

Agenda item 6.1 For information

### Council

CNL(16)24

Annual Progress Report on Actions Taken Under the Implementation Plan for the Calendar Year 2015

EU - UK (England and Wales)

### CNL(16)24

# Annual Progress Report on Actions taken under the Implementation Plan for the Calendar Year 2015

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 by 1 April 2016.

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

(Where changes are proposed, the revised Implementation Plans should be submitted to the Secretariat by 1 December).

#### No changes

# 1.2 Describe any major new initiatives or achievements for salmon conservation and management that you wish to highlight.

The Environment Agency hosted a Salmon Summit on 19 November 2015, to raise awareness about the state of England's salmon stocks and to bring together influential leaders, policy makers, delivery bodies and NGOs to discuss and agree how we can collectively protect and enhance them. The Environment Agency, Defra, its agencies and partner organisations are now developing a five-point approach to deliver a better future for salmon, which aims to address the pressures that they face through their life-cycle. This includes proposals for action on:

- 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.

Starting in April 2016, the Environment Agency is putting in place an 18-month programme to kick-start the new approach and help coordinate the actions to be undertaken by a range of organisations over the period 2016-2021.

#### 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 2015 showed the following river classifications:

- 0 rivers (0 %) 'not at risk' i.e. p>95 % of meeting the management objective (MO);
- 9 rivers (14 %) 'probably not at risk' i.e. p>50% but <95% of meeting MO;
- 33 rivers (52 %) 'probably at risk' i.e. p>5% but <50% of meeting MO;
- 22 rivers (34 %) '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:

Returning stock estimates and counts from nine rivers showed a highly variable picture and suggest north-south differences in salmon returns in 2015. For example, five out of six rivers in the south reported returns above the recent 5-year average and, for two rivers, these were the highest recorded for over 25 years. In contrast, two out of three counted rivers in the north had returns that were at or close to the minimum recorded in the 24- to 27-year time-series.

River flow is a key factor affecting angler effort. In 2015, flows were typically below the long-term average for much of the fishing season and were particularly low in October. The early autumn represents an important period for most rod fisheries and the very low flows at this time are likely to have affected runs of fish and provided conditions that were unfavourable for angling, particularly for 1SW salmon since these only start to return to rivers in the summer months. Runs of 1SW salmon were reported as being poor in many areas, and the number of days fished by anglers in 2015 was 21% below the average of the previous five years. These factors are likely to have contributed to the relatively low in-river catch in 2015.

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').

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(a) provisional nominal	In-river	Estuarine	Coastal	Total
catch (which may be	9.8	4.8	54.7	69.4
subject to revision) for				
2015 (tonnes)				
(b) confirmed nominal	9.3	4.3	40.6	54.3
catch of salmon for				
2014 (tonnes)				
(c) estimated unreported				13.1
catch for 2015 (tonnes)				
(d) number and	9,925 salmon (p	provisional) were i	released by rods i	in 2015, representing
percentage of salmon	79% of the declared catch.			
caught and released in				
recreational fisheries in				
2015.				

### 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.

	V 1 C	lg to additional material (e.g. via links to websites) may assist those ll not be evaluated by the Review Group.
Action F1:	Description of Action (as submitted in the IP):	Conduct annual assessments of the status of salmon stocks.
	Expected Outcome (as submitted in the IP):	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 (see note above):	Assessment of salmon stocks completed for 2015 (see sec 2.1). Results to be reported to ICES in April 2016 and published subsequently in the annual Cefas/EA/NRW Assessment of Salmon Stocks and Fisheries
	Current Status of Action (e.g. 'Not started';	Completed for 2015;
	'Ongoing'; 'Completed'):  If 'Completed', has the	Ongoing and on target for 2016  Objectives achieved for 2015.
Action F2:	Action achieved its objective?  Description of Action (as submitted in the IP):	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 (as submitted in the IP):	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 (see note above):	The NLOs for the net fisheries in the estuaries of the rivers Teign, Dart and Dee were reviewed. The following restrictions have been introduced:
		<ul> <li>Teign estuary: the NLO was maintained at three seine nets.</li> <li>Dart estuary: a reducing NLO* of zero was introduced for the seine net fishery; the remaining nets have now been bought out in perpetuity.</li> <li>Dee estuary: the reducing NLO* of zero was maintained for the seine and trammel net fisheries. (No fishing has taken place since 2009 following a buy-off of all nets).</li> </ul>
		* A reducing NLO means that the number of licences issued will be reduced to the specified number as existing netsmen leave the fishery.

