



Agenda item 5.1
For information

Council

CNL(19)36

***Annual Progress Report
on Actions Taken Under the Implementation Plan for the Calendar Year 2018***

EU – UK (England and Wales)

CNL(19)36

Annual Progress Report on Actions taken under the Implementation Plan for the Calendar Year 2018

The primary purposes of the Annual Progress Reports are to provide details of:

- any changes to the management regime for salmon and consequent changes to the Implementation Plan;
- actions that have been taken under the Implementation Plan in the previous year;
- significant changes to the status of stocks, and a report on catches; and
- actions taken in accordance with the provisions of the Convention

These reports will be reviewed by the Council. Please complete this form and return it to the Secretariat **no later than 28 March 2019**.

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| Party: | European Union |
| Jurisdiction/Region: | UK (England and Wales) |

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| 1: Changes to the Implementation Plan | |
| 1.1 Describe any proposed revisions to the Implementation Plan <i>(Where changes are proposed, the revised Implementation Plans should be submitted to the Secretariat by 1 December).</i> | |
| No changes made. | |
| 1.2 Describe any major new initiatives or achievements for salmon conservation and management that you wish to highlight. | |
| <p>New byelaws came into effect in England in December 2018 to reduce fishing mortality in English fisheries and on the Border Esk (border river with Scotland); the proposals were developed by the Environment Agency (EA) in England and followed an extensive period of consultation. The new measures will apply from the 2019 season and aim to protect and restore stocks, the measures include:</p> <ul style="list-style-type: none">• The closure of many net fisheries, including all remaining drift net fisheries, and the introduction of mandatory catch-and-release (C&R) of salmon in some other net fisheries where some fishing for sea trout will be allowed to continue. The latter fisheries will be permitted provided these predominantly take sea trout, do not threaten sea trout stocks and provided any salmon caught can be safely released.• The introduction of mandatory C&R by anglers on rivers classed in the lowest stock status category and all rivers categorised as recovering rivers (i.e. those that only support small stocks or where small populations have re-established in recent years in previously polluted catchments following improvements in water quality).• The introduction of voluntary C&R targets in excess of 90% on rivers classed as ‘probably at risk’. Compliance with the C&R target will be reviewed in 2020 with a view to either | |

continuing the voluntary measures or implementing mandatory C&R byelaws if stocks cannot be adequately protected by voluntary means.

- Renewal of the existing ‘spring salmon’ provisions to protect larger, early running salmon.

A similar package of measures to reduce exploitation of salmon in Welsh fisheries was also developed by Natural Resources Wales (NRW) in response to widespread failure of individual river stocks against their Conservation Limits and following a formal consultation process. These measures remain under consideration (a Local Inquiry has been held to review and advise on the proposals). If approved, the measures would:

- Introduce mandatory C&R fishing of salmon at all times for rod fisheries in all rivers in Wales.
- Introduce method prohibitions on bait (worm, prawn and shrimp), use of treble hooks and use of barbed hooks (barbless acceptable). Exceptions apply on the three cross-border rivers.
- Introduce mandatory C&R fishing and method controls on 2 of the 3 cross-border rivers – Dee and Wye (the Environment Agency take integrated lead for fisheries matters on the River Severn, the other cross-border river and measures will be reviewed here in early 2019).
- Introduce mandatory C&R of salmon at all times in all net fisheries, with the exception of a small net fishery on the Wye. The latter has had catches capped at 2 fish per licence under terms of a lease.
- Introduce revised start and finish dates for net fishing seasons.

Welsh Government will make the final decision on whether to implement these byelaws or not, or what form they should take. Until that decision is made, existing byelaws remain in place. However, salmon stocks remain vulnerable and so fishermen have been urged to return all salmon to the river; anglers have also been asked to only use methods that give released fish the best chance of survival.

Alongside these proposals for increased regulation of fisheries, both the EA and NRW are actively pursuing measures to improve the quality of the riverine environments utilised by salmonid stocks. Progress with actions is provided in this APR. |

2: Stock status and catches.

2.1 Provide a description of any new factors which may significantly affect the abundance of salmon stocks and, if there has been any significant change in stock status since the development of the Implementation Plan, provide a brief (200 word max) summary of these changes.

The provisional annual review of stock status for 2018 resulted in the following river classifications against the designated management objective (MO) – i.e. of meeting or exceeding the conservation limit in four years out of five (i.e. >80% of the time):

- 0 rivers (0 %) ‘not at risk’ – i.e. p>95 % of meeting the MO;
- 4 rivers (6 %) ‘probably not at risk’ – i.e. p>50% but <95% of meeting the MO;
- 36 rivers (56 %) ‘probably at risk’ – i.e. p>5% but <50% of meeting the MO;
- 24 rivers (38 %) ‘at risk’ – i.e. p<5% of meeting the MO.

[NB: The ‘at risk’ category does not mean that stocks are in danger of becoming extinct, but rather that they are falling well short of the management objective.]

Factors affecting stock abundance:

Several rivers in E&W have seen a progressive decline in numbers of returning salmon since around 2010. This has been driven by a marked reduction in the abundance of 1-sea winter salmon (or grilse) - the dominant run component on most salmon rivers in E&W in the last 20-30 years. While, in part, this decline has been compensated for by increased runs of multi-sea winter salmon (generally larger and more fecund fish than grilse), many river stocks are still failing to meet Management Objectives (above). These recent changes in the abundance and composition of returning salmon appear to be linked to changes in the marine environment – possibly long-term cyclical changes affecting the North Atlantic.

In addition to the influence of marine factors on adult returns, poor recruitment of salmon fry was a cause of significant concern in 2016 in many English and Welsh rivers. Available evidence indicated a very poor smolt run in 2017 on one river in southern England where almost all the smolts migrate as one-year-olds. For most other rivers in England and Wales, where two-year-old smolts predominate, smolt runs are also likely to have been well below average in 2018.

The summer of 2018 was particularly dry and relatively warm in England and Wales and flows on most rivers were well below seasonal averages from May through to the autumn. This, along with elevated temperatures is expected to have contributed to the poor runs and catches that were widely observed in 2018. |

2.2 Provide the following information on catches:*(nominal catch equals reported quantity of salmon caught and retained in tonnes ‘round fresh weight’ (i.e. weight of whole, ungutted, unfrozen fish) or ‘round fresh weight equivalent’).*

| | In-river | Estuarine | Coastal | Total |
|--|--|-----------|---------|-------|
| (a) provisional nominal catch (which may be subject to revision) for 2018 (tonnes) | 3.5 | 3.3 | 35.5 | 42.3 |
| (b) confirmed nominal catch of salmon for 2017 (tonnes) | 9.7 | 3.2 | 36.0 | 48.8 |
| (c) estimated unreported catch for 2018 (tonnes) | | | | 5.2 t |
| (d) number and percentage of salmon caught and released in recreational fisheries in 2018. | 6,486 salmon (provisional) were released by rods in 2018, representing 88% of the declared catch | | | |

3: Implementation Plan Actions.

