



Agenda item 6.3
For information

Council

CNL(17)31rev

*Annual Progress Report
on Actions Taken Under the Implementation Plan for the Calendar Year 2016*

EU-UK (England and Wales)

(revised 28 April 2017 with updated estimate of unreported catch)

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(revised 28 April 2017)

***Annual Progress Report on Actions taken under the Implementation Plan for the
Calendar Year 2016***

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 24 March 2017**.

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

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.
The Environment Agency's Salmon Five Point Approach (5PA), which has been developed jointly by the Environment Agency, Defra, Cefas, NGOs and fisheries interests, was formerly launched in May 2016 and sets out high level commitments to restore England's salmon populations: <u>Salmon 5PA</u> - Its mission is to restore the abundance, diversity and resilience of salmon stocks throughout England through maximising the production of healthy wild salmon smolts in freshwater and seeking to reduce salmon mortality at sea. This is being achieved through working in partnership across Government, its agencies and partner organisations to introduce new initiatives and improve the delivery of existing measures to protect and maximise salmon stock performance. This work is focused on five areas: <ol style="list-style-type: none">1. Improving marine survival;2. Further reducing exploitation by nets and rods;

3. Removing barriers to migration and enhancing habitat;
4. Safeguarding sufficient flows; and
5. Maximising spawning success by improving water quality.

Since the start of the Approach, the Environment Agency and its partners have been working on a range of actions in each of these five areas. These include: identifying issues in estuaries and near shore waters that impact on salmon numbers, developing options to further reduce exploitation of salmon stocks and improve survival of caught and released salmon and ensuring actions needed for salmon are recognised within river catchment planning. The Approach will continue to be a focus of work during 2017, with many of the resulting actions being embedded in Environment Agency and partner organisations work thereafter.

As part of the 5-Point Approach, discussions are underway to review the possible need for further controls on exploitation by both nets and rods in England. Options are being developed and will be consulted on in 2017, with a view to potential deployment in 2018.

Over the last year or so, Natural Resources Wales (NRW) has been liaising with fisheries interests to examine options to reduce the numbers of fish killed by the fisheries (nets and rods) as one approach to conserving threatened salmon and sea trout stocks. For salmon, NRW's preferred option is for mandatory catch-and-release fishing (alongside additional controls on angling methods) on rivers where stocks are in the worst risk categories (the vast majority of rivers in Wales).

NRW intends to begin a formal 12-week public consultation on its proposals in early May 2017 with the aim of introducing any new regulations at the start of the 2018 fishing season. The outcome of the consultation and the timetable for the implementation of new measures cannot be pre-judged. In the interim, the status of salmon stocks, in particular, remains a matter for great concern, and fisheries and fishermen have been asked to introduce their own voluntary measures now to ensure no salmon are killed in 2017.

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 2016 showed the following river classifications:

- 0 rivers (0 %) ‘not at risk’ – i.e. p>95 % of meeting the management objective (MO);
- 5 rivers (8 %) ‘probably not at risk’ – i.e. p>50% but <95% of meeting MO;
- 34 rivers (53 %) ‘probably at risk’ – i.e. p>5% but <50% of meeting MO;
- 25 rivers (39 %) ‘at risk’ – i.e. p<5% of meeting 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 – i.e. of meeting or exceeding the conservation limit in four years out of five, on average.*]

Factors affecting stock abundance:

The poor recruitment of juvenile salmonids – particularly salmon fry - has been a cause of significant concern in 2016 in many English and Welsh rivers. This was the case, for example, on most rivers in Wales, with systems such as the Usk, Tywi and Clwyd reporting the absence or virtual absence of young salmon at several formally productive electrofishing sites. In England too, salmon fry numbers were significantly reduced on rivers across the country. The widespread nature of these observations suggests common factors operating at a broad scale. Among the most likely causes are: (i) poor numbers of adult salmon returning to spawn in 2015; (ii) unseasonably warm winter temperatures which, through various mechanisms, may have adversely affected spawning success and (iii) extreme flows over the spawning period linked to winter storms and leading to destruction of redds. Different factors are believed to have had greater influence in different catchments.

Natural Resources Wales with Welsh Government and Cardiff University are seeking to develop a research project to investigate the adverse effects of extreme winter climate on salmonid spawning and examine options for mitigation.

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 2016 (tonnes)	9.7	5.6	70.7	85.9
(b) confirmed nominal catch of salmon for 2015 (tonnes)	8.0	4.4	55.2	67.6
(c) estimated unreported catch for 2016 (tonnes)				10.2
(d) number and percentage of salmon caught and released in recreational fisheries in 2016.	9,192 salmon (provisional) were released by rods in 2016, representing 80% 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).

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.