	Current Status of Action (e.g. 'Not started'; 'Ongoing'; 'Completed'):	Actions planned up to 2016 completed; other actions ongoing.
	If 'Completed', has the Action achieved its objective?	Objectives fulfilled for completed elements.
Action F3:	Description of Action (as submitted in the IP):	<ul> <li>Implement policy on mixed stock fisheries, including:</li> <li>a. Implement new regulatory measures for Severn Estuary (currently under consultation) and NE coast mixed stock fisheries (measures agreed).</li> <li>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.</li> <li>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.</li> <li>d. Conduct further genetic stock assignment studies on catches in mixed stock fisheries.</li> </ul>
	Expected Outcome (as submitted in the IP):	Implementation of regulations to bring all mixed stock fisheries in line with national policy and international guidance.
	Progress on Action to Date (see note above):	a) Completed in 2014, as previously reported.
		b) A new regulatory measure was introduced for the Anglian Coastal Fishery maintaining the reducing NLO to phase out the fishery.
		c) Ongoing; the review of the NE coast beach net fishery is due in 2017.
		d) Genetic analysis has been undertaken to determine the resolution of stock discrimination that can be achieved using Single Nucleotide Polymorphic (SNP) genetic markers. Samples of salmon from north east English rivers are being screened and together with information from Scottish rivers, the resolving power between different rivers and assignment success rates to each river will be determined. The final report is expected in 2016.
		Additional actions:
		An investigation into the possibility of capping catches in the North East coast net fishery (drift nets and T and J beach nets) to prevent exceptionally high landings has been completed. Further action in relation to the management of this fishery will be taken forward as part of the Environment Agency's five-point approach (see section 1.2).

		As part of an initiative to improve the protection of salmon and sea trout in coastal waters, the Environment Agency has undertaken an evidence review of regulatory measures in inshore fisheries for marine species.
	Current Status of Action (e.g. 'Not started'; 'Ongoing'; 'Completed'):	Actions planned up to 2016 completed; other actions ongoing.
	If 'Completed', has the Action achieved its objective?	Objectives achieved for completed elements
Action F4:	Description of Action (as submitted in the IP):	Joint promotion, with stakeholders, of catch and release in rod fisheries.
	Expected Outcome (as submitted in the IP):	Increased uptake of catch and release in rod fisheries.
	Progress on Action to Date (see note above):	The Angling Trust, Salmon and Trout Conservation UK and Atlantic Salmon Trust actively promote best practice catch and release through their websites and social media.
		In response to stocks being at risk, a voluntary carcass tagging scheme was introduced in 2015 on the rivers Ribble and Eden to encourage C&R and limit the take of salmon.
		The C&R message has been promoted by Natural Resources Wales (NRW) via press-releases and in discussions at local fisheries meetings. The views of fisheries interests have recently been sought across Wales via a questionnaire to examine C&R options including changes to angling methods to improve post-release survival.
		C&R in rod fisheries has increased from 10% in 1993 to 78% in 2014. For 2015, C&R is provisionally estimated at 79 %, with an estimated 9,925 fish released.
	Current Status of Action (e.g. 'Not started'; 'Ongoing'; 'Completed'):	Ongoing and on target
	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 (see note above):	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 Environment Agency and Natural Resources Wales, often jointly with Inshore Fisheries and Conservation Authorities (IFCAs) and the police.
	In the north east, the Environment Agency working with the Police caught two gangs illegally gill netting on the River Tyne. In two separate incidents 20 large migratory fish were seized together with nets and a car.
	In regulating the north east T&J net fishery, five licensed netsmen were issued with warning letters for breach of licence conditions.
	To prevent illegal fishing in a vulnerable location on the River Wear in Durham, a portion of the public fishery has been closed after discussion with the Wear Anglers Association and the Freemen of Durham.
	A further preventative initiative is the Christchurch Harbour Fisheries Enforcement Partnership, where a river keeper is co-funded by the Environment Agency and Bournemouth Water to undertake routine patrols.
	Enforcement staff with Natural Resources Wales have reported a number of incidents and prosecutions in Wales in the last 12 months. These have included use of unauthorised nets from beaches across Wales (e.g. Burry Inlet, Gwendreath, Morfa Buchan, Swansea, Llannon); the foul hooking of fish (Loughor), removal of unclean fish, and similar poaching activities (as well as many licence related offences). Where cases have been prosecuted, fines and costs normally total several hundred pounds (over £1,000, in the Llannon case).
	b. Effectiveness of enforcement activities:
	Fisheries enforcement activities are continuing to be reviewed by the Environment Agency to make sure they provide a risk-based, intelligence-led and consistent enforcement service. Central to this is developing a framework that aligns its work with a national intelligence model.