| 3.1 Provide an update on progress against actions relating to the Management of Salmon Fisheries (Section 2.8 of the Implementation Plan). | | |
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| <i>Note: The reports under 'Progress on Action to Date' should provide a brief overview with a quantitative measure of progress made. While referring to additional material (e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.</i> | | |
| Action F1: | Description of Action <i>(as submitted in the IP)</i> | Conduct annual assessments of the status of salmon stocks. |
| | Expected Outcome <i>(as submitted in the IP)</i> | Determination of the need for emergency regulatory controls or other new measures (including voluntary) on salmon fishing by nets and rods and implementation of changes. |
| | Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i> | The report on the annual assessment of salmon stocks for 2017 was completed and made available on-line. The annual assessment for 2018 was also completed (see section 2.1); results will be reported to ICES in April 2019 and subsequently published in the annual Cefas/EA/NRW Assessment of Salmon Stocks and Fisheries. The objectives for 2018 have therefore been met. |
| | Current Status of Action | Ongoing |
| | If 'Completed', has the Action achieved its objective? | |
| Action F2: | Description of Action <i>(as submitted in the IP)</i> | Conduct regular (normally every 5 or 10 years) reviews of current Net Limitation Orders (NLOs) and Byelaws for estuary and river fisheries using the Decision Structure for Fisheries Management (<i>see Annex 2</i>) and amend the NLOs (licence numbers) and Byelaws (fishing periods and gear) as appropriate. |
| | Expected Outcome <i>(as submitted in the IP)</i> | Determination of the need for changes to existing regulatory controls on salmon fishing by nets and rods and implementation of changes. |
| | Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i> | The NLO for the Solway Estuary haaf nets was reviewed and the number of available licences reduced to 75. Separate byelaws were also approved introducing mandatory catch-and-release (C&R) of salmon in this fishery and by anglers fishing the Rivers Eden and Border Esk (which discharge to the Solway). Additional C&R restrictions were also applied to the fixed engine (coop) fishery on the River Eden. The measures will apply for 10 years. The NLO for the Southern Region of England was also reviewed and replaced by a new byelaw (not time-limited). This precludes all netting for salmon and sea trout in the Region with the exception of a single seine net authorised by the Environment Agency for the capture of sea trout only in the estuary of the River Beaulieu. |

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| | | <p>The River Fowey NLO was reviewed and a reducing NLO proposed with a target of zero. This protects the rights of the single existing licensee, such that the fishery would only close when the netsman retires. In practice, the licensee is expected to be compensated not to fish, so no fishery is expected to operate for the duration of the NLO (10 years). The new NLO has now been confirmed.</p> <p>The NLO on the River Camel was also due for renewal in 2018. However, due to concerns about the current poor state of the stock on this river, an emergency byelaw has been introduced which precludes any net fishing and requires mandatory C&R by rods. This emergency measure expires on 20 April 2019 and it is planned to complete the NLO review and implement new measures in the near future.</p> <p>NLOs for 12 rivers in Wales were reviewed in 2017 and were renewed, unchanged. These were formally approved in January 2018 and will apply for 10 years. If approved, these fisheries will be subject to new mandatory C&R restrictions (see Section 1.2).</p> <p>Mandatory catch limits remained in place for both net and rod fisheries on a number of rivers in England and Wales in 2018.</p> <p>An emergency byelaw was approved in Wales on 10 December 2018 to maintain existing national measures for the protection of spring salmon. These measures mirror those in England and require: mandatory C&R of salmon on all rivers prior to 16 June (with additional method restrictions), closure of some net fisheries prior to 1 June, and mandatory C&R of salmon before 1 June for those net fisheries given derogations to fish prior to June for sea trout. These emergency measures are valid for one year and can be renewed for a further 6 months. If approved, these measures would remain in force in the longer term under the proposed measures outlined in Section 1.2.</p> <p>Both the EA and NRW have been supporting the Inshore Fisheries and Conservation Authorities (IFCAs) in their duty to manage the exploitation of sea fisheries resources so that these activities do not impact upon migratory salmonids.</p> <p>The objectives have been fulfilled for the planned reviews. </p> |
| | Current Status of Action | Ongoing |
| | If 'Completed', has the Action achieved its objective? | |

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| Action F3: | Description of Action <i>(as submitted in the IP)</i> | Implement policy on mixed stock fisheries, including: <ul style="list-style-type: none"> a. Implement new regulatory measures for Severn Estuary (currently under consultation) and NE coast mixed stock fisheries (measures agreed). b. Conduct 10 year review of NLO for Anglian Coastal Fishery and amend the NLO (licence numbers) and Byelaws (fishing periods and gear) as appropriate. c. Conduct a review of the NE coast beach net fishery to provide a full evaluation of the potential for maintaining some nets (other than drift nets) that will conform to national policy and NASCO guidance on salmonid fishery management and amend the NLO (licence numbers) and Byelaws (fishing periods and gear) as appropriate. d. Conduct further genetic stock assignment studies on catches in mixed stock fisheries. |
| | Expected Outcome <i>(as submitted in the IP)</i> | Implementation of regulations to bring all mixed stock fisheries in line with national policy and international guidance. |
| | Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i> | <ul style="list-style-type: none"> a. A review of the Severn Estuary NLO was completed in 2014, as previously reported. This is due for further review in 2019 and this is currently underway. This fishery is currently also regulated by catch limits. Under new measures effective from 2019, the drift net fishery on the NE coast of England will close. The closure was previously scheduled to occur in 2022. b. The 10-year review of the NLO was completed in 2015, as previously reported. The fishery remains subject to a phase out as fishers retire or leave the fishery. Under new measures effective from 2019, mandatory C&R will apply to any salmon caught in the fishery (very small numbers). c. Under new measures effective from 2019, the NE coast beach (T & J) net fishery will be subject to mandatory C&R of salmon. The fishery will still be allowed to operate to catch sea trout, but additional season restrictions will also apply in some districts to restrict fishing to periods when sea trout predominate in catches (and thus to restrict the need for C&R of salmon). The beach fishery remains subject to a phase out as fishers retire or leave the fishery. d. Results of earlier studies reported previously. No new investigations in 2018. |

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| | | The objectives for planned activities have been fulfilled. There will be no capture of salmon in coastal mixed stock fisheries in England after 2018. |
| | Current Status of Action | Ongoing |
| | If 'Completed', has the Action achieved its objective? | |
| Action F4: | Description of Action <i>(as submitted in the IP)</i> | Joint promotion, with stakeholders, of catch and release in rod fisheries. |
| | Expected Outcome <i>(as submitted in the IP)</i> | Increased uptake of catch and release in rod fisheries. |
| | Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i> | <p>Under new byelaws approved in England in 2018, mandatory C&R requirements now apply to the River Eden and Border Esk, to rivers with the lowest assessed salmon stock status and to all recovering rivers (see Section 1.2)</p> <p>Voluntary targets of C&R, in excess of 90%, have also been established for all rivers in England designated as 'probably at risk'. The Angling Trust (AT) and Environment Agency have been in discussion about how best to achieve these targets and have been engaging with representatives of river associations and clubs throughout England to encourage compliance. Progress in meeting the targets will be reviewed in 2020 and consideration given to the imposition of mandatory C&R if uptake is insufficient.</p> <p>The Angling Trust has been providing guidance to member clubs and fisheries about the need for the majority of fish to go back, as well as advice about handling fish and using the correct equipment. In support of this, the Atlantic Salmon Trust, FishPal and AT have produced instructional videos entitled 'the gift' on how to play, handle and release Atlantic salmon. These are available on the Angling Trust website and on YouTube. The EA has also been promoting these messages through its extensive database of anglers.</p> <p>In Wales, it is proposed to make C&R of salmon mandatory in all rivers (with associated method controls) under proposed new measures to protect failing salmon stocks (see Section 1.2). These measures are currently under consideration and have not yet been approved. The C&R message has been and continues to be promoted among anglers by NRW in Wales via a number of routes (e.g. press-releases; discussions with local fisheries groups, etc.).</p> <p>C&R in rod fisheries in England & Wales has increased from 10% in 1993 to 88%, provisionally, in 2018. </p> |

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| | Current Status of Action | Ongoing |
| | If 'Completed', has the Action achieved its objective? | |
| Action F5: | Description of Action (as submitted in the IP) | Ensure effective enforcement of fishery regulations: a. Continue with prevention, disruption and intervention of illegal fishing, including intelligence-led enforcement and implementation of a ban on sale of rod caught fish and a carcass tagging scheme for net caught fish. b. Review the effectiveness of fishery enforcement activities, including consistent application of a national intelligence model and best-practice in intelligence-led enforcement. |
| | Expected Outcome (as submitted in the IP) | Reduced illegal fishing and corresponding response in salmon stocks in vulnerable rivers. |

Progress on Action to Date
(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)

