#### Council



Annual Progress Report on Actions taken under the Implementation Plan for the Calendar Year 2020 – UK-England and Wales

#### Annual Progress Report on Actions taken under the Implementation Plan for the Calendar Year 2020

The Annual Progress Reports allow NASCO to evaluate progress on actions taken by Parties / jurisdictions to implement its internationally agreed Resolutions, Agreements and Guidelines and, consequently, the achievement of their objectives and actions taken in accordance with the Convention. The following information should be provided through the Annual Progress Reports:

- 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.

In completing this Annual Progress Report please refer to the **Guidelines for the Preparation** and Evaluation of NASCO Implementation Plans and for Reporting on Progress, <u>CNL(18)49</u>.

These reports will be reviewed by the Council. Please complete this form and return it to the Secretariat **no later than 1 April 2021**.

Party:	United Kingdom
Jurisdiction / Region:	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 November*).

The draft Implementation Plan for England and Wales is being revised according to the findings of the latest Review, but these revisions are deemed minor and therefore not described in further detail here.

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

Following a lengthy period of consultation and challenge - including a Local Inquiry regulations requiring mandatory catch-and-release (with associated method changes) were approved and introduced on all salmon net and rod fisheries in Wales in January 2020 to protect vulnerable stocks (see Action F3). A 'Plan of Action for Salmon and Sea Trout in Wales' was also launched by NRW in April 2020. The plan was compiled following discussions with stakeholders and Welsh Government and sets out measures and initiatives to address known pressures on salmon and sea trout stocks in order to halt and reverse declines (see: https://naturalresources.wales/about-us/strategies-and-plans/salmon-and-sea-trout-plan-of-action-2020/?lang=en)

#### **2:** Stock status and catches.

# 2.1 Provide a description of any new factors that may affect the abundance of salmon stocks significantly 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.

2020 was marked by the COVID-19 pandemic, which through lockdowns, placed restrictions on rod fishing activity in England and Wales (E&W) during the early part of the season. Investigations have indicated that this did not adversely impact upon our ability to undertake salmon stock assessments. Field activities, enforcement and monitoring programmes undertaken by the Environment Agency, Natural Resources Wales and others were severely impacted by the pandemic, with no meaningful juvenile electrofishing surveys carried out by the former organisations. However, the network of fish counters and traps across E&W used to enumerate returns of adult salmon was, to a large extent, able to continue operating with limited disruption. Similarly, national systems to collect and report returns from net and rod fisheries were unaffected. Based on these sources of information, initial assessment indicates that salmon returns overall in 2020 were slightly better than in recent years. The majority of river stocks in E&W, however, remain in a depleted state when assessed against Conservation Limits (CLs) (e.g. see Action F1). 94% of principal salmon rivers in England and Wales are predicted to be At Risk or Probably At Risk in 5 years' time.

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').

(a) provisional nominal	In-river	Estuarine	Coastal	Total
catch (which may be	3.0	0	0	3.0
subject to revision) for				
2020 (tonnes)				
(b) confirmed nominal	4.0	0.5	0	4.5
catch of salmon for				
2019 (tonnes)				
(c) estimated	0.3	0	0	0.3
unreported catch for				
2020 (tonnes)				
(d) number and	In England and	Wales, 10,672 sa	almon were releas	sed from 11,440
percentage of salmon	caught, which equates to 93% overall catch and release (Based on			
caught and released in	provisional 2020 rod catch data). This reflects a combination of			
recreational fisheries in	voluntary and mandatory catch and release requirements.			
2020				

#### **3:** Implementation Plan Actions.

**3.1 Provide an update on progress on actions relating to the Management of Salmon Fisheries** *(section 2.9 of the Implementation Plan).* 