Current Status of Action	Ongoing and on target.
(e.g. 'Not started';	
'Ongoing'; 'Completed'):	
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.

see	king more detailed information, this wil	l not be evaluated by the Review Group.
Action H1:	Description of Action (as submitted in the IP):	Implementing Climate Change Adaptation Plans (produced by both government and private sector) and specifically:
		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.
	Expected Outcome (as submitted in the IP):	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'.
	Progress on Action to Date (see note above):	a. Keeping Rivers Cool (KRC) Project:
		The Woodland Trust now leads on the KRC project. Since last year's update, an additional 55,000 trees have been planted and 27.5 km of fencing erected. From the original pilots on the Ribble, Wye and Usk and Hampshire Avon, the geographic coverage of the project has expanded and now includes the Tyne, Arun, Yare, Bure, Test and Itchen catchments. Funding sources have diversified with the latter two catchments benefitting from Rotary Club funding.

		b. Water Company investment plans:
		The next cycle of water company Water Resources Management Plans is expected to be out for consultation in 2017/18 with an anticipated publication date of 2019. These will consider the impacts of climate change on any new options, including carbon costs, in its cost-effectiveness analysis.
		c. Strategic environment planning frameworks:
		In England and Wales, the 2 <sup>nd</sup> 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.
		As part of the LIFE Natura 2000 Programme for Wales, Natural Resources Wales is developing 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) are also being produced by the LIFE Programme identifying key strategic issues, including diffuse pollution, invasive species, climate change and flow.
		d. Thermal standards:
		Environment Agency and Natural Resources Wales have been contributing to the evidence base producing robust thermal standards for transitional and coastal waters. (See publications: Marine Pollution Bulletin ( <a href="http://nora.nerc.ac.uk/19082/">http://nora.nerc.ac.uk/19082/</a> ) and BEEMS Scientific Advisory Report series 008. Existing standards: p.22: <a href="http://www.wfduk.org/sites/default/files/Media/Environmental%20standards/Environmental%20standards/Environmental%20standards/Environmental%20standards/20phase%202_Final_110309.pdf">http://www.wfduk.org/sites/default/files/Media/Environmental%20standards/Environmental%20standards/20phase%202_Final_110309.pdf</a> )
	Current Status of Action (e.g. 'Not started'; 'Ongoing'; 'Completed'):	Ongoing and on target
	If Completed, has the Action achieved its objective?	
Action H2:	Description of Action (as submitted in the IP):	Improving river connectivity through implementing the 11 RBMPs in England and Wales and specifically by:  a) taking a catchment based approach and removing or
		<ul><li>easing barriers;</li><li>b) implementing new regulations enhancing powers to require fish passage;</li></ul>