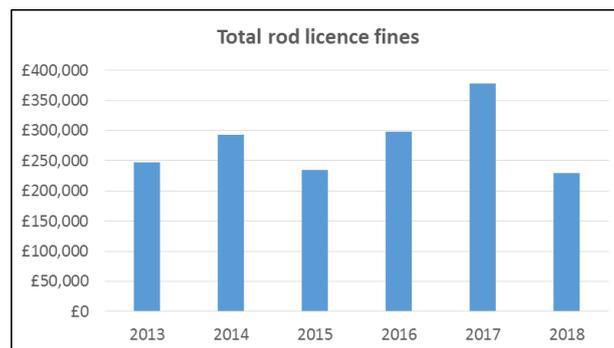
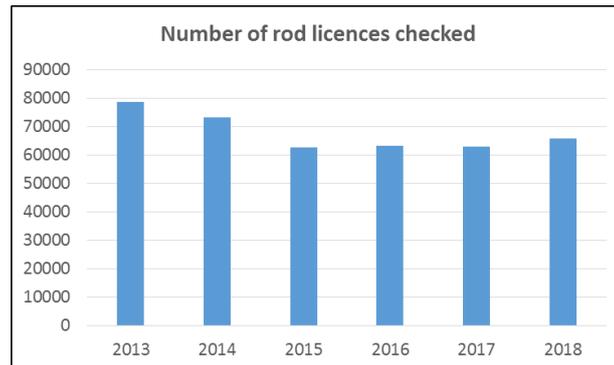
a. **Prevention, disruption and intervention of illegal fishing:**

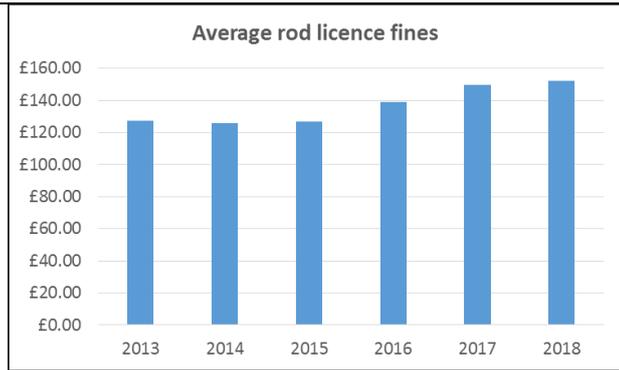
Illegal fishing continues to pose a risk to stocks across England and Wales. Intelligence-led targeted operations are carried out by the EA and NRW, often jointly with Inshore Fisheries and Conservation Authorities (IFCAs), the Marine Management Organisation (MMO), Welsh Government and the police.

Examples of illegal fishing incidents from NE England:

- Unlicensed net and fishing in the prohibited Area;
- 6 warning letters issued to netsmen for keeping incorrect records;
- Unlicensed fishing, obstruction, Theft Act;
- Use of gaff, lamp and unlicensed net at Wolsingham 2017 - £1,180 total fines and costs, forfeiture of 13 fish and equipment seized.

National rod licence enforcement figures 2013-18:





Enforcement priorities for salmon and other fish species identified by NRW in 2017 have continued in 2018, resulting in a targeted approach to: (i) combat illegal netting; (ii) protect spawning beds; and (iii) ensure effective regulation of licensed nets and anglers.

Successful enforcement operations appear to have acted as a deterrent in 2018 in high risk areas such as the Three Rivers estuary in South Wales. The number of reported incidents in this area has been negligible as corroborated by night time patrols detecting no signs of illegal activity.

In SE Wales, coastal activity is controlled by regular vessel patrols, with the aim of extending this deterrent to other areas of Wales in future.

NRW has been working closely with partner organisations to increase awareness of illegal fishing activity; these include Welsh Government, North West IFCA and the Police. NRW bailiffs have delivered presentations to seconded Police Officers across Wales, informing them of the current poor status of Welsh salmon stocks and advising on the difference between legitimate and illegal fishing; common offences; and incident reporting. Time has also been spent with the EA's coastal survey vessel which operates around Wales, identifying 'red' areas for netting, and highlighting suspicious reportable activities. Where Rural Crime Teams exist within Welsh Police Forces, NRW has attended partnership meetings to develop working relationships; these have included joint patrols.

Over the winter months, enforcement effort has focused on Wales' spawning tributaries. Two individuals reported in November 2017 on suspicion of using a prohibited instrument to take a salmon from a tributary of the River Dee received fines and costs totalling ~£3,000. The case received local publicity – serving as a deterrent to others.

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| | | <p>Rod licence checking remains a key activity undertaken across Wales, providing opportunity to engage with anglers, gather intelligence and carry out general environmental surveillance. Unlicensed fishing remains the most common fisheries offence in Wales with 71 cases recorded in 2018. The enforcement responses to these have varied from official warnings to prosecutions, depending on the circumstances of the case. Working in partnership with a seconded Police Officer, in February 2019 a successful prosecution was taken against an angler via the CPS for offences under the Theft Act 1968. The angler was stopped by NRW bailiffs on the River Usk and River Loughor in 2018. Despite holding a valid rod licence he did not have permission to fish on either stretches. Fines of £160 and total costs of £115 were imposed by the Court.</p> <p>a. Effectiveness of enforcement activities:</p> <p>The Environment Agency has secured £150,000 to provide upgraded enforcement equipment, including night vision equipment, thermal cameras, wildlife trap cameras, binoculars and digital cameras.</p> <p>Enforcement activity and its integration with other areas of work will be examined as part of a wider business restructuring exercise undertaken by NRW in 2019. Activities will seek to continue to protect salmon - including in response to any new catch-and-release controls, if implemented. Priorities will stem from annual strategic assessment of crime informed by incident reports and intelligence. </p> |
| | Current Status of Action | Ongoing |
| | If 'Completed', has the Action achieved its objective? | |

3.2 Provide an update on progress against actions relating to Habitat Protection and Restoration (Section 3.4 of the Implementation Plan).

Note: The reports under 'Progress on Action to Date' should provide a brief overview with a quantitative measure of progress made. While referring to additional material (e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.

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| Action H1: | Description of Action (as submitted in the IP) | <p>Implementing Climate Change Adaptation Plans (produced by both government and private sector) and specifically:</p> <p>a) inspiring organisations to increase riparian shade over water bodies, through the 'Keeping Rivers Cool Project';</p> <p>b) influencing decisions in the next round of Water Company investment plans to ensure climate</p> |
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| | | <p>resilience for both water abstractions and wastewater management, and ensuring that due regard is given to their impact on the environment;</p> <p>c) ensuring climate change is considered within strategic environment planning frameworks (e.g. River Basin Management Plans (RBMPs), Common Agriculture Policy (CAP) reform);</p> <p>d) supporting the regulation of robust thermal standards for transitional and coastal waters to manage the impact of cooling water from power stations.</p> |
| | <p>Expected Outcome <i>(as submitted in the IP)</i></p> | <p>The overall aim is to moderate the effects of climate change in waterbodies through landscape, river flow and water level management. Targets for tree planting and fencing are being set in the demonstration catchments for the ‘Keeping Rivers Cool Project’.</p> |
| | <p>Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i></p> | <p>a) Keeping Rivers Cool (KRC) Project:</p> <p>In 2018 23km of salmon river have been enhanced through fencing and tree planting, including Rivers Ehen, Cocker, Esk, Ribble, Derwent, Eden, Severn, Upper Yorkshire Ouse and Candover (Itchen catchment).</p> <p>The voluntary closure of salmon rod fisheries when river temperature reaches 19°C at 09:00 remains in place on the Test, Itchen and Avon, and leads to a number of lost fishing days each year.</p> <p>b) Water Company investment plans:</p> <p>For the next water company investment cycle (PR19) under the Water Industry National Environment Programme (WINEP), for principal salmon catchments, the Environment Agency has 286 schemes and investigations confirmed as being required to be delivered under various statutory drivers and a possible further 113 projects likely to be required. For recovering salmon catchments, 220 schemes and investigations have been confirmed as being required to be delivered and a possible further 189 projects likely to be required. The majority of these projects are for water quality and water resources drivers. Subject to the final signoff of the WINEP (by the end of 2019), these projects will be delivered between 2020-2025.</p> <p>The same planning process/cycle operates in Wales. Water Companies have recently submitted their ‘PR19 Business Plans’ (2020-25) to the regulator ‘Ofwat’, and review of the current planning cycle will conclude in 2019.</p> |