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>	Assessment of salmon stocks completed for 2016 (see section 2.1). Results to be reported to ICES in March/April 2017 and published subsequently in the annual Cefas/EA/NRW Assessment of Salmon Stocks and Fisheries.
	Current Status of Action	Completed for current year
	If 'Completed', has the Action achieved its objective?	Yes. Objectives achieved for 2016.
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>	<p>No NLOs were renewed in 2016.</p> <p>For the Solway haaf net fishery, a catch condition was introduced restricting each licensee to a maximum catch of 10 salmon for the season. This was introduced to protect stocks on the Rivers Eden and Border Esk</p> <p>Following a byelaw review, catchment-wide mandatory catch limits were introduced on the Rivers Leven and Crake to restrict the number of fish that can be taken. The controls were implemented through the issuing of carcass tags. For 2016, 12 carcass tags were issued for the Leven catchment and 3 tags for the Crake catchment. The tags were allocated by local angling organisations. The number of tags will be reviewed each year based on the annual stock assessments.</p> <p>Under the Salmon Five Point Approach (section 1.2) discussions are underway to review the possible need for further controls on exploitation by both nets and rods in England. Options are being developed and will be consulted on in 2017, with a view to potential deployment in 2018.</p> <p>NLOs on 12 rivers in Wales are due for renewal in 2017. These will be addressed as part of a broader set of regulatory proposals for net and rod fisheries expected to be publicised for formal consultation in May 2017 (see Section 1.2).</p>

		A salmon stock assessment workshop (organised by IFM/AST) was held in July 2016 and provided an opportunity for discussion around current assessment practices. A number of potential improvements to existing measures were identified and these will help inform ongoing developments, as well as future actions under the Salmon 5-Point Approach.
	Current Status of Action	Completed for current year
	If 'Completed', has the Action achieved its objective?	Objectives fulfilled for planned reviews, consideration of further options ongoing.
Action F3:	Description of Action <i>(as submitted in the IP)</i>	<p>Implement policy on mixed stock fisheries, including:</p> <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. Completed in 2014, as previously reported. b. Completed in 2015 as previously reported. c. Ongoing; the review of the NE coast beach net fishery is due to be completed in 2017. d. Genetic analysis using Single Nucleotide Polymorphic (SNP) genetic markers has been completed in the NE coast fishery to determine the composition of the stocks exploited in the fishery. The results confirmed that both drift and inshore beach nets exploit salmon originating from rivers in England and Scotland, with the drift nets exploiting a higher proportion of fish originating in Scotland. Overall, the relative proportions of fish sampled in the fishery were estimated at 47% from Scotland and 53% from England. The improved analysis allows for fish caught in the marine environment to be confidently assigned to geographically coherent

		<p>units within Scotland and NE England, including individual rivers. The results reaffirm previous tagging work which suggested fish destined for all contributing catchments were taken in the beach and drift net fisheries in North East England.</p> <p>Additional actions:</p> <p>Options are being drawn up in both England and Wales, in consultation with fisheries interests, to further reduce exploitation by both nets and rods. Proposals will be developed further and consultation progressed through 2017, with new measures potentially being introduced in 2018.</p> <p>The Environment Agency, reviewed the impact of inshore sea fisheries (within six nautical miles) on migratory salmonids and proposed a number of measures to protect these stocks. This work was carried out to support the Inshore Fisheries and Conservation Authorities (IFCAs) in their duty to manage sea fisheries so that they do not impact upon other marine fauna, including migratory salmonids.</p>
	Current Status of Action	Completed for current year
	If 'Completed', has the Action achieved its objective?	Objectives fulfilled for planned activities, other work ongoing.
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>The Atlantic Salmon Trust, FishPal and the Angling Trust have produced a step by step instructional video on how to play, handle and release an Atlantic salmon.</p> <p>In response to ongoing concerns about declining stock status, a voluntary carcass tagging scheme was continued in 2016 on the rivers Ribble and Eden to encourage C&R and limit the take of salmon.</p> <p>The C&R message has been promoted by Natural Resources Wales via press-releases and in discussions with local fisheries groups – most recently for the 2017 season. As part of the process of developing new regulatory proposals to protect salmon stocks (Section 1.2), the views of fisheries interests have been sought across Wales via a questionnaire to examine C&R options including changes to angling methods to improve post-release survival.</p>

		C&R in rod fisheries has increased from 10% in 1993 to 79% in 2015. For 2016, C&R is provisionally estimated at 80%, with an estimated 9,192 fish released. Further improvements in C&R rates in England are under discussion as part of a package of possible new measures being developed under the Salmon 5-Point Approach.
	Current Status of Action	Ongoing
	If ‘Completed’, has the Action achieved its objective?	
Action F5:	Description of Action <i>(as submitted in the IP)</i>	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 <i>(as submitted in the IP)</i>	Reduced illegal fishing and corresponding response in salmon stocks in vulnerable rivers.