	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 (as submitted in the IP):	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 (see note above):	a) Removing or easing barriers
(see note doove).	On England's 42 principal salmon rivers, work was undertaken on eight barriers to fish migration during 2015, improving access for salmon to 280 km of river.
	The Welsh Government/EU funded 'Salmon for Tomorrow Programme' (S4T programme) in Wales (2010-2015) was completed, investing £2m in the delivery of 13 fish passes and 49 fish easements and 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.
	Following the S4T programme, Natural Resources Wales and Afonydd Cymru are seeking future funding sources, including the European Maritime Fisheries Fund (EMFF) to continue delivery of this type of work.
	b) New fish passage regulations
	Defra is developing proposals for new regulations enhancing powers to require fish passage and screening improvements in England; the public consultation process is expected to begin in 2016.
	c) Research on hydropower
	A report has been published assessing the potential impact of hydropower on weir pool features <a href="https://www.gov.uk/government/publications/hydropower-assessment-of-the-impact-on-weir-pool-habitats">https://www.gov.uk/government/publications/hydropower-assessment-of-the-impact-on-weir-pool-habitats</a> .
	A report on the effectiveness of fish screens for smolts and adult eels at hydropower intakes is due to be published in 2016. Research into the effects of in-river hydropower schemes is on-going on the River Frome and Yorkshire Esk.
Current Status of Action (e.g. 'Not started'; 'Ongoing'; 'Completed'):	Ongoing and on target.

	If Completed, has the Action achieved its objective?	
Action H3:	Description of Action (as submitted in the IP):  Expected Outcome (as submitted in the IP):	Provision of appropriate river flows by:  a) Implementing the 11 RBMPs and the Restoring Sustainable Abstraction (RSA) programme (see: <a href="http://www.environment-agency.gov.uk/business/topics/water/32026.aspx">http://www.environment-agency.gov.uk/business/topics/water/32026.aspx</a> ), taking a catchment-based approach; and  b) Taking forward the Water Bill.  • 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 (see note above):	a) RBMPs and Restoring Sustainable Abstraction (RSA) programme:  Since 2008, the RSA programme has prevented damage (or the risk of damage) to the environment associated with 265 unsustainable abstraction licences, of which 77 licences were on England's 42 principal salmon rivers: 50 had a licence condition added (e.g. hands-off flow condition); 18 licences had unused headroom removed (removing the risk of 32,159,219 m³/year being abstracted and impacting the environment); three licences were reduced/revoked in the amount the licence holders could abstract (which resulted in 9,358,261 m³/year being put back into the environment); and six unused licences were revoked (removing the risk of 109,861,147 m³/year being abstracted and impacting the environment). These benefited the following rivers: Itchen, Avon, Teign, Exe, Dart, Erme, Taw, Wyre, Ehen, Eden, Derwent, Yealm and Wye. A further 20 licences relating to salmon rivers will be modified under the RSA programme by 2020.
		Many of the licence changes in Wales have been associated with Natura 2000 rivers (including the rivers Wye and Dee). Some of these changes have included installing fish screens to reduce or prevent the risk of environmental damage.
		b) Taking forward the Water Bill:  The Water Act passed into law in 2014 (as previously reported). Abstraction Reform to create a new adaptive system for managing water resources in the face of

		climate change, water demand and changing environmental standards is being developed. It will rationalise and simplify the abstraction licensing system, facilitate the more efficient use of water resources through licence trading and provide for more sophisticated environmental standards. Implementation is expected in the early 2020s.  New abstraction authorisations are to be implemented between 2016 and 2018. 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 (e.g. 'Not started'; 'Ongoing'; 'Completed'):	Ongoing and on target
	If Completed, has the Action achieved its objective?	
Action H4:	Description of Action (as submitted in the IP):	Taking an integrated catchment management approach to reduce the impact of land use, through implementing the 11 RBMPS and also, specifically:  a) Investigating the sources of sediment (including catchment walkovers) to help identify the most appropriate remedial action;  b) Increasing participation of stakeholders in the
		<ul> <li>b) Increasing participation of stakeholders in the decision making process;</li> <li>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);</li> </ul>
		d) Encouraging uptake of incentive schemes to promote better land management (e.g. agrienvironment 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.