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| | | <p>For example, in the period 2015-20, the investment programme for the Water Company Dwr Cymru Welsh Water (DCWW) is £1.5 billion. This includes £55.9m of capital investment for water quality improvement schemes. DCWW’s proposed PR19 Business Plan will make further investments to improve approximately 300km of river quality. Significant investment will also go into addressing point source impacts from sewage treatment works and discharges from the sewer network. This will reduce pollutants such as ammonia and nutrients that disturb the natural ecological balance of water bodies and cause excessive growth of vegetation and algae. Habitat improvement schemes are planned to reduce the impact of physical modifications caused by water company operations.</p> <p>c) Strategic environment planning frameworks:</p> <p>The second climate change national adaptation programme was published in 2018 and sets out actions to build climate resilience in the short and long term. Relevant to salmon, adaptation measures include: safeguarding and improving protected sites; restoring degraded ecosystems; reducing pressures from other sources (barriers, degraded habitat, insufficient flow and poor water quality); increasing riparian shade and adapting angling practices.</p> <p>The Environment Agency has initiated a ‘Climate Resilient Strategies’ project to ensure new or updated strategies and plans are resilient to future climate impacts. The aim, by the end of March 2020, is that the Environment Agency’s top strategies and plans, such as the River Basin Management Plan refresh, prepare for the overall impact of a four degree rise in temperature by year 2100. Alongside this, a ‘climate impacts tool’ has been developed to help understand potential risks and impacts from a changing climate. Furthermore, a two-year catchment resilience project has begun to define what resilience looks like and what measures can be put in place.</p> <p>As part of the Environment Agency’s 5 Point Approach for improving the status of salmon stocks, and specifically the work package considering the survival of salmon at sea, Cefas have been leading an investigation into the risks posed to salmon by various potential stressors in estuarine and nearshore coastal areas. A review of the scientific literature has been completed and local fishery officers have been consulted to advise on identified ‘issues’ in their areas. These sources of information, together with details of the location and geographic extent of possible stressors,</p> |
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| | | <p>have been combined in a semi-quantitative assessment of the various identified stressors. A report is in the final stages of development and will be completed in 2019. The review aims to facilitate the prioritisation of potential risks to salmon in marine waters and help inform management decisions.</p> <p>In August 2017, Welsh Government published the Natural Resources Policy (NRP). This integrates a broad range of traditional policy areas (e.g. water, food and drink, farming and agriculture, forestry, waste, energy, countryside access and the environment) and identifies key challenges and opportunities for the sustainable management of natural resources across Wales (including those linked to climate change).</p> <p>To address these challenges, NRW is preparing Area Statements that bring together data, information and ways of engaging others to better understand the state and trends of natural resources in an area, the pressures on them, and their benefits. Area Statements aim to identify the priorities, risks and opportunities to be addressed and facilitate coordinated working to build ecosystem resilience and enhance the benefits they provide.</p> <p>d) Thermal standards:</p> <p>The EA continues to support a PhD studentship at Nottingham University investigating the impact of water-source heat pumps on thermal regimes in river systems.</p> |
| | Current Status of Action | Ongoing |
| | If Completed, has the Action achieved its objective? | |
| Action H2: | Description of Action <i>(as submitted in the IP)</i> | <p>Improving river connectivity through implementing the 11 RBMPs in England and Wales and specifically by:</p> <ul style="list-style-type: none"> a) taking a catchment based approach and removing or easing barriers; b) implementing new regulations enhancing powers to require fish passage; c) undertaking further research on impacts of hydropower (including cumulative effects) and taking account of best scientific advice to maintain and where possible to improve fish passage. |
| | Expected Outcome <i>(as submitted in the IP)</i> | <ul style="list-style-type: none"> a) & b) Improvements to fish movement allowing greater access throughout rivers, and more water bodies meeting Good Ecological Status/Potential. c) Better understanding of the potential impacts |

| <p>Progress on Action to Date (Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</p> | <p>of hydropower</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | <p>a) Removing or easing barriers:</p> <p>On England’s 42 principal salmon rivers, in 2018, 9 weirs/barriers were removed, and 8 fish passage easements were delivered, improving access for salmon to 152km of river on the Rivers Ribble, Crake, Kent, Wear, Severn, Tamar, Camel, Fowey, Taw, and Monks Brook (Lower Itchen). Over the last 5 years (2014-18) 57 barriers have been removed or altered, which has improved access to 2,398km of river catchment. On the River Ouse in Yorkshire, a recovering salmon river, a new fish-canoe pass was completed at Linton Weir.</p> <div data-bbox="719 678 1433 1137" style="border: 1px solid black; padding: 5px;"> <p style="text-align: center;">Removing or easing barriers on England's principal salmon rivers 2014 - 2018</p> <table border="1" style="display: none;"> <caption>Approximate data from the stacked bar chart</caption> <thead> <tr> <th>Year</th> <th>Alaskan A/Denil</th> <th>LCB</th> <th>Baulk</th> <th>Pool type</th> <th>Larinier super active baffle</th> <th>Rock ramp</th> <th>Bypass/natural channel</th> <th>Weir removal</th> <th>Prebarrage</th> <th>Other</th> </tr> </thead> <tbody> <tr> <td>2014</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>7</td> <td>0</td> <td>1</td> <td>1</td> <td>2</td> <td>1</td> </tr> <tr> <td>2015</td> <td>1</td> <td>2</td> <td>0</td> <td>0</td> <td>6</td> <td>0</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td> </tr> <tr> <td>2016</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>3</td> <td>2</td> <td>0</td> <td>4</td> <td>1</td> <td>1</td> </tr> <tr> <td>2017</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>3</td> <td>0</td> <td>0</td> <td>2</td> <td>0</td> <td>1</td> </tr> <tr> <td>2018</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>9</td> <td>0</td> <td>8</td> </tr> </tbody> </table> </div> <p>NRW – working with partners – has continued a 5-year programme (value ~£270K per annum) to improve access and habitat for salmon as an alternative to mitigation stocking on the Rivers Dee, Seiont, Mawddach, Cleddau, Twyi, Taff and Wye (see Section 3.3). Recent works in the Dee catchment, for example, have included easement projects, schemes to create and improve spawning and rearing habitats, and riparian zone fencing.</p> <p>In South Wales, removal of a weir at Methyr Vale on the River Taff marks the last of a series of significant barriers to fish passage removed on this river in recent years. This will result in improved access for salmon and sea trout to over 10 km of good quality spawning habitat on the Taff Fechan and Fawr upstream of Merthyr Vale, and is part of a package of measures – including other fish pass improvements (x3) on minor tributaries and the addition of spawning gravels – to help restore the river to ‘good ecological status’ under WFD.</p> <p>Several other fish passage schemes (x15) have also been completed on neighbouring rivers in South Wales.</p> <p>b) New fish passage regulations:</p> | Year | Alaskan A/Denil | LCB | Baulk | Pool type | Larinier super active baffle | Rock ramp | Bypass/natural channel | Weir removal | Prebarrage | Other | 2014 | 0 | 0 | 0 | 0 | 7 | 0 | 1 | 1 | 2 | 1 | 2015 | 1 | 2 | 0 | 0 | 6 | 0 | 1 | 1 | 1 | 1 | 2016 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 4 | 1 | 1 | 2017 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 1 | 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 |
| Year | Alaskan A/Denil | LCB | Baulk | Pool type | Larinier super active baffle | Rock ramp | Bypass/natural channel | Weir removal | Prebarrage | Other | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2014 | 0 | 0 | 0 | 0 | 7 | 0 | 1 | 1 | 2 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2015 | 1 | 2 | 0 | 0 | 6 | 0 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2016 | 0 | 0 | 0 | 0 | 3 | 2 | 0 | 4 | 1 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2017 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 2 | 0 | 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2018 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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| | | <p>Defra is developing proposals for new regulations enhancing powers to require fish passage and screening improvements in England. Appropriate legislation will be advanced after EU exit, the timing to depend on government legislative priorities.</p> <p>In recent years there has been a significant increase in the number of abstractions for hydro-electric power generation from rivers and streams across Wales. Salmon spawning and rearing habitat is protected from high levels of abstraction under NRW's existing hydropower licensing guidance. However, this guidance has been changed to increase the level of flow protection in the depleted reach, a level of protection which has been further enhanced in sites where salmon are a designated feature.</p> <p>c) Research on hydropower:</p> <p>During April/May 2018 a collaborative research project between Cefas and NRW investigated smolt movements in relation to a hydropower scheme at Radyr Weir on the River Taff. Two hundred and forty one hatchery-reared smolts were tagged with coded acoustic transmitters and their subsequent behaviour was monitored around the hydropower scheme and throughout the river system to the exit of the impounded Cardiff Bay. Information was also obtained on the number of fish moving through the turbine. A significant proportion of the migrating salmon smolts (50%) moved downstream through the turbine. The salmon smolts demonstrated strong nocturnal movements in relation to the structure. There was no delay caused by the hydropower scheme. Survival of the smolts that had passed through the turbine was ~64% in the freshwater section of the River Taff. It was recommended that to mitigate any impact of the hydropower scheme on migrating salmon smolts, the turbines should not be operated during the peak of the smolt run or at night.</p> |
| | Current Status of Action | Ongoing |
| | If Completed, has the Action achieved its objective? | |
| Action H3: | Description of Action (as submitted in the IP) | <p>Provision of appropriate river flows by:</p> <p>a) Implementing the 11 RBMPs and the Restoring Sustainable Abstraction (RSA) programme (see: http://www.environment-agency.gov.uk/business/topics/water/32026.aspx), taking a catchment-based approach; and</p> <p>b) Taking forward the Water Bill.</p> |