	<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. Prevention, disruption and intervention of illegal fishing:</p> <p>Illegal fishing continues to pose a risk to stocks across England and Wales. Intelligence-led targeted operations are carried out by the Environment Agency and Natural Resources Wales, often jointly with Inshore Fisheries and Conservation Authorities (IFCAs)/Welsh Government and the police.</p> <p>In Cumbria (NW England), a gang of poachers were caught taking salmon on the River Duddon, directed by intelligence gathered by officers.</p> <p>In NE England, the Environment Agency working with the Police caught one gang of three repeat offenders gill netting salmon on a tributary of the Tyne and one gang of two people using prohibited instruments to take salmon off their spawning beds on a tributary of the River Wear.</p> <p>As a result of co-ordinated action by Dorset Police, the National Wildlife Crime Unit, Environment Agency, Marine Management Organisation and the Southern Inshore Fisheries and Conservation Authority a poacher from Plymouth caught fishing illegally in Christchurch Harbour was given a Proceeds of Crime Act confiscation order totalling £104,147.</p> <p>In Wales, netting in coastal and estuarine areas remains the biggest concern and the source of many reported incidents. Prosecutions are pending in north, mid and southwest Wales against a total of 11 individuals for illegal netting activity. Fixed nets have been removed and confiscated from beaches at Newport, Pembrokeshire and Ogmore-by-Sea, and enforcement responses are pending against three individuals involved in this activity.</p> <p>Foul hooking of migratory salmonids also continues to present a risk in certain areas; e.g. two individuals have recently been prosecuted for this type of activity and their equipment forfeited by the Court as a deterrent to others. Others have been successfully prosecuted for out of season fishing for salmon and sea trout.</p>
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	<p>In south-east Wales unlicensed fishing with rod and line is among the greatest challenges - reflected by the number of incident reports, intelligence and cases.</p> <p>Enforcement staff in Natural Resources Wales are working across Wales to deter, prevent and apprehend those acting illegally. The approach is intelligence led and targeted, with key enforcement priorities for salmon and sea trout in 2017–19 relating to (i) tackling illegal netting (fixed and drift); (ii) protecting spawning beds and (iii) ensuring compliance in licenced net and rod fisheries.</p> <p>b. Effectiveness of enforcement activities:</p> <p>The Environment Agency is undertaking a review of fisheries enforcement and will be consulting on options being considered.</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.

Action H1:	Description of Action <i>(as submitted in the IP)</i>	<p>Implementing Climate Change Adaptation Plans (produced by both government and private sector) and specifically:</p> <ul style="list-style-type: none"> a) inspiring organisations to increase riparian shade over water bodies, through the ‘Keeping Rivers Cool Project’; b) influencing decisions in the next round of Water Company investment plans to ensure climate resilience for both water abstractions and wastewater management, and ensuring that due regard is given to their impact on the environment; c) ensuring climate change is considered within strategic environment planning frameworks (e.g. River Basin Management Plans (RBMPs), Common Agriculture Policy (CAP) reform); d) supporting the regulation of robust thermal standards for transitional and coastal waters to manage the impact of cooling water from power stations.
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	<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>The Woodland Trust now leads on the KRC project. In 2016 15,000 trees were planted and 12km of fencing erected on the Tyne, Ribble and Arun.</p> <p>b) Water Company investment plans:</p> <p>For the next water company investment cycle PR19, the Environment Agency is utilising statutory drivers to influence the National Environment Programme to deliver Salmon Five Point Approach actions focussing in particular on improving water quality, flow and barriers to fish migration.</p> <p>c) Strategic environment planning frameworks:</p> <p>In England and Wales, the 2nd cycle River Basin Management Plans (2015-2021) were published in February 2016. Implementation of the measures outlined in the plans are designed to increase resilience in the face of climate change.</p> <p>As part of the LIFE Natura 2000 Programme for Wales (culminating March 2016), Natural Resources Wales has developed Prioritised Improvement Plans (PIPs) for all Natura 2000 sites in Wales (including several sites specifically designated to protect Atlantic salmon). Thematic Plans (linked to River Basin Management Plans) have also been produced by the LIFE Programme identifying key strategic actions to address issues such as diffuse pollution, invasive species, climate change and flow.</p> <p>Outputs produced as part of this project are available at:</p> <p>https://naturalresources.wales/about-us/our-projects/life-n2k-wales/?lang=en</p> <p>d) Thermal standards:</p> <p>Environment Agency and Natural Resources Wales have been contributing to the evidence base producing</p>