Evported Outcome	Improvements to land management practices and more
Expected Outcome (as submitted in the IP):	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.
Progress on Action to Date (see note above):	a) Sources of sediment:
(see note above).	Investigations and wet-weather walk-overs continue to be instrumental in targeting measures to tackle diffuse water pollution. Under the Water Framework Directive (WFD), for all waterbodies where a WFD element failure is recorded, and where the pressures are known to be from agriculture and rural land management, phosphate accounts for the greatest proportion (56%), followed by physical modification (16%) and fine sediment (11%), based on Cycle 2 data.
	b) & c) Stakeholder engagement:
	Under the CaBA (Catchment Based Approach) there are now 110 Catchment Partnerships operating across England's 87 management catchments, plus the six that cross the border with Wales. These catchment partnerships are hosted by third sector led organisations, supported by Environment Agency catchment coordinators. The catchment partnerships have helped inform the updating of the River Basin Management Plans (2015), which set out water body objectives and a summary of the programme of measures (including for salmon) that will be required to achieve these objectives by 2021 and beyond: https://www.gov.uk/government/collections/river-basin-management-plans-2015.
	Natural England and the Environment Agency are preparing and implementing 37 Natura 2000, 20 Ramsar and 59 SSSI Diffuse Water Pollution Plans across England.
	A one-year trial to better manage conflicts between fisheries and fish-eating birds has been completed. The trial involved the employment of dedicated advisors to help encourage and disseminate best practice with regard to deterrent options and the introduction of a new area-based approach to management. A number of benefits were identified and a final report has been prepared. Subject to confirmation of funding, it is intended to continue this initiative, for a further year in the first instance.
	Natural Resources Wales has 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. The level one qualification provides learners with the opportunity to develop specific skills and on the job experience in river restoration and includes topics such as:

- The legislation relating to river works
- River formation and characteristics
- Invasive non-native species
- Conducting river walkover surveys
- Practical river restoration skills

A multidisciplinary expert group on small water bodies (SWBs) has been established by Cefas to bring together scientists, managers and stakeholders with the following objectives:

- 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.

#### d) Incentive schemes

Catchment Sensitive Farming (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. CSF works in priority catchment areas to address WFD Water Bodies, Protected Areas and SSSIs failing water quality objectives. To date, over 19,300 farm holdings covering 2.6 million hectares have received CSF advice. Evaluation has shown demonstrable reductions in pollutants through CSF work (for more information http://publications.naturalengland.org.uk/publication/6 510716011937792). Between 2007 and 2014, CSF funded £78 million of farm infrastructure improvements to tackle water pollution. This sum was match-funded by the farmers themselves.

An important focus for CSF is now to support delivery of water quality improvements through Countryside Stewardship (CS). CSF Officers are supporting this scheme as part of their advice delivery work, helping ensure water quality outcomes from CS agreements and grants are maximised (see below). In 2015, £11.5

million of CS water grants were funded with matchfunding from farmers.

The new £900m Countryside Stewardship scheme was launched in July 2015 and is jointly run by Natural England, Forestry Commission England and the Rural Payments Agency (RPA) on behalf of Defra. It provides incentives for land managers to look after their environment. The scheme is open to all eligible farmers, woodland owners, foresters and other land managers through a competitive application process. The main priority is to protect and enhance the natural environment, in particular the diversity of wildlife (biodiversity) and water quality. This single scheme supersedes the following schemes which are now closed to new applications: Environmental Stewardship (ES) including organic and upland strands; the English Woodland Grant Scheme (EWGS); and capital grants from the Catchment Sensitive Farming (CSF) programme.

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.

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: <a href="https://gmep.wales/">https://gmep.wales/</a>

e) Regulation, pollution prevention and soil protection:

The Environment Agency and Natural Resources Wales continued to follow up incidents and issues identified in catchment walkovers and WFD data. This included giving advice to farmers (during farm visits and workshops) on pollution prevention and complying with regulations. Material has been developed for Environment Agency and Natural Resources Wales staff on dealing with sediment pollution, prevention and enforcement to improve soil protection. We inspect about 3% of the total number of farms annually.

f) Good Agricultural and Environmental Condition (GAEC):

New cross compliance guidance on soil management has been published for 2015 on minimum soil cover and measures to limit erosion from: cropping practices; livestock management; vehicles, trailers and

	machinery; wind; and post-harvest land and late harvested crops. Penalties will apply for significant erosion events. In addition to the above, new 'Basic Measures' for farmers are currently under consultation.
	g) Local partnerships:
	Across England and Wales there are now 58 Rivers Trusts with >200 professionally employed staff, an income of >£22m and involving >24,000 volunteers. Under Defra's River Improvement Fund over 140 fish passage and habitat schemes delivered improvements for salmon.
	Salmon and Trout Conservation UK are currently undertaking an investigation into the state of fly life and the impact of phosphate and sediment. This could help better target measures to address diffuse pollution.
Current Status of Action (e.g. 'Not started';	Ongoing and on target
'Ongoing'; 'Completed'):	
If Completed, has the Action achieved its objective?	