	Not	e: the reports un	der 'Progress on action to date' should provide a <b>brief overview</b> of each action. For all		
	acti	actions, provide clear and concise quantitative information to demonstrate progress. In circumstances where			
	qua	ntitative informa	tion cannot be provided for a particular action because of its nature, a clear rationale		
	mus	must be given for not providing quantitative information and other information should be provided to enable			
	prog	progress with that action to be evaluated. While referring to additional material (e.g. via links to websites			
	may	assist those see	king more detailed information, this will not be evaluated by the Review Group.		
	Action E1:	tion Description In order to ensure that management decisions are based on up-to-date assessments stock status and composition (E1) in $E \& W$ we will (i) undertake annual assessments			
	F1:	of action	the status of salmon stocks in line with the NASCO Fishery Management Guidance		
		(as submitted	(naragraph 2.5) and (ii) annually review management measures and any need for		
		in the IP):	(paragraph 2.5), and (ii) annuary review management measures and any need for changes / possible new measures (including voluntary and emergency regulatory)		
			changes / possible new measures (including voluntary and emergency regulatory		
			These actions will also ensure that regulated fishing in estuary and river fisheries does		
			not exceed levels that are sustainable and threaten conservation of stocks (F3), and that		
			mixed stock fisheries do not pose unacceptable risks to stocks (F4).		
		Expected	An annual update on stock status for all principal salmon rivers, meeting annual		
		outcome	reporting requirements for ICES and NASCO, and, where the annual review of		
		(as submitted	management measures indicates the need for change, these changes will be		
		in the IP):	implemented.		
		Progress on	The status of salmon stocks was assessed for all 64 of England and Wales'		
		action to	principal salmon rivers to meet annual reporting requirements for ICES and		
		date	NASCO and will be published in the report: Salmon Stocks and Fisheries in		
		(Provide a	<i>England and Wales 2020.</i> The assessment places each rivers' salmon stock into		
		brief overview	one of four categories with the strongest classed as 'Not at Risk' and the		
	with a weakest as 'At Risk', see Figure 1 below		weakest as 'At Risk', see Figure 1, below.		
		quantitative			
<i>measure, or</i> <i>other justified</i> Details of revised management measures are described in F3 and F4		Details of revised management measures are described in F3 and F4.			
		other justified	6		
		evaluation, of	100%		
		progress.			
		Other	80% -		
		malerial (e.g.			
		websile links)			
		will not be evaluated):			
		evalualea).			
			0% + + + + + + + + + + + + + + + + + + +		
			Not at risk Probably not at risk Probably at risk At risk		
	Figure 1. Percentage of principal salmon rivers in each risk category, ass		Figure 1. Percentage of principal salmon rivers in each risk category, assessed		
		against their management objective. for 2006-2020 and as predicted for 202			
			for England and Wales.		
		Current	Ongoing		
		status of			
ļ		action:			

	IC	
	Completed',	
	has the	
	action	
	achieved its	
	objective?	
Action	Description	In order to ensure that assessments of stock status, compliance procedures and
F2:	ofaction	associated Decision Structure make best use of available data and remain fit for
	(as submitted	purpose (F2), E&W will continue to assess ways in which assessment procedures and
	in the IP).	the related Decision Structure can be improved and changes implemented. These
developments will be subject to discussion and review with st		developments will be subject to discussion and review with stakeholders through the
		England Fisheries Group (EFG) and Welsh Fisheries Forum (WFF).
	Expected	Introduction of a more robust stock assessment methodology with clearer and more
	outcome	timely links to management decision-making and regulatory responses.
	(as submitted	
	in the IP):	
	Progress on	A salmon stock assessment working group has been established, which
	action to	includes: The Environment Agency, NRW, the Centre for Environment.
	date	Fisheries and Aquaculture Science (Cefas) and the Game and Wildlife
	(Provide a	Conservation Trust (GWCT) together with a project programme and delivery
	brief overview	schedule. This group and associated sub-groups met regularly throughout 2020
	with a	senedule. This group and associated sub groups met regularly throughout 2020.
	quantitative	Work has been progressed all of the six main workstreams, namely:
	measure, or	1. Quality assurance of the current assessment process
	other justified	2. Review of methods for the setting of Conservation Limits
	evaluation, of	3. Improved adult and invenile monitoring processes
	progress.	4 Consideration of statistical compliance procedures
	Other	5 Improving the Decision Structure
	malerial (e.g.	6 Improved reporting requirements to keep stakeholders engaged and informed
	will not be	o. Improved reporting requirements to keep stakeholders engaged and informed
	evaluated):	In addition to the outputs reported previously, this has included on-going work
		to:
		(i) Develop improved methods to estimate angling exploitation rates for use in
		deriving Returning Stock Estimates from rod catches linking this to flow and
		reported rod effort (i.e. for application on the majority of rivers where the is no
		direct enumeration of adult returns from counters or traps).
		(ii) Critically review current statistical compliance procedures used to evaluate
		performance against CLs and consider modifications or alternative approaches
		- including by reference to approaches used within neighbouring jurisdictions.
(iii) Examine application of the Decision Structure		(iii) Examine application of the Decision Structure and identify address and
		implement future development needs
		improment future development needs.
		Progress on these and other aspects of this project will be reported to
		stakeholder groups during 2021
	Current	Ongoing
	status of	Ongoing (
	status of	
	action:	

