Conditions

# 4. Fisheries improvements

The boxes below highlight some projects we have delivered followed by the table below listing many of our environmental improvement projects that have helped to deliver benefits to fisheries; many in conjunction with our partners. We have included the time of our fisheries officers in the funding considerations for the projects as their posts are funded by fishing licence income. Considerable amounts of their time and expertise has been provided for the projects. Many projects have also received funding from government or from other parts of the Environment Agency e.g. flooding, the Environment Programme or Water Framework Directive budgets however where contribution has included fishing licence income, this has been noted.

# $\pounds 53,112 + \pounds 40,900 = \pounds 94,012$

ΕA

Match

**Fisheries improvements** 

In 2017 to 2018 DCS installed 3 fish passes and opened up 30.4km km of habitat or spawning ground for fish.

#### Fish stocking from Calverton during December 2017 and January 2018

Our fish farm in Calverton is funded 100% by fishing licence income, they provided fish stock for:

- Exeter & District Angling Association
- Bideford & District Angling Club
- Barnstaple & District Angling Club
- Roche Angling Club
- Devonport Services Angling Association
- Plymouth & District Angling Club
- Bude Canal Angling Association
- Threemilestone Angling Club
- Marazion Angling Club



Lovingly nurtured by our officers at our Calverton fish farm, putting rod licence revenue money to great use helping the local angling clubs stock good quality fish.

#### Camelford (As part of larger project)



The Water for Growth Project is a £2.2m European Union funded partnership project with the Environment Agency, Westcountry Rivers Trust, Natural England and South West Water. It started in 2017 with the aim of improving migratory fish stocks in two principle salmon rivers; Rivers Camel and Fowey. Over 15 barriers to fish migration have been identified by the project so far and five have been addressed through a variety of fish passes and fish

easements. Camelford weir identified in the picture below was identified as a major barrier to fish migration on the main River Camel (SAC, SSSI). Due to a foul sewer running immediately below the weir crest, weir removal or reduction was not possible. Recycled plastic baffles were installed on the weir face to improve fish passage at the structure. The



diagonal gap running from right to left provides a route of passage under low flows.'

#### Weir removal

Weir removal and habitat works on the Yeo near Crediton in partnership with The Wild Trout Trust and Crediton Fly Fishing Club.



South Teign habitat improvements

Following an initial trial in 2014, South West Water contracted Westcountry Rivers Trust to carry out three years of gravel augmentation and other improvements on the South Teign river to mitigate for impacts of Fernworthy Reservoir.

The Environment Agency acted as a key technical advisor, providing training and guidance support to ensure that improvement works were maximised for the benefit of salmon and offsetting the impacts of the reservoir.

Monitoring with electro fishing showed improvements in trout fry by 2017, but with salmon remaining absent. But this year salmon were shown to have spawned.

This is a great result, confirming the role of gravel augmentation combined with dam over topping or fish bank releases in enhancing the survival of salmon in our water resource rivers.

Project Title	Outcome or benefit	Partners	EA Funding (£)	Match funding (£)	Total Cost
Marazion Habitat Improvements	Improved spawning areas and refuges for fish	Marazion Angling Club	£1,181	£500 (Labour)	£1,681
Hemerdon Habitat Improvements	Improved spawning areas and refuges for fish	Devonport Services A/A	£2,000	£2,050 (Labour, tool hire)	£4,050
Roche Angling Club Habitat Improvements	Improved spawning areas and refuges for fish	Roche Angling Club	£1,551	£1,000 (Labour)	£2,551
Crediton Fly Fishing Club Habitat Improvements	Weir removal and introduction of in- channel woody habitat on the River Yeo near Crediton.	Crediton Fly Fishing Club, Wild Trout Trust	£4,000	£3,050 (Labour)	£7,050
Taw Fishing Club Habitat Improvements	Bankside tree coppicing for habitat improvement and introduction of in- channel woody habitat on the River Taw.	Taw Fishing Club, Wild Trout Trust	£2,500	£2,000 + £500 (Labour)	£5,000
Dulverton Angling Association Habitat Improvements	Bankside tree coppicing for habitat improvement and introduction of in- channel woody habitat on the River Exe.	Dulverton Angling Assoc., Wild Trout Trust	£2,500	£2,000 (Labour)	£4,500
Little Dart Fishery Improvement	10 x farm engagement/advis ory visits and site water improvement plans written for sites in the Little Dart sub- catchment of the River Taw. Improvements to water quality from land use and yards.	West country Rivers Trust, River Taw fisheries Assoc.	£27,500	£13,800 + £1000 (Labour)	£42,300