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| <p>Expected Outcome <i>(as submitted in the IP)</i></p> | <ul style="list-style-type: none"> • Water bodies do not deteriorate from their current status; and • by 2027, provision of flows to support Good Ecological Status/Potential or any other alternative WFD objective set within the overall context of affordability and benefits to society. |
| <p>Progress on Action to Date <i>(Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</i></p> | <p>a) RBMPs and Restoring Sustainable Abstraction (RSA) programme:</p> <p>Since 2008, the RSA programme has changed 282 unsustainable abstraction licences preventing damage (or the risk of damage); 81 of these licences were on England’s 42 principal salmon rivers, returning 9 million cubic metres of water. A remaining 121 licences will be modified under the RSA programme by 2020; 14 of these relate to salmon rivers.</p> <p>In addition to the above, the Environment Agency has used a range of policy mechanisms provided by government, including: addressing Serious Damage, recovering unused licences and ensuring no deterioration at licence renewals, which has resulted 43 million cubic metres of water being returned to the environment.</p> <p>The RSA programme has helped prevent damage (or the risk of damage) to 12 Habitats Directive sites in Wales. Over 40 abstraction licences have been modified or revoked in Wales. Licence variations have included adding hands-off flow conditions, requirements for fish screens and reduced abstraction volumes. These changes have benefited the following principal salmon rivers: Dee, Wye, Usk, Teifi, Tywi, Gwyrfai and Cleddau. Variations to a small number of licences are still being progressed to meet the Habitats Directive requirements which should be modified under the RSA programme by 2020.</p> <p>Working with licence holders, NRW have also made changes to several licensed abstractions affecting non designated and local sites to restore sustainable abstraction and improve conditions for fisheries (e.g. Rivers Afan and Lyfni). These have seen reduced abstraction and civil engineering solutions. NRW continue to investigate abstractions to determine if licence change is needed.</p> <p>b) Taking forward the Water Bill:</p> <p>The Environment Agency and Defra’s joint Abstraction Plan was launched in England on 15 December 2017.</p> |

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| | | <p>In addition to delivering the Restoring Sustainable Abstraction (RSA) Programme, progress to date includes:</p> <ul style="list-style-type: none"> • Since 2017, 1,689 time-limited licences have been reviewed and adjustments made where necessary to ensure they do not cause environmental damage now or in the future. This is against a target of 2,300 reviews by 2021. • Since 1 Jan 2018, two licences have been changed in seriously damaged water bodies; 490 unused licences have been revoked (against a target of 600 by 2021); 178 new authorisations have been received to regulate significant abstractions that have historically been exempt (approximately 5,000 expected). • Under AMP6 (2015-20), there have been 8 total sustainability changes to licences, against a target of 160. <p>To support abstraction management decisions and to provide a stronger catchment focus, the Future Local Management of Flows project, 2019-2024, has been initiated, working with abstractors and catchment groups. Trials in four initial priority catchments commenced in April 2018, increasing to 10 over the coming months. The EA have committed to report progress to the UK Parliament in May 2019 and will update 10 abstraction licensing strategies by 2021.</p> <p>In June 2017, the Welsh Government’s ‘Taking Forward Wales Sustainable Management of Natural Resources’ consultation sought views on whether the abstraction reform consulted upon in the ‘Making the Most of Every Drop’ consultation should apply on a Wales only basis. The Welsh Government are now considering those responses and propose to continue to work with NRW, Defra and the EA to use the powers in the Water Act 2014 to bring water abstraction activities into the Environmental Permitting Regulations.</p> <p>NRW is continuing the process of modernising the information and communication technologies that support the abstraction management service in Wales. Planned improvements include the ability to apply for abstraction and impoundment licences; view licence information; submit water return information and request licence amendments all online. These improvements will be delivered incrementally over the next 2 years. </p> |
| | Current Status of Action | Ongoing |

| | If Completed, has the Action achieved its objective? | |
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| Action H4: | Description of Action <i>(as submitted in the IP)</i> | <p>Taking an integrated catchment management approach to reduce the impact of land use, through implementing the 11 RBMPS and also, specifically:</p> <ul style="list-style-type: none"> a) Investigating the sources of sediment (including catchment walkovers) to help identify the most appropriate remedial action; b) Increasing participation of stakeholders in the decision making process; c) Providing advice to land managers through projects such as Catchment Sensitive Farming and providing advice and support to other relevant stakeholders (e.g. to control erosion from road verges); d) Encouraging uptake of incentive schemes to promote better land management (e.g. agri-environment schemes); e) Regulation (e.g. cross-compliance), pollution prevention campaigns and improving soil protection; f) Reviewing Good Agricultural and Environmental Condition; and g) Making effective use of local partnerships and voluntary schemes identified in the ‘Significant Water Management Issues’ and ‘Living Waters for Wales’ programmes as part of the WFD planning process. |
| | Expected Outcome <i>(as submitted in the IP)</i> | Improvements to land management practices and more water bodies meeting Good Ecological Status/Potential, as well as Natura 2000 Protected Area objectives within the overall context of affordability and benefits to society. |