	If		
	'Completed'.		
	has the		
	action		
	achieved its		
	objective?		
Action F3:	Description of action ( <i>as submitted</i> <i>in the IP</i> ):	In order to ensure that regulated fishing by estuary and river fisheries does not exceed levels that are sustainable and threaten conservation of stocks (F3) (in line with the NASCO Fishery Management Guidance - paragraph 2.7), E&W will introduce new restrictions on net and rod fisheries in England from the 2019 season, and in Wales from 2020. The measures are based on the projected status of stocks for 2022, as assessed in 2017, and will be in place for 10 years. In England there will be a review of rod and line C&R in 2020. Stock status will continue to be assessed annually.	
		to stocks (F4).	
		For England (measures implemented from 2019):	
		• Closure of all net fisheries for 'at risk' and 'probably at risk' rivers in 2019, based on the projected status of stocks for 2022, as assessed in 2017; this includes all remaining drift net fisheries.	
		• Mandatory C&R by anglers on the rivers that are classed as 'at risk', based on projected status of stocks for 2022, as assessed in 2017, and on rivers that are list as 'recovering rivers' (Annex 2).	
		• Voluntary C&R targets in excess of 90% on rivers classed as 'probably at risk'. Compliance with the C&R target will be reviewed in 2020 with a view to either continuing the voluntary measures or implementing mandatory C&R byelaws if stocks cannot be adequately protected by voluntary means.	
		• Renewal of the 1998 Spring Salmon Byelaws. These protect the larger, early running salmon, and do not introduce any new restrictions.	
		N.B. River Severn emergency byelaws were introduced in 2019 requiring compulsory C&R.	
		N.B. A package of rod fishing byelaws will also be developed for the cross-border rivers Wye and Dee ("Border Rivers (England) byelaws") to complement measures in Wales.	
		For Wales (measures implemented from 2020):	
		• Mandatory C&R fishing of all salmon at all times for rod fisheries in all rivers in Wales.	
		• Introduce partial method prohibitions on bait (worm, prawn and shrimp), use of treble hooks and use of barbed hooks.	
		• Introduce mandatory C&R fishing and method controls on 2 of the 3 cross-border rivers – Dee and Wye in Wales. (N.B. River Severn emergency byelaws were introduced in 2019 requiring compulsory C&R)	
		• Introduce mandatory C&R of salmon at all times in all net fisheries, with arrangements for the last very small fishery under negotiation.	
		Introduce revised start and finish dates for net fishing seasons.	