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3.3 Provide an update on progress against actions relating to Aquaculture, Introductions

and Transfers and Transgenics (Section 4.8 of the Implementation Plan).

lower risk leading to protected genetic integrity and reduced risks from inadvertent introduction of diseases,

non-native invasive species, etc.

(as submitted in the IP):

	Progress on Action to Date	) D. 1. 1. 11. 11.
	(see note above):	a) Regulate salmonid stocking:
		In England, following consultation with stakeholders, the Environment Agency will not consent any further stocking of salmon into rivers that are Special Areas of Conservation (SACs) where salmon is a qualifying feature, or Sites of Special Scientific Interest (SSSIs).
		b) Review of evidence on stocking:
		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.
	Current Status of Action (e.g. 'Not started'; 'Ongoing'; 'Completed'):	Ongoing and on target
	If Completed, has the Action achieved its objective?	
Action A2:	Description of Action (as submitted in the IP):	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.
		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.
		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 'Check, Clean, Dry' campaign; see <a href="http://www.environment-agency.gov.uk/homeandleisure/wildlife/129217.asp">http://www.environment-agency.gov.uk/homeandleisure/wildlife/129217.asp</a> <a href="http://www.environment-agency.gov.uk/homeandleisure/wildlife/129217.asp">http://www.environment-agency.gov.uk/homeandleisure/wildlife/129217.asp</a> <a href="http://www.environment-agency.gov.uk/homeandleisure/wildlife/129217.asp">http://www.environment-agency.gov.uk/homeandleisure/wildlife/129217.asp</a>
		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 (as submitted in the IP):	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	a) Live fish movement regulations:
(see note above):	Completed in 2014/15: the new live fish movement legislation came into force on January 19 <sup>th</sup> (England) and January 20 <sup>th</sup> (Wales) 2015.
	b) EU Regulations:
	Implementation of European Council Regulation No. 708/2007 concerning the Use of Alien and Locally Absent Species in Aquaculture and the Alien and Locally Absent Species in Aquaculture (England and Wales) Regulations 2011, has prevented the introduction of non-native Chinook and Coho salmon into an enclosed stillwater in England following an enquiry by a private fishery.
	c) Preventing the spread of parasite or disease threats:
	A desktop exercise, Operation Alpheus, testing Great Britain's response to a <i>G. Salaris</i> outbreak was undertaken in 2015 by Defra and its supporting agencies.
	In response to reports of fungal infections affecting salmon (and sea trout) across England and Wales in 2015, and in particular in the River Dart and Yorkshire Esk, advice was provided and sampling/monitoring undertaken by the Environment Agency and Natural Resources Wales in collaboration with fisheries interests. On the River Dart, an emergency byelaw was implemented in mid-July, requiring the seine net fishery to release all salmon and close early and rod anglers to practice 100% C&R spinning was also banned to reduce stress on released fish and support the river's spawning escapement.
	The Environment Agency is supporting a three-year study into <i>Saprolegnia</i> with Cardiff University.
	d) Compliance with biosecurity protocols.
	Environment Agency and Natural Resources Wales operational field staff are required to follow the principles of the Defra "check, clean, dry campaign" which is also widely promoted to all water users.

(http://www.nonnativespecies.org/checkcleandry/)

Research conducted by the Angling Trust in partnership with the Environment Agency showed that almost half of anglers surveyed were now classed as 'low risk' – meaning they cleaned and dried equipment every time they returned from fishing – compared to just 21% five years ago.

e) Communication with anglers and water users:

Three mobile phone 'apps' have now been developed for anglers and other water users to help report new occurrences and distribution of invasive non-native species: AquaInvaders (26 aquatic non-native invasive species including 12 fish species)), PlantTracker (collected 14,500 unique records since August 2012) and Sealife Tracker.

They are available in both Android and Apple formats.