Bideford & District Angling Club – Fishery Borehole	New borehole water supply for club's purpose- built carp fishery lake.	Bideford & District Angling Club	£11,880	£15,000 (In kind)	£26,880
TOTAL			£53,112	£40,900	£94,012

# 5. Monitoring

Monitoring of all fish species is vital to our assessment of the condition of the environment. Surveys of fish populations, including coarse fish, are used to assess the status of stocks and contribute to the overall assessment of ecological status of a water body. In DSC:

**198** Waterbodies **43%** of waterbodies assessed for fish 2016/17

assessed were at good status or above for fish

#### Tamar index river monitoring 2017 to 2018 report

As observed in 2016, we recorded an improved run of multi-sea winter (MSW) salmon on the River Tamar in 2017 when compared to previous years. However, this run is still very much below those reflected in Tamar rod and net catches of MSW salmon in 1970s and 1980s which have declined by almost 90%.

Nationally, the observed significant decline in the 1SW (grilse) run component since 2014 has to some degree been offset by the observed improvement in the overall proportion of MSW salmon; on the Tamar the average MSW proportion among the run estimate in the last seven years has risen to 45% from a previous average of 30% in the preceding seven years from 2004 to 2011. The improved MSW salmon run on the Tamar therefore reflects an upward trend in the MSW salmon proportion of the run rather than a significant improvement in terms of overall numbers. The one sea-winter salmon (1SW) run on the Tamar, arrived earlier than normal and was again below the 10-year average. These fish were also relatively small fish.

The marine survival estimates of 1SW and MSW salmon returning as adults in 2017 were slightly below the 2002-2016 average at 3.5% and 2.3% respectively.

We allocated considerable resources to the trapping and tagging of salmon smolts in spring 2017, but only caught half of our target number despite reasonable conditions to support the trapping programme. This suggests a reduced run of salmon smolts compared to previous years. Monitoring programmes on other rivers (e.g. River Frome and River Dee) have also reported very low salmon smolt catches in 2017. In contrast, salmon fry densities had improved in 2017 compared to the poor year of 2016. Salmon

parr numbers in 2017 were low, which wasn't unexpected given the poor fry numbers of 2016.

Overall, the adult sea trout run was consistent with previous years. However, the proportion of larger sea trout was lower than in previous years. Marine survival estimates of school peal (sea trout returning before spending a winter at sea) and one sea-winter sea trout that returned in 2017 were similar to previous years at 21.0% and 6.5% respectively.



Trapping and tagging

#### SAMARCH (Salmonid Management Round the Channel) Project

March 2018 – SAMARCH Project. Fisheries Enforcement staff worked with the Game & Wildlife Conservation Trust (GWCT) to monitor the migration of salmon & sea trout smolts down the Tamar Estuary and into Plymouth Sound. Monitoring staff also worked with GWCT to capture and tag Sea trout kelts for the SAMARCH project.



Monitoring

#### **Devon monitoring**

In 2017 we carried out 92 Fish Surveys of which 34 were temporal sites that are surveyed every other year, and 58 were temporal and spatial sites on the River Torridge. Spatial sites are surveyed once every six years, so that over the six year spatial cycle we cover every catchment in Devon in detail. 2017 was the turn of the River Torridge to be surveyed in this way.

Salmon were found right through most of the Torridge catchment, though usually in low numbers. For instance in the survey at Horton Bridge, right at the top of the catchment, we found one salmon Fry. Proof that a pair of Salmon had travelled approximately 60 miles up the Torridge from the Sea in order to spawn. The main salmon spawning areas within the Torridge catchment are in the River Okement and the sites here again proved that salmon had spawned very successfully, with good numbers of both Salmon and brown trout fry and parr.

After the nationwide collapse of both salmon fry and trout fry numbers that we experienced in the summer of 2016, it was good to see that the 2017 surveys were showing the situation improving with fry numbers nearly back to normal.

#### Partnership monitoring

Monitoring staff worked aided CEFAS (Centre for Environment Fisheries and Aquaculture Science) to capture and deploy acoustic tracking tags in Salmon smolts, then helped locate sites and deploy acoustic listening devices around the lower Tamar and Plymouth Sound.

800 salmon and trout biopsies were collected by monitoring staff at the Tamar smolt trap to aid a national genetic study undertaken by Exeter University.

You can look at our Catchment Data Explorer for more information.

Our fish count data is now available online here

For information on what we are doing across the rest of the country read our other Area reports

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