	If		
	"Completed"		
	beg the		
	achieved its		
	objective?		
ActionDescriptionIn order to ensure that mixed stockF4:of action (as submitted in the IP):In order to ensure that mixed stockActionOf action (F4), E&W will introduce measure reduce fishing mortality to sustainab NASCO Fishery Management Guide		In order to ensure that mixed stock fisheries do not pose unacceptable risks to stocks (F4), E&W will introduce measures to phase out / regulate any remaining MSFs to reduce fishing mortality to sustainable levels in order to conserve stocks (in line with the NASCO Fishery Management Guidance - paragraph 2.7).	
		Any estuarine MSFs will continue to be managed in order to safeguard the weakest contributing stock. Measures include:	
		a. The drift net fishery on the NE coast will close in 2019 and mandatory C&R of salmon will be required in the NE T&J (beach) net and Anglian coastal fisheries.	
		b. The 5-year review of the NLO for net fisheries in the Severn Estuary and the regulatory measures for fixed engines will be conducted and amended as appropriate.	
		c. The 7-year review of the NLO for the remaining nets in the Anglian Coastal Fishery will be conducted and the NLO (licence numbers) and Byelaws (fishing periods and gear) amended as appropriate.	
		d. The 10-year review of the NLO for the remaining T&J (beach) nets in the NE coast fishery will be conducted and the NLO (licence numbers) and Byelaws (fishing periods and gear) amended as appropriate.	
	Expected outcome (as submitted in the IP):	Cessation of netting or introduction of mandatory C&R provisions for salmon in all coastal mixed stock fisheries from 2019.	
	Progress on action to date (Provide a	a. The drift net fishery on the NE was closed in 2019 and mandatory C&R of salmon is now required on the NE T&J (beach) net and Anglian coastal fisheries.	
	brief overview with a quantitative measure, or	b. The Severn Estuary net fishery is subject to an emergency byelaw which has closed the net fisheries and requires compulsory C&R for salmon caught by rod and line. The Severn NLO and rod and net byelaws are out for consultation.	
	other justified evaluation, of	c. The Anglian coast NLO is due for review in 2022.	
	other	d. The NE coast NLO is due for review in 2022.	
	website links) will not be		
	evaluated):		
	Current	Ongoing	
	status of		
	action:		
	If		
	'Completed'		
	has the		

	action	
	achieved its	
	objective?	
Action F5:	Description of action ( <i>as submitted</i> <i>in the IP</i> ):	In order to ensure that conservation of salmon stocks and fishing mortality at sustainable levels is not threatened by lack of support from stakeholders in voluntary conservation measure (F5), E&W will work with stakeholder organisations to promote C&R in rod fisheries through enhanced guidance and communications to increase acceptance of C&R among those anglers currently reluctant to adopt this practice and to achieve required C&R targets.
		season - mandatory C&R in all rivers from 2020; and in England from the 2019 season - mandatory C&R in all rivers classed as 'at risk', with voluntary high C&R rates (>90%) in all stocks classed as 'probably at risk' (based on the projected status of stocks for 2022, as assessed in 2017).
	Expected outcome (as submitted in the IP):	Higher uptake of C&R in rod fisheries resulting in increased numbers of salmon surviving to spawn to facilitate stock recovery.
	Progress on action to date (Provide a brief overview with a quantitative	Based on provisional rod catch data for 2020, the overall C&R rate across England and Wales was 93%, which includes a combination of mandatory and voluntary measures that require C&R. In England, for the rivers requiring mandatory C&R, compliance was 100% and the overall C&R rate was 92%. In Wales, where mandatory C&R applied to all 22 principal rivers, the overall C&R rate was 99%.
	measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):	Action to improve levels of C&R has included: the Angling Trust, Salmon and Trout Conservation and the Atlantic Salmon Trust promoting best practice C&R guidance and producing 'The Gift', Parts 1-3, which are video clips on the best tackle to use to safely C&R Atlantic salmon; planning how to safely land a hooked salmon; and how to safely land, unhook, revive and release a salmon. In 2020, C&R reminders were sent by the Environment Agency to 8,000 salmon rod fishing licence holders in England and Wales who have signed up to receive the e-newsletter.
		In Wales, guidance was issued to all netsmen on C&R. For rod and line anglers, a new web-based guide to C&R was developed in 2019: <i>Look after your salmon</i> - <i>an angler's guide to catch and release</i> , in partnership with the Wye and Usk Foundation, Angling Trust and Environment Agency.
	Current status of action:	Ongoing
	If 'Completed', has the action	
	achieved its objective?	