		robust thermal standards for transitional and coastal waters. (See publications: Marine Pollution Bulletin (http://nora.nerc.ac.uk/19082/) and BEEMS Scientific Advisory Report series 008. Existing standards: p.22; http://www.wfdruk.org/sites/default/files/Media/Environmental%20standards/Environmental%20standards%20phase%202_Final_110309.pdf).
	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 of hydropower
	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>a) Removing or easing barriers:</p> <p>On England's 42 principal salmon rivers, work was undertaken on 12 barriers to fish migration during 2016, improving access for salmon to 555 km of river. Rivers affected included the: Stour, Withy Brook, Browney, Thrushel, Derwent, Eden, Brancepeth Beck and Calder.</p> <p>The Welsh Government/EU funded 'Salmon for Tomorrow Programme' (S4T programme) in Wales (2010-2015) has invested £2m in the delivery of 13 fish passes and 49 fish easements, improving access to over 700 km of river. The same funding source was used in a £1.7m programme by Afonydd Cymru and five of its member Trusts to deliver 63 fish easements and habitat restoration in stream lengths totalling 42 km.</p>

	<p>Following the S4T programme, Natural Resources Wales (NRW) and Afonydd Cymru are seeking future funding sources, including the European Maritime Fisheries Fund (EMFF) to continue delivery of this type of work.</p> <p>NRW have also begun 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 have included, for example, the introduction of 200 tons of graded stone and gravel to improve the availability of spawning habitat on a heavily regulated tributary of the River Dee. The programme as whole will be reviewed at the end of the 5-year period.</p> <p>b) New fish passage regulations:</p> <p>Defra is developing proposals for new regulations enhancing powers to require fish passage and screening improvements in England.</p> <p>c) Research on hydropower:</p> <p>Three Environment Agency research reports have recently been published:</p> <ul style="list-style-type: none"> • Investigations into the cumulative effects of hydropower schemes on fish migration and populations: https://www.gov.uk/government/publications/cumulative-effects-of-hydropower-schemes-on-fish-migration-and-populations • The effectiveness of fish screens for hydropower intakes: https://www.gov.uk/government/publications/testing-the-effectiveness-of-fish-screens-for-hydropower-intakes • The effects of run-of-river hydroelectric power schemes on fish: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/552316/Effects_of_run-of-river_hydroelectric_power_schemes_on_fish.pdf <p>A review of the literature indicated that multiple hydropower schemes have the potential to increase impacts for migratory species, but noted that most studies had been conducted on overseas sites and</p>
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involved schemes much larger than those typically in use in England and Wales. A model was developed to test scenarios based on various hydropower scheme effects, mitigation measures and salmon life-cycle stages. In the scenarios tested, the cumulative effects of several schemes ranged from +18% to -12% of the numbers of expected returning salmon. This variation in effect was highly dependent on the passability of existing barriers and the location of the scheme on the river, with sites further downstream having the potential to cause larger effects. Positive effects were always driven by the inclusion of improved fish passage at individual scheme sites.

The second report examined the effectiveness of screens designed to prevent fish from being drawn in to in-river (run-of-river) hydropower schemes. Most hydropower schemes in England and Wales use physical screens (positive exclusion screens) to divert fish away from the turbine to a suitable by-pass. Guidelines have been developed to inform screening designs that seek to avoid fish becoming caught on the screen (impinged) or drawn into the turbines (entrained), as both are likely to cause injury or death in affected fish. A key objective of the study was to test the effect of screen bar spacing on the ability of fish to by-pass screens (i.e. the deflection efficiency). Field investigations tested screen bar spacings of 10 mm and 12.5 mm (as recommended in Environment Agency guidance). Measured deflection efficiencies for salmon smolts were found to be at least 92% using 10 mm screens and at least 88% for 12.5 mm screens.

The third study looked at changes in fish communities from run-of-river HEP schemes compared with a set of control sites without hydropower across a range of river types and locations. Six measures of fish community composition were analysed. No significant change was found in 5 of the measures. However, a very small but statistically significant decrease was observed in the mean number of fish species in the period after HEP construction relative to the period before construction. The research showed that the impact of these schemes on fish is limited, although the small number of samples means that subtle changes may not have been detected.