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| <p>Progress on Action to Date (Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</p> | <p>a) Sources of sediment:</p> <p>Designations under the Water Framework Directive for England’s 42 principal salmon catchments rank the highest reasons for failure as: phosphate, followed by macrophytes, fish, invertebrates, dissolved oxygen, hydrological regime, ammonia and metals. The latest available principal salmon water body status (2016) is: 25% Good/High, 54% Moderate, 19% Poor, 2% Bad. An updated WFD status report will be produced in 2019.</p> <p>In Wales, WFD status of Water Bodies has improved from 7% meeting good or better status in the first (2009-2015) cycle of River Basin Management Plans (RBMPs) to 37% at the start of the second cycle (minimum target of 42% by 2021). The top three reasons for not achieving good status are: physical modifications, pollution from rural areas and pollution from sewage and waste water.</p> <p>Initiatives under the Sustainable Drainage Systems (SuDS) scheme in rural as well as urban areas are designed to reduce the impact that drainage run-off can have (including issues of sedimentation and poor water quality). For example, from January 2019, new legislation has made it mandatory to incorporate SuDS into new housing developments. Retro-fitting of SuDS into existing developments is also beginning to occur.</p> <p>In rural areas, planting of shelter belts and hedges has enabled livestock to remain outdoors over-winter. Within tree-planted areas (from which stock were excluded) there was significantly less overland flow and a 67-fold improvement in infiltration. Modelling showed that shelter belts located in the right place could reduce peak flood flows by 40% while at the same time improving water infiltration in the wooded area. Follow up research has provided important evidence on the role of trees in the control of run-off and pollution prevention, as well as their contribution as important wildlife habitat.</p> <p>The ‘Welsh Government Wales Land Management Forum’ (WLMF) has been established to improve advice and guidance on diffuse pollution. The group is chaired by NRW and comprises a wide range of sector representatives. Its focus is on reducing agricultural pollution in up to 28 water bodies at greatest risk - as identified through the WFD. Evidence from both NRW and Dwr Cymru Welsh Water is being used to develop and deliver a targeted framework of information provision and support for farmers with the assistance of</p> |
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| | | <p>Farming and Forestry Connect. At the same time, a national campaign aims to encourage all farmers to think about planning and investment to prevent pollution from happening.</p> <p>NRW has appointed eight new agricultural officers who aim to visit around 30% of the 1,700 dairy farms in Wales in 2019. They will help the industry ensure it is following best practice and complying with the relevant regulations to prevent agricultural pollution. Once the officers are on the farm the aim will be to help farmers understand how their day to day activities could reduce the risk of any potential pollution to water.</p> <p>Officers will work in partnership with others to help develop innovative new ideas, technology and practices which can further reduce agricultural pollution.</p> <p>b) & c) Stakeholder engagement:</p> <p>In 2017/18, 27,841 individuals and organisations have engaged with the catchment-based approach (CaBA) nationwide including: NGOs, Water Companies, Local Authorities, Government Agencies, Landowners, Angling Clubs, Farmer Representative Bodies, Academia and Local Businesses. For every £1 invested directly by Government, CaBA partnerships have raised £6.50 from non-governmental funders. A further £23 million of wider Government funding has been made available for catchment management. Concerning farming, 6,100 farmers were engaged, and a range of farm measures have been implemented.</p> <p>Natural England and the EA are continuing the process of updating 36 Diffuse Water Pollution Plans (DWPPs) that cover 36 Natura 2000 sites, 19 RAMSAR sites and 56 SSSIs across England.</p> <p>The successful delivery of RBMPs in Wales – and associated improvements in the quality of the water environment - require effective working with Liaison Panels, partners and stakeholders. NRW provides a publicly available on-line mapping facility (‘Water Watch Wales’) which allows users to identify the WFD status of Water Bodies and reasons for not achieving good status, as well as share information on project activities by external partners.</p> <p>In addition, a ‘River Restoration Project’ has been launched in Wales. Promoted by NRW and contracted to Afonydd Cymru, this involves the surveying of river catchments to guide future restoration work supporting vulnerable salmonid populations. Five catchments have been targeted initially: Teifi, Tywi, Cleddau, Clwyd</p> |
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and Mawddach (see: <http://afonyddcymru.org/river-restoration-project/>).

The Environment Agency have continued to fund the work of two Fishery Management Advisers (FMAs), based with the Angling Trust. The FMAs continue to advise clubs and fishery owners about techniques for managing predation by fish-eating birds, including measures to protect parr and smolts. They have also contributed to licence application processes and the implementation of various area-based licences to coordinate management activities at a catchment scale.

In 2018, the multidisciplinary Defra Expert Group on Small Water Bodies (SWBs) produced a review paper: 'Small Water Bodies in Great Britain and Ireland: Ecosystem function, human-generated degradation, and options for restorative action'. Available at: <https://www.sciencedirect.com/science/article/pii/S0048969718327268>. Key highlights:

- SWBs provide a suite of vital ecosystem services;
- Hydromorphology of SWBs makes them highly vulnerable to anthropogenic pressures;
- Land-use and environmental changes are disrupting the ecosystem functions of SWBs;
- 3-tier restoration is needed: channel, riparian and wider catchment management;
- Success will require government prioritization, expert advice, and stakeholder buy-in.

The group also produced an accompanying two-page policy overview: 'How can the impact of human-generated degradation of small water bodies be reversed and the vital ecosystem services they provide be restored? Options for policy development and restorative action'. Available at: https://www.researchgate.net/publication/327369371_SWBs_Options_for_restorative_action_and_policy_development

The next steps are to develop collaborate research proposals to fill knowledge and monitoring gaps, with funding sought from across Government Departments.

d) Incentive Schemes:

Catchment Sensitive Farming (CSF) advice (as of January 2018) has been given to 19,776 farm holdings covering 3.3 million hectares and representing 34% of the farmed area in England.

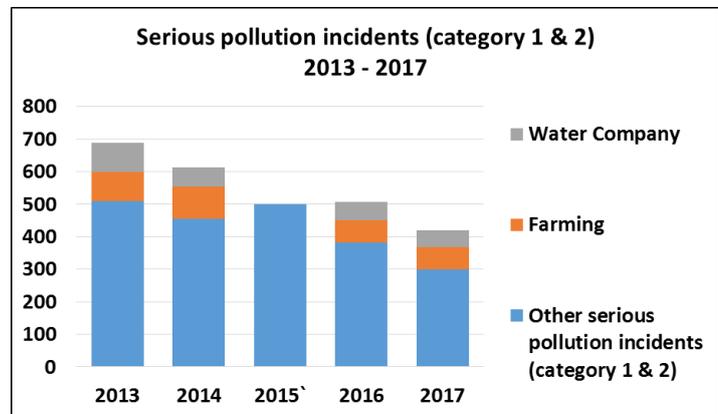
CSF delivers practical solutions and targeted support to enable farmers and land managers to take voluntary action to reduce water pollution from agriculture and to

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| | <p>protect water bodies and the environment. It is subject to an ongoing programme of evaluation and an updated Evaluation Report will be produced in 2019.</p> <p>In addition, to control and manage rural diffuse pollution on England’s principal salmon catchments, 122.2km of river has been enhanced through mechanisms like the Countryside Stewardship scheme, which is delivering measures such as new silage clamps.</p> <p>From 2 April 2018, new rules for all farmers in England were introduced to help protect water quality across the country. These require farmers to keep soil on the land, match nutrients to crop and soil needs, and keep livestock fertilisers and manure out of the water. The EA have rolled out the rules through an advice-led approach, working with farmers to meet the requirements before enforcement action is taken.</p> <p>The new farming rules for water are part of a package of measures to help farmers and land managers look after the environment. Under Pillar 2 of the Common Agricultural Policy (CAP), around £3bn has been allocated for 2014-2020 to support agri-environment and woodland schemes, such as Countryside Stewardship. Wildlife conservation is one of the primary goals of these schemes. Defra are also developing an Environmental Land Management scheme, which will provide a new policy framework for agriculture.</p> <p>Glastir is the Welsh Government’s sustainable land management scheme, offering financial support to farmers and land managers, and aimed at: (i) combating climate change; (ii) improving water management and (iii) maintaining and enhancing biodiversity.</p> <p>For example, Glastir small grant applications totalling £23K along with partnership funding of £36K (NRW, United Utilities, Dŵr Cymru Welsh Water, Woodland Trust and in partnership with Welsh Dee Trust, Dee Valley Water and Reaseheath College) is being used to deliver farm improvements and tackle issues of diffuse pollution in the Emerald Brook catchment (a tributary of the River Dee).</p> <p>A four-year rolling cycle to monitor and evaluate the environmental benefits of Glastir across Wales began in 2012. This focusses on six outcomes – including ‘improving water quality and managing water resources’ – with results reported on the Glastir web page: https://gov.wales/glastir.</p> |
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e) Regulation, pollution prevention and soil protection:

The EA and NRW use targeted advice-led regulation to work with farmers to help them address impacts on the environment.