Action F6:	Description of action (as submitted in the IP):	<ul> <li>In order to ensure that unregulated (illegal) fishing and by-catch in other fisheries do not threaten conservation of stocks (F6), E&amp;W will ensure the effective enforcement of fishery regulations (in line with the NASCO Fishery Management Guidance - paragraph 2.3), and specifically will:</li> <li>a) Continue with prevention, disruption and intervention of illegal fishing, including intelligence-led enforcement and ongoing implementation of a ban on the sale or rod-caught fish and a carcass tagging scheme for net-caught fish.</li> <li>b) Undertake a review of fishery enforcement priorities in England and Wales.</li> <li>c) work with England's ten Inshore Fisheries and Conservation Authorities (IFCAs and Welsh Government to secure better protection for migratory salmonids from</li> </ul>		
	Expected outcome (as submitted	Reduced illegal fishing and by-catch of migratory salmonids in estuaries and nearshore areas, helping to ensure that as many returning salmon as possible survive to contribute to spawning, particularly for stocks in vulnerable rivers.		
	Progress on action to date (Provide a brief overview with a	a) In 2020, enforcement was severely impacted by reduced enforcement, there was a significant rise in seizures in the NE rose from 10 (2019) to 17 in 20 metrics are presented for NE and NW England tog enforcement figures 2016-20 in Figure 3.	COVIE n offenc 20. Saln ether wi	0-19 restrictions. With be reports. Net non enforcement ith national licence
	quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be	NE England fisheries enforcement 2020Section 1 & 2 offences(Gaff/Snatch/stripping eggs))Illegal nets seized - salmonMemex Intel reportsNational Incident Reporting System (NIRS)reports	No. 3 17 103 110+	
	evaluated):	Estuary and coastal boat patrols (16 commercial T netsmen checked and 26 other boats checked)	14	
		NW England fisheries enforcement 2020Anti-poaching patrols.Coastal/licenced netting patrols.Byelaw patrolsNets removedTraps removedFish dealer checksLetters sent out to 5 anglers declaring tohave killed salmon on 100% catch andrelease rivers (currently awaitingresponses)	No. 19 16 81 3 1 2 5	



Figure 3. National rod licence enforcement figures 2016-2020 (N.B. these figures relate to both migratory salmonid and coarse and trout licences. 2020 figures are April to December 2020)

	<ul> <li>b) The Environment Agency has recognised that there is increasing and uneven pressure to ensure our migratory fisheries are protected. The at risk rivers on the SW and NW coasts require ongoing attention and there is an increasing need to regulate fisheries on the east coast as rivers continue to recover in respect to water quality and barrier removal upstream. Overall there is an increasing enforcement need to protect vulnerable salmon populations that sits alongside a decreasing resource to deliver effective operational planning. The ongoing review is looking at how the Environment Agency delivers all fisheries enforcement and this will include salmon.</li> <li>c) The Environment Agency has worked with all 10 Inshore Fisheries Conservation Authorities (IFCAs) during 2020 to ensure the protection of salmon and sea trout in inshore waters. This has included attending IFCA meetings and undertaking joint patrols, with officers of both agencies operating with cross-warrants in some districts. In Wales, NRW are continuing to seek ways of working with Welsh Government marine fisheries to better protect salmon in inshore waters</li> </ul>
Current status of action:	Ongoing
If	
'Completed',	
has the	
action	
achieved its	
objective?	

## **3.2 Provide an update on progress on actions relating to Habitat Protection and Restoration** *(section 3.5 of the Implementation Plan).*

**Note:** the reports under 'Progress on action to date' should provide a **brief overview** of each action. For all actions, provide **clear and concise** quantitative information to demonstrate progress. In circumstances where quantitative information cannot be provided for a particular action because of its nature, a clear rationale must be given for not providing quantitative information and other information should be provided to enable progress with that action to be evaluated. 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 (as submitted in the IP):	To increase salmon's climate change resilience (H1) we will: a) seek to safeguard and create thermal refugia through tree planting/fencing to increase riparian shade in England and Wales (target 50,000 trees and 50km fencing in England by 2024);
		<ul><li>b) work with anglers to minimise the risk to salmon when temperatures are high through supporting voluntary cessation of fishing (e.g. on all principal salmon rivers where water temperatures reach 19°C at 09:00);</li><li>c) ensure that salmonid thermal standards are applied and</li></ul>