	<p>Cefas-led research into the effects of in-river hydropower schemes was completed on the River Ribble in 2015 and is ongoing on the River Taff in Wales. In the Ribble study, it was only possible to track a small number of smolts (10 rather than the planned 50), so the small sample size precluded detailed analysis. Of the 10 fish tagged, 4 passed downstream through the turbine while the other 6 migrated via the weir. This is a higher proportion of fish compared to a previous study on the River Frome where 9.6% of the fish tagged over a two-year period were detected moving downstream through the turbine. These results suggest that the impact of hydropower schemes is likely to be very site-specific.</p> <p>During April 2016, a collaborative research project between Cefas and Natural Resources Wales investigated smolt movements in relation to a hydropower scheme at Radyr Weir on the River Taff. However, mechanical problems and delays in the commissioning of the scheme resulted in the turbines only being operated for a very limited period (1 day). The main objective had been to determine the movements of fish as they emigrated downstream and to quantify the numbers of fish that passed through the two turbines and those which migrated downstream using alternative routes (e.g. weir and side channels). In view of the limited operational period, the study was modified. Batches of acoustically tagged hatchery-reared smolts were released simultaneously above the turbine and in the by-pass (controls) and subsequent detections downstream recorded. A smaller proportion of the experimental batch were subsequently detected downstream, but the significant limitations resulting from the limited duration of the study meant that no meaningful conclusions could be made regarding the impact of the hydropower scheme on emigrating smolts. The study is to be repeated in April/May 2017 when smolts will be trapped and tagged upstream of the hydropower scheme. This is expected to provide a more robust determination of the impact of the scheme on the behaviour and survival of wild smolts.</p>
Current Status of Action	Ongoing
If Completed, has the Action achieved its objective?	

Action H3:	Description of Action <i>(as submitted in the IP)</i>	<p>Provision of appropriate river flows by:</p> <ul style="list-style-type: none"> 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 b) Taking forward the Water Bill.
	Expected Outcome <i>(as submitted in the IP)</i>	<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.
	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>a) RBMPs and Restoring Sustainable Abstraction (RSA) programme: Since 2008, the RSA programme has changed 271 unsustainable abstraction licences preventing damage (or the risk of damage) by returning approximately 27.5 million cubic meters of water to the environment. 81 of these licences were on England's 42 principal salmon rivers. A remaining 158 licences will be modified under the RSA programme by 2020; 16 of these licences relate to salmon rivers. In addition to the above, the Environment Agency is working to recover unsustainable abstraction where it exists, utilising a range of policy mechanisms provided by government, including: Serious Damage, recovering unused licences and ensuring no deterioration at licence renewals. The RSA programme will prevent damage (or the risk of damage) to 12 Habitats Directive sites in Wales. Around 35 abstraction licences have been modified or revoked in Wales. Licence variations have included adding hands-off flow conditions, requirements for fish screens and reducing abstraction volumes. These changes will benefit the following principal salmon rivers: Dee, Wye, Teifi, Tywi, Gwyrfai and Cleddau. About a further 10 licences will be modified under the RSA programme by 2020 which will bring further benefits to the rivers Tywi, Teifi and Usk .</p>

	b) Taking forward the Water Bill: Abstraction Reform will create a new adaptive system for managing water resources in the face of climate change, water demand and changing environmental standards. It will rationalise and simplify the abstraction licensing system, facilitate the more efficient use of water resources through activities like water trading whilst ensuring environmental standards are maintained. Implementation is expected in the early 2020s. The New Authorisations initiative will remove current exemptions to bring remaining significant abstractions into regulation. This is planned to be implemented from later this year. This will bring currently unlicensed activities such as trickle irrigation, dewatering in quarries, Canal and Rivers Trust water transfers and Inland Drainage Board abstractions into regulation.
Current Status of Action	Ongoing
If Completed, has the Action achieved its objective?	
Action H4:	Description of Action <i>(as submitted in the IP)</i> Taking an integrated catchment management approach to reduce the impact of land use, through implementing the 11 RBMPS and also, specifically: <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;