The most recent information on pollution incidents in England is detailed in the report: *Regulating for people, the environment and growth: 2017 summary*. The number of serious pollution incidents (categories 1 and 2) in 2017 was 419, down 18% from 2016. Of these, farming caused 68 incidents and Water Companies 52 incidents. Courts fined companies a total of £25.5 million (£8 million in 2016). This increase was due to an unprecedented £20 million fine for one company.



*2015 sector breakdown not provided

f) Good Agricultural and Environmental Condition (GAEC):

For GAEC, rules related to the establishment of buffer strips along watercourses were changed from 1 January 2017 such that land parcels of 2 hectares or less next to watercourses have to comply with all the rules to protect watercourses against pollution and run-off from agricultural sources. Therefore, for all agricultural land within 2 metres of the centre of a watercourse or field ditch and from the edge of the watercourse or field ditch to 1 metre on the landward side of the top of the bank, both of the following apply: landowners must take all reasonable steps to maintain a green cover and they must not cultivate or apply fertilisers or pesticides. There were no changes to this guidance in 2018.

g) Local partnerships:

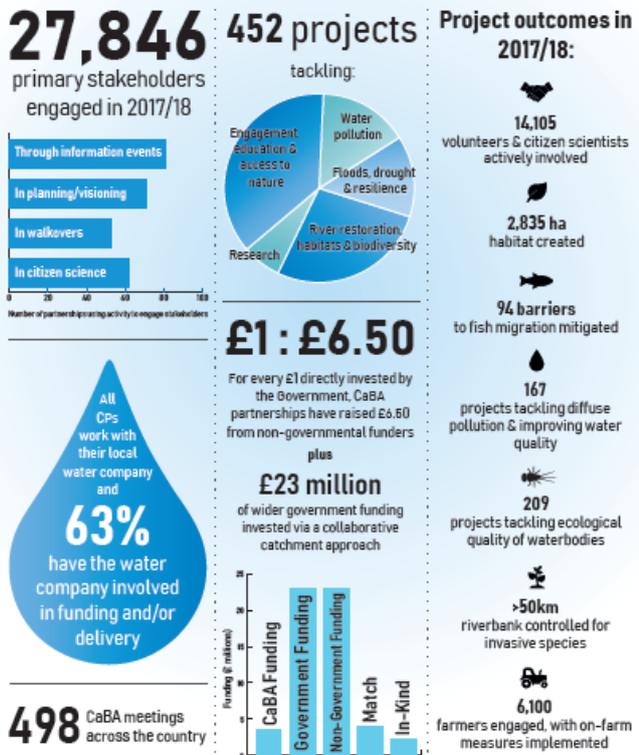
The following Catchment Based Approach (CaBA) report summarises outputs in 2017/18 across the country.

Catchment Based Approach

Celebrating the benefits of a collaborative approach for people and wildlife



Action and Activities in 2017/18



Available at: https://catchmentbasedapproach.org/wp-content/uploads/2018/10/CaBA-Benefits-Assessment-Full-Report_Final-1.pdf

To fund improvements to the rural water environment, the Water Environment Grant scheme was launched in March 2018, under the Rural Development Programme for England. The scheme is jointly run by the EA and Natural England and has a £27m budget to 2021. Successful applicants are now beginning work on a wide range of activities including fish passage, river restoration and tackling rural diffuse pollution.

Salmon and Trout Conservation (S&TC) are continuing their investigation into the state of fly life through their Riverfly Census, which is scheduled to report in May 2019. The Census results have already shown a concerning impact on the upper reaches of several important salmon rivers from sediment and phosphate, and the species-level invertebrate data is also identifying areas of chemical pollution. The project is to be extended into a new 'SmartRivers' initiative involving citizen science.

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| | | <p>In Wales the Riverfly Census has targeted three rivers from 2016: the Usk, Clwyd and Eastern Cleddau (added to the initial 12 English rivers). This year, S&TC are collecting final samples to complete the three-year programme and will be analysing the Welsh results early in 2019.</p> <p>In addition to the examples of partnership working identified above, WFD updates in Wales are provided in a twice-yearly external newsletter ‘Living Waters for Wales’. For example: https://cdn.naturalresources.wales/media/684913/living-waters-for-wales-newsletter.pdf?mode=pad.</p> |
| | Current Status of Action | Ongoing |
| | If Completed, has the Action achieved its objective? | |

3.3 Provide an update on progress against actions relating to Aquaculture, Introductions and Transfers and Transgenics (Section 4.8 of the Implementation Plan).

Note: The reports under ‘Progress on Action to Date’ should provide a brief overview with a quantitative measure of progress made. While referring to additional material (e.g. via links to websites) may assist those seeking more detailed information, this will not be evaluated by the Review Group.

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| Action A1: | Description of Action (as submitted in the IP) | <p>a) Regulate salmonid stocking in English and Welsh rivers by implementing and enforcing existing and proposed new (anticipated Oct 2013) live fish movements legislation. For rivers, the scheme will include limiting stock levels and preserving the genetic integrity of stocked fish. Out of catchment introductions of fish will only be permitted from sites authorised and regulated under the Aquatic Animal Health (England and Wales) Regulations 2009.</p> <p>b) Ongoing review of evidence about impacts of stocking will be used to update the stocking guidance and procedures underpinning existing and proposed new regulations, and to influence fisheries and conservation organisations.</p> |
| | Expected Outcome (as submitted in the IP) | Stocking operations are more focused, appropriate and lower risk leading to protected genetic integrity and reduced risks from inadvertent introduction of diseases, non-native invasive species, etc. |
| | Progress on Action to Date (Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.) | a) Regulate salmonid stocking - The Environment Agency in England will not consent any stocking of salmon into rivers that are Special Areas of Conservation (SACs) where salmon is a qualifying feature, or into rivers that are Sites of Special Scientific Interest (SSSIs). Other stocking will only be considered where there is a clear case for mitigation (e.g. significant loss of spawning habitat |

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| | | <p>due to a reservoir construction) or where the salmon population is at risk of extirpation, and only if this is done as part of a wider catchment restoration plan. In Wales, no stocking is permitted.</p> <p>b) Review of evidence on stocking - The EA has developed a national policy to cover its own stocking activities and the determination of consents for other parties to stock salmon (and other fish species). These have been developed in line with the NASCO guidance on introductions, transfers and stocking. The decision to cease stocking of salmon (and sea trout) in Wales in 2015 followed a detailed review of the evidence by NRW. Alternative means of delivering benefit for fish and fisheries are now preferred, including work to remove barriers to migration and improve sub-optimum habitats (See Section 3.2). </p> |
| | Current Status of Action | Ongoing |
| | If Completed, has the Action achieved its objective? | |
| Action A2: | Description of Action (as submitted in the IP) | <p>a) Implementing and enforcing existing and proposed new live fish movement regulations, making sure fish movements are screened to prevent spread of non-native fish and diseases. Movements of fish from waters known to contain high-risk invasive species will be prohibited. Audit selected high-risk movements to ensure compliance.</p> <p>b) Implementing European Council Regulation No. 708/2007 concerning Use of Alien and Locally Absent Species in Aquaculture and the Alien and Locally Absent Species in Aquaculture (England and Wales) Regulations 2011.</p> <p>c) Rapid and robust application of fish movement regulations to prevent the spread of new and/or emerging parasite or disease threats.</p> <p>d) Making sure in-river operations comply with biosecurity protocols.</p> <p>e) Encouraging anglers and other water users to remain vigilant to the risk of non-native species and pathogens, to report sightings and to take biosecurity measures (the 'Check, Clean, Dry' campaign; see http://www.environment-agency.gov.uk/homeandleisure/wildlife/129217.aspx)</p> <p>f) Working with fishery owners to eradicate non-native fish at high-risk sites and/or applying Import of Live Fish Act (IFLA) or new fish movement</p> |