		adhered to through regulation on all principal salmon rivers;
		d) aim to establish temperature monitoring networks on principal salmon rivers, representative of regions (target 5 rivers in England by 2024) to research and support management initiatives; and
_		e) investigate potential impacts of future climate change scenarios on salmon and explore and seek to implement possible mitigating measures.
	Expected outcome ( <i>as submitted in the IP</i> ):	Improved salmon survival as a result of actions to moderate the impact of climate change.
	Progress on action to date (Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):	a) In 2020, across England's principal and recovering salmon rivers, 5.4km of tree planting was undertaken (Environment Agency's 'kilometres of river enhanced' database). Under the Keeping Rivers Cool initiative, in 2020, a second generation shade map for England was in development to inform riparian tree planting. Wales' National Forest Programme was officially launched in March 2020 - aiming to provide a network of new and restored woodlands throughout Wales. This will help protect nature, address biodiversity loss and serve as an important carbon store in the context of climate change. The programme has been backed by £5 million of funding in the current year with a further £10 million of Glastir Woodland creation and restoration funding available to increase tree planting across Wales. A related programme to restore ~3,000 hectares of peatland - for carbon storage and other environmental benefits - has also received development funding of £1.5 million.
		b) Three voluntary schemes continue to be in operation in 2020, on the Test, Itchen and Hampshire Avon.
		c) Further work is required to determine the application of thermal standards in the permitting of discharges.
		d) A temperature monitoring network continued to operate on the River Tamar in 2020. In Wales, networks of temperature loggers are in place on a number of principal salmon rivers, including the Wye, Usk, Tywi, Conwy, Clwyd and Dee (via NRW and partner organisations including Welsh Water, Afonydd Cymru and Wye Salmon Association).
		e) In 2020, a report: Achieving Net Zero carbon emissions: a review of the evidence behind carbon offsetting has been drafted, which includes reference to role of freshwater wetlands in carbon offsetting has been drafted and is awaiting publication. Under the new

			Environmental Land Management measures and England Tree Planting Programme, support for the adoption of buffer strips and riparian tree planting includes recognition of the benefit of riparian shading in protecting salmon. NRW, with Cardiff University and Welsh Government (Kess II programme), is supporting PhD research (2018- 2021) into climate effects on salmonids in freshwaters. This aims to utilise long-term data sets - including on temperature, discharge, water quality and juvenile fish abundance - to map and model thermal conditions and salmonid habitat availability across Welsh catchments under future climate scenarios. A key aim is to identify important refuge habitats and guide both protection and potential enhancement actions. Work commissioned by NRW to investigate the extent and causes of recruitment failure of salmon and trout in Wales in 2016 following Storm Desmond, has recently been published: <u>https://onlinelibrary.wiley.com/doi/10.1111/fwb.13609</u> . This examines historic data sets (pre and post event) to identify the extent to which levels of salmonid recruitment in 2016 were unusual, and explores potential causes (e.g. temperature, flow, spawning levels).
	Current statu	us of action:	Ongoing
	action achiev	ed, has the ved its	
	objective?		
Action H2:	Description of action (as submitted in the IP):	<ul> <li>To improve the survival of salmon in estuaries and inshore waters (H2), we will:</li> <li>a) review and report on the factors affecting salmon at sea and the associate evaluation and prioritisation of potential stressors acting in estuaries a inshore waters;</li> <li>b) raise the profile of salmon by supporting the International Year of the Salme (IYS) throughout 2019 (and possibly beyond);</li> <li>c) support research initiatives aimed at improving understanding of salme survival at sea (including: SAMARCH (SAlmonid MAnagament Round) CHannel) 2017-2022 and the Likely Suspects initiative) and the recommendations to realise better protection for salmon in estuaries and sea;</li> <li>d) work with England's ten Inshore Fisheries and Conservation Authoritt (IFCAs) and Welsh Government to secure better protection for migrate salmonids from netting activities;</li> <li>e) secure improvements in water quality through the delivery of the Wa Company National Environment Programmes PR14 (2015-2021) &amp; (2020-2025) and River Basin Management Plans (2015-2021) &amp; (2020-2025)</li> </ul>	