		<p>f) Reviewing Good Agricultural and Environmental Condition; and</p> <p>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.</p>
	<p>Expected Outcome <i>(as submitted in the IP)</i></p>	<p>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.</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) Sources of sediment:</p> <p>Investigations and wet-weather walk-overs continue to be instrumental in targeting measures to tackle diffuse water pollution. In England's 42 principal salmon catchments the highest elemental failure is phosphate, followed by macrophytes, fish, invertebrates, dissolved oxygen, hydrological regime, ammonia and metals. The status for these rivers is: 26% Good/High, 54% Moderate, 17.5% Poor and 2.5% Bad. This is using the 2015 WFD baseline data, which was used for the 2nd cycle plan.</p> <p>The 'Diffuse Water Pollution Action Plan' for Natural Resources Wales is available at: https://naturalresources.wales/media/4059/diffuse-water-pollution-in-wales.pdf</p> <p>This and other initiatives have seen an improvement in the WFD status of Water Bodies across Wales 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 main reasons for not achieving good status are physical modifications, pollution from rural areas and pollution from sewage and waste water.</p> <p>b) & c) Stakeholder engagement:</p> <p>More than 1500 organisations are 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 more: https://catchmentbasedapproach.org/</p> <p>Natural England and the Environment Agency are preparing and continuing to implement 36 Natura 2000, 19 RAMSAR and 56 SSSI Diffuse Water Pollution Plans (DWPPs) across England. An example of the work being delivered, is the taking off-line of a large silt-filled lake in the upper Itchen catchment at Tichborne on the Cheriton Streams.</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. Natural Resources Wales (NRW) provides a publicly available on-line</p>
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	<p>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; see:</p> <p>http://waterwatchwales.naturalresourceswales.gov.uk/en/</p> <p>NRW has also been working with Agored Cymru, the Welsh education and training awarding body to develop a new River Restoration Qualification which will benefit volunteers and Welsh rivers.</p> <p>The trial to better manage conflicts between fisheries and fish-eating birds was considered a success and funding has been found to continue to support the work of two Fishery Management Advisers (FMAs). Since they started, the FMAs (who have been based with the Angling Trust to date) have advised hundreds of clubs and fishery owners about techniques for managing predation by fish eating-birds, including measures to protect parr and smolts. This has also included successfully implementing 16 area-based licences to coordinate management activities at a catchment scale, e.g. on the Rivers Eden, Ribble, Cumbrian Derwent and Hampshire Avon.</p> <p>A multidisciplinary expert group on small water bodies (SWBs) has recently been established by Cefas to bring together scientists, managers and stakeholders with the following objectives:</p> <ul style="list-style-type: none"> • develop and maintain a network of scientific experts on SWBs; • provide a forum on SWBs among experts, stakeholders and other interest groups; • discuss emerging issues on SWBs and consider possible responses; • review ongoing research on SWBs, identify gaps, improve coordination and collaborate in the development of new proposals; • advise funding agencies on research needs relating to SWBs e.g. NERC Highlight Topics. <p>The SWB group is currently developing a multi-disciplinary review paper aimed at informing policy makers about the issues affecting SWBs and their importance to wider catchment management.</p> <p>a) Incentive Schemes:</p>
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	<p>Catchment Sensitive Farming (CSF) advice has now been given to 19,995 farm holdings, covering an area of 2.7 million hectares.</p> <p>CSF delivers practical solutions and targeted support to enable farmers and land managers to take voluntary action to reduce water pollution from agriculture to protect water bodies and the environment.</p> <p>To December 2016, the Countryside Stewardship scheme in England has 2,987 live agreements, covers 84,376ha and supports actions including: fencing, the creation of buffer strips, measures to separate rain and dirty water, pasture pumps and the under-sowing of crops. The number of agreements that include options to protect soils and water are 992 with 758 of these including buffer strips. 173 agreements include options to improve wetlands.</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>A four-year rolling cycle to monitor and evaluate the environmental benefits of Glastir began in 2012. This focusses on six outcomes – including ‘improving water quality and managing water resources’ – with results reported at: https://gmep.wales/</p> <p>b) Regulation, pollution prevention and soil protection:</p> <p>The Environment Agency and NRW use targeted advice-led regulation to work with farmers to help them address impacts on the environment.</p> <p>The most recent information on pollution incidents in England is detailed in the report: <i>Pollution incidents 2015 evidence summary</i>. In 2015 there were 325 serious pollution incidents that affected the water environment, which was 10% down compared to 2014. The sectors responsible for the largest numbers of incidents affecting water were farming (81 incidents), which were mostly caused by non-permitted activities; and the water industry (62 incidents), which were mostly caused by permitted activities.</p>
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	<p>Enforcement undertakings brought by the Environment Agency between 1 August 2016 to 27 January 2017 have generated over £1.5m for projects benefitting wildlife and the environment. Beneficiaries include Wildlife and Rivers Trusts.</p> <p>The Angling Trust has been pursuing, in partnership with WWF, a number of legal and advocacy avenues with regards to water pollution which have included a judicial review of the government about Water Protection Zones to tackle agricultural pollution. Fish Legal has successfully established, after a case running for many years, that water companies must be subject to the Environmental Information Regulations, which enables them to be challenged about what they put into, and take out of, rivers and coastal waters. Fish Legal has also fought numerous legal cases in relation to pollution incidents on salmon rivers, on behalf of member clubs and riparian owners.</p> <p>The Angling Trust has also run a Save Our Salmon campaign. This highlighted agricultural pollution as a key concern, along with predation by fish-eating birds and an end to mixed-stock commercial netting.</p> <p>c) Good Agricultural and Environmental Condition (GAEC):</p> <p>A decision is awaited following a consultation on new ‘Basic Rules’ for farmers to tackle diffuse water pollution from agriculture in England.</p> <p>Under cross-compliance guidance, for 2016, this includes GAEC 1: Establishment of buffer strips along watercourses, which from 1 January 2017 will include land parcels of two hectares or less next to watercourses. GAEC 4 covers providing minimum soil cover and GAEC 5 gives guidance on minimising soil erosion.</p> <p>d) Local partnerships:</p> <p>Across England and Wales there are now 58 Rivers Trusts with >200 professionally employed staff, an income of >£22m and involving >24,000 volunteers. Examples of projects include:</p> <p>The five-year, £20m ‘Unlocking the Severn’ project, which is being led by the Severn Rivers Trust in</p>
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	<p>partnership with the Canal and River Trust, Environment Agency and Natural England, aims to re-open the UK's longest river to all fish species, including endangered shad, salmon, eel and lamprey and reconnect communities with their natural, cultural and industrial heritage.</p> <p>'Natural Course' is the first LIFE Integrated Project (IP) in the UK. Led by the Environment Agency in partnership with United Utilities, the Rivers Trust, Greater Manchester Combined Authorities (GMCA) and Natural England, this 10 year multi-million pound project aims to protect and improve the water environment across the North West River Basin District.</p> <p>Four pioneers are being developed to further Defra's 25 Year Environment Plan. These are:</p> <ul style="list-style-type: none"> • Catchment Pioneer (Cumbria) – EA led • Urban Pioneer (Greater Manchester) – EA led • Landscape Pioneer – Devon Biosphere – NE led • Marine Pioneer – TBC – MMO led <p>A £15m Natural Flood Management Programme has been announced, which aims to reduce flood risk, deliver environmental improvements and contribute to filling NFM evidence gaps. These two initiatives present opportunities to further salmon priorities through integrated catchment management.</p> <p>Salmon and Trout Conservation UK are continuing their investigation into the state of fly life and the impact of phosphate and sediment. This could help better target measures to address diffuse pollution.</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.