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

A five year WFD funded programme to eradicate the highly invasive topmouth gudgeon (*Pseudorasbora parva*) using piscicides has been developed and implemented. Topmouth gudgeon are host to novel parasites and disease which pose a potential risk to native fish species, including salmonids. Of 37 suspected sites in England, 24 were confirmed to hold topmouth gudgeon, of which 20 have been successfully cleared of the species, leaving 4 sites to be treated. The programme is due to be completed in 2017. Salmon catchments protected through the WFD topmouth gudgeon eradication programme include: Rivers Kent, Tamar, Test and Severn. Pending feasible eradication strategies, containment plans are being implemented at two topmouth gudgeaon sites in Wales.

Two other high risk invasive fish species the fathead minnow and black bullhead catfish have also been eradicated from the only known sites containing these species in England.

Rapid response eradications will be delivered to react to novel invasive species should they be detected.

The Environment Agency have formed a 'European Piscicide Working Group' in partnership with the Norwegian Veterinary Institute and Norwegian Environment Agency to provide a strategic approach to the development & delivery of piscicide based management of invasive fish and parasites across Europe.

	Current Status of Action (e.g. 'Not started';	Ongoing and on target
	'Ongoing'; 'Completed'):	
	If Completed, has the Action	
	achieved its objective?	
Action A3:	Description of Action (as submitted in the IP):	a) On-going application of discharge controls and EU restrictions on prohibited substances;
		b) Research on effects of contaminants from fish farms on wild salmon populations.
	Expected Outcome (as submitted in the IP):	Improved water quality and compliance with WFD GES/GEP status.
	Progress on Action to Date (see note above):	a) Discharge controls and prohibited substances:
		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.
		Natural Resources Wales have produced the equivalent statistics for Wales along with other information relating to the 2009-2015 and 2015-2021 River Basin Mangement Planning cycles. (Further information on: https://naturalresources.wales/water/quality/submissio n-of-river-basin-management-plans/?lang=en.)
		b) Contaminants from fish farms:
		A Defra funded research project (SF0256: The impacts of contaminants and temperature on freshwater fish populations) has been completed and will be published shortly
		(http://sciencesearch.defra.gov.uk/Default.aspx?Location=None& Module=FilterSearchNewLook&Completed=0)
		The direct exposure of sensitive salmonid life-stages to the effluent water from an operating fish farm revealed a degree of osmotic imbalance in smolts after transfer to saltwater, but with no associated mortalities. However, there were no significant effects of effluent on maturing female brown trout or subsequent egg survival and development. Although effluent analysis showed compounds related to farm activities (e.g. disinfectants and pharmaceuticals) and others (e.g. phthalates and phenols) that were not present in the water abstracted from the river, the impacts of this effluent on wild salmonids in the river below the fish farm were expected to have been low. There are
		however other fish farms discharging to the study river which could provide scope for an assessment of

combined effluent effect on receiving waters. Furthermore, analysis also revealed a range of other pollutants in the river water (from pesticides to flame retardants) which are also known to affect fish physiology and behaviour, including in salmonids. The project also showed that small increases in water temperature are likely to influence sensitive life-stages;  $\sim 4^{\circ}C$ increase resulted in transitory an osmoregulatory imbalance in salmon smolts and impaired oocyte development in maturing female brown trout, leading to significant mortality during egg fertilization and development. Life cycle modelling indicated that such effects would significantly reduce the size of the salmonid population. The combined effects of climate change (up to ~4°C increase in water temperature above ambient) and contaminants exposure can vary depending on the life cycle stage. For example, a similar exposure (time and concentration) to a flame retardant, tributyl phosphate, had significant sub-lethal effects on the osmoregulatory ability of Atlantic salmon smolts, but not on maturing adult brown trout or subsequent egg survival and development. **Current Status of Action** Ongoing and on target (e.g. 'Not started'; 'Ongoing'; 'Completed'): 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.

New Net Limitation Orders approved for estuary fisheries in the rivers Teign, Dart and Dee and the Anglian coastal fishery.

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.

Existing commitments unchanged.

4.3 Details of any new actions to prohibit fishing for salmon beyond 12 nautical miles.

Statutory instruments prohibiting fishing for salmon in the sea have been consolidated, without change, to make them clearer. (http://www.legislation.gov.uk/uksi/2015/441/contents/made).

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