		2027); and		
		<li>f) seek to ensure tidal-lagoons and power stations do not adversely impact on salmon populations.</li>		
	Expected outcome	Improved understanding of the fate of salmon in estuaries and marine waters to inform policy and strengthen management practice in these areas.		
	(as submitted in the IP):	Tangible measures implemented to protect salmon in the marine environment, e.g. byelaws introduced to protect salmon from inshore netting activities.		
	Progress on action to date (Provide a brief overview with a quantitative measure, or	a) Two review reports were completed in 2020: Review of factors regulating Atlantic salmon at sea and their distribution and migration during the marine phase of the life-cycle (Russell, Gillson & Bašić); and, Review of potential stressors of Atlantic salmon during the marine phase of the life cycle (Russell, Gillson, Bašić, Riley & Talks). Publication of the reports in 2020 proved not possible, but the second report will be submitted to a scientific journal in 2021.		
	other justified evaluation, of progress.	b) In 2020, as part of IYS, the Institute of Fisheries Management held a special session on salmon at its 'virtual' Annual Conference.		
	material (e.g. website links) will not be evaluated):	c) A 2020 update on the SAlmonid MAnagement Round the CHannel project 2017-2022 (SAMARCH) has been provided to NASCO's IASRB and a newsletter is available on the project's website. To date, for tracking: 457 salmon and 359 sea trout smolts have been acoustically tagged and 314 sea trout kelts and been acoustically and Data Storage Tagged. 26% of the DSTs have been recovered. For genetics: 2,000 juvenile brown trout samples have been collected from 80 rivers. For salmon assessment: two scientific papers have been published. For policy and stakeholder engagement: the project's findings will be used to better protect salmon in the marine coastal zone including informing IFCA byelaw reviews. NRW has recently commissioned a 'Feasibility study of methods to collect data on the spatial and temporal distribution of diadromous fish in Welsh waters'. This collaborative work is being undertaken by Swansea University, Atlantic Salmon Trust and GWCT and will be delivered (in 2021) as two reports: one examining the feasibility of data collection methods and one proposing the design of a telemetry array covering Marine Energy resource areas in Wales.		
d) In 2020, IFCA byela were introd 2020. These review. All 2017 and sl		d) In 2020, in England, Southern IFCA, Sussex IFCA and Cornwall IFCA byelaws remain under review. New net (and rod) fishery byelaws were introduced on all principal salmon (and sea trout) rivers in Wales in 2020. These byelaws will be in place for 10 years with a 5-year mid-term review. All Net Limitation Orders (NLOs) in Wales were renewed in 2017 and should be in place for another 10 years.		
		e) In England, the most recent published WFD status information for transitional and coastal (TraC) waters is 2019. The results for overall WFD class status were: High Good Moderate Poor Bad		
		Transitional 0% 0% 91.3% 3.8% 4.8%		

		Coastal 0% 0% 98.4% 1.6% 0% The significant reduction in compliance was due to the change of classification rules for chemical assessments.			
		In Wales, WFD cycle 2 interim classifications were undertaken in 2018, which are the most recent. The next update (3-year cycle) is due in 2021. Since the last classification in 2015, transitional water bodies meeting 'good' or 'better' status have decreased by three including one water body which has deteriorated from high to moderate. Only one of 32 transitional water bodies in Wales was classified as 'poor' in 2018, the remainder were 'good' or 'moderate'. Coastal waterbodies (23 in Wales) have generally stayed the same except for the only 'poor' water body improving to 'moderate' status. This means no coastal water bodies were reported as 'poor' or 'bad' in 2018.			
		f) In 2020, to protect migratory salmonids, work continues to inform the Hinkley Point and Sizewell Nuclear Power Station developments. Project TIGER (Tidal Stream Industry Energiser Project) includes refurbishment of a tidal stream turbine in Ramsay Sound, West Wales - to work as a research facility. In addition, NRW are engaged in discussions with a number of developers on environmental impact assessments - including impacts to diadromous fish. These relate to a number of planned projects in Wales, including: the Morlais Tidal Demonstration Zone off Anglesey; a Tidal Stream proposal in Bardsey Sound; a Tidal lagoon proposal in the Dee Estuary; and Mersey Tidal Power development.			
	Current status of action:	Ongoing			
	If 'Completed', has the action achieved its objective?				
Action H3:Description of action (as submittedTo improve fish passage and salmon hab Basin Management Plans, working with Rivers Trust across England and Wales, w		To improve fish passage and salmon habitat (H3) through implementing River Basin Management Plans, working with key partner organisations such as the Rivers Trust across England and Wales, we will aim to:			
	in the IP):	a) identify and prioritise barriers to migration and implement measures to improve fish passage (e.g. passage schemes completed on at least 25 sites in England by 2024 and 35 in Wales in 2020/21);			
		<ul> <li>b) identify and restore degraded salmon habitat (e.g. minimum 50 kilometres in England and a target of 100 kilometres in Wales by 2024);</li> </ul>			
		c) deliver new fish passage regulations; and			
		d) seek to ensure in-river hydropower and tidal power schemes meet defined standards and do not cause deterioration in salmon populations.			