Action A1:	Description of Action <i>(as submitted in the IP)</i>	a) Regulate salmonid stocking in English and Welsh rivers by implementing and enforcing existing and proposed new (anticipated Oct 2013) live fish
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		<p>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 <i>(as submitted in the IP)</i>	<p>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.</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>a) Regulate salmonid stocking:</p> <p>As reported in 2016, following consultation with stakeholders, the Environment Agency in England will not consent any further stocking of salmon into rivers that are Special Areas of Conservation (SACs) where salmon is a qualifying feature or that are Sites of Special Scientific Interest (SSSIs).</p> <p>b) Review of evidence on stocking:</p> <p>Following a review of the evidence, Natural Resources Wales ended the stocking of salmon (and sea trout) into Welsh rivers (as reported in 2015). Stocking is now being replaced by alternative means of delivering benefit for fish and fisheries, including work to resolve barriers to migration and 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 <i>(as submitted in the IP)</i>	<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</p>

	<p>Locally Absent Species in Aquaculture (England and Wales) Regulations 2011.</p> <ul style="list-style-type: none"> c) Rapid and robust application of fish movement regulations to prevent the spread of new and/or emerging parasite or disease threats. d) Making sure in-river operations comply with biosecurity protocols. 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 '<u>Check, Clean, Dry</u>' campaign; see http://www.environment-agency.gov.uk/homeandleisure/wildlife/129217.aspx) 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 regulations enforcement to take action where site owners are not compliant.
Expected Outcome <i>(as submitted in the IP)</i>	<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.
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>a) Live fish movement regulations:</p> <p>Following the implementation of the Keeping and Introduction of Fish Regulations in 2015 our focus has been on issuing all fisheries and fish suppliers with relevant permits.</p> <p>b) EU Regulations:</p> <p>Cefas remain vigilant to any potential threat or issue to salmon stocks. A precautionary approach is taken with regard to any proposals to farm non-native species where these might pose a risk to native salmonids.</p> <p>c) Preventing the spread of parasite or disease threats:</p> <p>In response to increased reports of <i>Saprolegnia</i> infections in salmon (and sea trout), we 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</p>

assessments of environmental variables that may be driving this disease. Compared with previous years, infections of *Saprolegnia* were less prevalent in 2016, with no serious disease problems reported.

The Environment Agency is supporting a three-year study into the epidemiology of *Saprolegnia* in wild salmonids in collaboration with Cardiff University.

The Environment Agency and Natural Resources Wales continue to regulate non-native parasites and investigate 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 has been subject to ongoing monitoring since then.

The parasite *Sphaerothecum destruens*, 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, *Pseudorasbora parva*, are helping limit the spread of *S. destruens*, which is known to be carried by this non-native fish. Work is underway to establish the pathogenicity of this parasite with no evidence of disease and no further controls justified at this time.