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| | | <p>regulations enforcement to take action where site owners are not compliant.</p> |
| | <p>Expected Outcome (as submitted in the IP)</p> | <ul style="list-style-type: none"> • Containment and/or eradication of undesirable non-native fish species. • Regulation of other fish species. • Prevention of <i>G. salaris</i> and other parasites and diseases occurring in England and Wales. |
| | <p>Progress on Action to Date (Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.)</p> | <p>a) Live fish movement regulations –</p> <p>Since the implementation of the Keeping and Introduction of Fish Regulations in 2015, the Environment Agency has issued 5,207 site permits and 356 supplier permits.</p> <p>b) EU Regulations –</p> <p>There have been no applications to culture non-native fish species in natural waters in England and Wales in 2018. Defra policy remains to prohibit the farming of any non-native species in environments where they could pose a threat to native salmonid populations.</p> <p>c) Preventing the spread of parasite or disease threats -</p> <p>In response to reports of <i>Saprolegnia</i> infections in salmon (and sea trout), the EA and NRW have continued to monitor disease problems across England and Wales. This has included ongoing assessments of fungal infections in all our major salmon rivers and assessments of environmental variables that may be driving this disease. Nationally, 2018 was a relatively quiet year for <i>Saprolegnia</i>.</p> <p>The EA and NRW are continuing to support a three-year study into the epidemiology of <i>Saprolegnia</i> in wild salmonids in collaboration with Cardiff University.</p> <p>The EA and NRW are also continuing to investigate non-native parasites and emerging disease threats to wild fish populations. This includes work on Red Vent Syndrome (RVS), a disease that has seen wild salmon returning to rivers with red and bleeding vents. This disease was first observed in 2004 through our index river monitoring and continues to be detected annually in a proportion of the returning fish at monitored sites.</p> <p>The parasite <i>Sphaerothecum destruens</i>, also known as the Rosette Agent, has also been identified as a potential risk to the health of wild migratory salmonids in England and Wales. Eradications of the Topmouth gudgeon, <i>Pseudorasbora parva</i>, are helping limit the spread of <i>S. destruens</i>, which is known to be carried by this non-native fish. Work is underway to establish the</p> |

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| | | <p>pathogenicity of this parasite with no evidence of disease and no further controls justified at this time.</p> <p>To satisfy Article 43 of Directive 2006/88/EC, sampling of species susceptible to <i>Gyrodactylus salaris</i> is required as part of the criteria to maintain national control measures for the freedom of the parasite in England and Wales. Due to the low number of salmon farms in England and Wales, samples are obtained from wild salmonid populations. Monitoring is conducted through a rolling programme of sampling covering all river catchments which contain salmon. Each of the catchments is sampled approximately every five years, where possible. Occasionally investigative samples have also been taken (e.g. in response to low juvenile densities in 2016). Since 2007, 57 sites on 43 catchments have been sampled. In this time, <i>G. salaris</i> has not been found in any of the samples, although several other gyrodactylid species native to the UK have been identified. A new non-destructive method has been developed that enables gyrodactylids to be collected whilst leaving fish unharmed. This technique has enabled more fish to be sampled, and gyrodactylids to be collected, and has improved statistical confidence in the sampling programme. It is planned to publish the methodology and seek its possible inclusion in the OIE manual for diagnostic tests for aquatic animals.</p> <p>d) Compliance with biosecurity protocols -</p> <p>The Fish Health Inspectorate (FHI) audits biosecurity measures on aquaculture premises in England and Wales, to ensure that the risk of disease spread between farmed and natural waters is minimised. The FHI provides advice to industry on biosecurity and publicises the wider ‘Check, Clean, Dry’ campaign which aims to educate all water users on the risks of moving non-native species or pathogens between water bodies. FHI also provides guidance on best practice.</p> <p>The Great Britain Invasive Non-native Species Strategy 2015-20 seeks to minimise the risk posed by, and reduce the negative impacts of, invasive non-native species. It follows a hierarchical approach stressing prevention, followed by early detection and rapid response and finally long-term management and control. Enhanced biosecurity is one of the ten goals of the Defra 25-year environment plan.</p> <p>e) Communication with anglers and water users -</p> <p>To improve awareness of invasive species and the importance of biosecurity, the GB Non-Native Species Secretariat held Invasive Species Week from the 23</p> |
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| | | <p>March 2018, with a joint ministerial launch and 310 organisations taking part in 90 events. Further continuing efforts include biosecurity and prevention campaigns, guidance, and codes of practice. Examples include: Pathway Action Plans; Be Plant Wise; and the ‘Check, Clean, Dry’ campaign.</p> <p>f) Eradicating non-native fish at high-risk sites -</p> <p>Work to eradicate the highly invasive topmouth gudgeon (<i>Pseudorasbora parva</i>) continues, with 27 sites having been treated since 2011. Two sites were treated in 2018, in the Severn and Trent catchments. Two further populations have been identified and are scheduled to be treated in 2019/20. The Environment Agency are continuing to work closely with Welsh Government & NRW with the aim of total eradication of the species from England and Wales.</p> <p>Recent investigations by Cefas have confirmed the benefits of using environmental DNA (eDNA) to detect non-native fishes in both still and running waters, especially where the species are present in such low abundance that they are not detected using conventional sampling methods. This new surveillance approach can be used to inform management decisions regarding the distribution of non-native species, the effectiveness of invasive species eradication efforts, and provides a cost-effective alternative in locations where conventional sampling is impossible or ineffective, and to detect newly-arrived species before they become established and/or more widely distributed. </p> |
| | Current Status of Action | Ongoing |
| | If Completed, has the Action achieved its objective? | |
| Action A3: | Description of Action (as submitted in the IP) | <p>a) On-going application of discharge controls and EU restrictions on prohibited substances;</p> <p>b) Research on effects of contaminants from fish farms on wild salmon populations.</p> |
| | Expected Outcome (as submitted in the IP) | Improved water quality and compliance with WFD GES/GEP status. |
| | Progress on Action to Date (Provide a brief overview with a quantitative measure of progress. Other material (e.g. website links) will not be evaluated.) | <p>a) Discharge controls and prohibited substances -</p> <p>To meet requirements for protected areas and ‘no deterioration’ under the WFD, the Water Companies’ National Environment Programme 2016-2021 is scheduled to deliver 42 improvements, 160 investigations, 15 catchment schemes and 10 water resource schemes on England’s 42 principal salmon rivers.</p> |

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| | | <p>In 2018, for England's 42 principal salmon rivers, the EA, in its kilometres of rivers enhanced database, recorded that 490km of river had been improved, encompassing water quality, water resources, fish passage, habitat, fencing and tree planting actions.</p> <p>NRW have produced the equivalent statistics for Wales along with other information relating to the 2009-2015 and 2015-2021 River Basin Management Planning cycles (further information available on-line).</p> <p>b) Contaminants from fish farms -</p> <p>There have been no new investigations on this issue in 2018.</p> |
| | Current Status of Action | Ongoing |
| | If Completed, has the Action achieved its objective? | |

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| 4: Additional information required under the Convention | |
| 4.1 | Details of any laws, regulations and programmes that have been adopted or repealed since the last notification. |
| | Various new NLOs and byelaws, as specified in Section 2. |
| 4.2 | Details of any new commitments concerning the adoption or maintenance in force for specified periods of time of conservation, restoration and other management measures. |
| | Proposed new fishery regulations in Wales are currently under consideration (Section 1.2). Compliance with the voluntary catch-and-release targets established for rivers in England is due to be reviewed in 2020; mandatory provisions may be considered if targets not achieved. |
| 4.3 | Details of any new actions to prohibit fishing for salmon beyond 12 nautical miles. |
| | None. |
| 4.4 | Details of any new actions to invite the attention of States not Party to the Convention to matters relating to the activities of its vessels which could adversely affect salmon stocks subject to the Convention. |
| | None. |
| 4.5 | Details of any actions taken to implement regulatory measures under Article 13 of the Convention including imposition of adequate penalties for violations. |
| | None. |