To satisfy Article 43 of Directive 2006/88/EC, sampling of species susceptible to *Gyrodactylus salaris* 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 catchment's which contain salmon. Each of the catchments is sampled approximately every five years where possible. Since 2007, fifty-four sites on forty-three catchments have been sampled. In this time, *G. salaris* has not been found in any of the samples. In 2016, a novel non-destructive method for sampling wild salmonids was introduced and a request will be made to include this in the OIE manual of diagnostic tests for aquatic animals.

d) Compliance with biosecurity protocols:

Biological control is being deployed to manage damaging invasive non-native plants. The Azolla weevil has been used very effectively to manage water fern on a number of water bodies and biocontrols have recently been released against Japanese knotweed and Himalayan balsam; riparian plants that increase siltation and bank erosion. Government is currently considering the potential to release further biocontrols against floating pennywort and Australian swamp stonecrop, both of which degrade aquatic ecosystems and restrict angling and recreation.

e) Communication with anglers and water users:

To improve awareness of invasive species and the importance of biosecurity, the GB Non-Native Species Secretariat organised Invasive Species Week 2016, which took place between 29th February and the 6th March and involved 160 organisations.

f) Eradicating non-native fish at high-risk sites:

The five year WFD funded, piscicide based programme instigated in 2011-2012 to eradicate the highly invasive topmouth gudgeon (*Pseudorasbora parva*) is nearing successful completion. Topmouth gudgeon are host to novel parasites and disease which pose a potential risk to native fish species, including salmonids. Of the 25 confirmed sites in England, 22 have been successfully cleared of the species, leaving only 3 sites to be treated. The programme is due to be completed in 2018. Salmon catchments protected through the WFD topmouth gudgeon eradication programme include: Rivers Kent, Tamar, Test and Severn. The Environment Agency are working closely with Welsh Government & Natural Resource Wales to implement eradication operations for the 2 Welsh sites, with the aim of total eradication of the species from England and Wales.

The Environment Agency has been working closely with its European partners to develop risk assessments and risk management assessments to provide a robust evidence base from which to develop and deliver invasive non-native fish regulation, containment, control and management to protect our native species and habitats, including key salmonid rivers.

		With our partners in the Norwegian Veterinary Institute, we have successfully formed a ‘European Piscicide Working Group’ to provide a strategic approach to the development and delivery of piscicide based management of invasive fish and parasites, including <i>Gyrodactylus salaris</i> , across Europe.
	Current Status of Action	Ongoing
	If Completed, has the Action achieved its objective?	
Action A3:	Description of Action <i>(as submitted in the IP)</i>	<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 <i>(as submitted in the IP)</i>	Improved water quality and compliance with WFD GES/GEP status.
	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>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> <p>In 2016, the Environment Agency introduced a new tracker to monitor the kilometres of river enhanced across England. On England’s 42 principal salmon rivers, preliminary figures indicate that 330kms of river have been improved by the Environment Agency and partners. The work has involved 51 habitat enhancement and fish passage improvements, 15 schemes to reduce sediment, 8 to reduce phosphate, 29 and 10 to manage diffuse and point source pollution respectively, and 1 to reduce abstraction and improve flow. A further 20 schemes have been delivered on transitional and coastal waters.</p> <p>Natural Resources Wales 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 at: https://naturalresources.wales/water/quality/submission-of-river-basin-management-plans/?lang=en.)</p> <p>b) Contaminants from fish farms:</p> <p>There have been no new investigations on this issue in 2016. A number of studies have previously been</p>

	<p>completed that have looked at the effects of trout farm effluents on various life stages of Atlantic salmon and brown trout. These have indicated possible impacts on:</p> <ul style="list-style-type: none"> • the reproductive physiology of mature fish; • the quality of spawning gravels immediately downstream of farm; • egg development and survival; • the structure of the gills and kidney; and • osmoregulation, blood chemistry and the ability of salmon smolts to survive in seawater. <p>Different effects, however, have been observed in different situations, and no component of the effluent has yet been identified as responsible for specific impacts, so the implications for wild salmonid populations remain unclear.</p>
Current Status of Action	Ongoing
If Completed, has the Action achieved its objective?	

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.

A catch condition, restricting licensees in the Solway haaf net fishery to a total catch of 10 salmon in the season, was introduced to protect stocks on the Rivers Eden and Border Esk.

Following a byelaw review, catchment-wide mandatory catch limits were introduced on both the River Leven and River Crake that restrict the number of fish that can be taken.

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.

Launch of Salmon Five Point Approach and fishery regulatory initiatives in Wales – see section 1.2.

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.