Bevere Weir fish pass on the River Severn



Masbrough Weir fish pass on the River Don

b) In 2020, 12.5km of habitat was enhanced across England's 42 principal salmon rivers (data from the Environment Agency's 'kilometres of river enhanced' database and fish passage group). NRW records indicate that habitat improvement works benefitting salmon were undertaken at 20 sites in Wales in 2020 and totalling at least ~50 km of river. This included an ongoing programme to develop and action 'Fisheries Habitat Restoration Plans' for all (23) principal salmon rivers in Wales – commissioned by NRW and delivered by Afonydd Cymru (£1.1 million funding from Welsh Government).

	Current status of action: If 'Completed', has the action	<ul> <li>c) The government remains committed to delivering fish passage legislation, subject to parliamentary capacity in the House.</li> <li>d) On England's 42 principal salmon rivers, up until the end of 2020, 123 hydropower permits have been issued. No breaches were detected in 2020, though compliance visits were reduced due to COVID-19. Ongoing</li> </ul>
	achieved its objective?	
Action H4:	Description of action	To ensure sufficient flow for salmon through delivering measures to realise sustainable abstraction (H4), we will:
	(as submittea in the IP):	<ul> <li>a) continue the Restoring Sustainable Abstraction (RSA) Programme; to vary abstraction licences to meet requirements of environmental legislation (e.g. (WFD &amp; HD), which includes 13 licences on salmon rivers in England investigated by March 2020);</li> </ul>
		b) review time-limited licences due for renewal on salmon rivers, adjusting them as necessary to make sure they do not allow environmental damage now or in the future;
		c) ensure all permanent abstraction licences shown to be seriously damaging to salmon are reduced and meet environmental standards;
		d) revoke 116 unused licences that are no longer needed, and work with abstractors to reduce 12 under-used licences on salmon rivers in England by 2019. This will prevent increased abstraction from these licences creating new environmental pressures;
		e) regulate all significant abstractions that have been exempt historically to protect the water environment;
		<li>f) secure sufficient flows for salmon through delivering &gt;100 Water Industry National Environmental Programme water resource investigations during PR14 &amp; PR19;</li>
		g) work with abstractors and catchment groups to develop local solutions to existing abstraction problems, as set out in the Water Abstraction Plan 2017 (England). To support this, we will also work with stakeholders to improve available tools through the Future Local Management of Flows initiative 2019-2024; and
		h) ensure hydro and tidal power schemes do not cause deterioration in flows or an increase in migration barriers to the detriment of salmon populations. Where possible ensure flows and artificial spates controlled from impounding reservoirs are managed to optimise salmon production/migration.

	Expected outcome ( <i>as submitted</i> <i>in the IP</i> ):	Improved flows to sustain the various life stages of salmon in freshwater (and the wider ecology of rivers) resulting in improved survival of salmon.
		More sustainable abstraction with more water bodies meeting environmental objectives.
		Under Defra's 25-year Environment Plan and set out in the Water Abstraction Plan ( <u>https://www.gov.uk/government/publications/water-abstraction-plan-</u> <u>2017/water-abstraction-plan</u> ), it is proposed to reduce the damaging abstraction of water from rivers and groundwater, ensuring that by 2021 the proportion of water bodies with enough water to support environmental standards increases from 82% to 90% for surface water bodies and from 72% to 77% for groundwater bodies. In order to meet these goals, the Environment Agency will implement the actions described above.
	Progress on action to date (Provide a brief overview with a quantitative measure, or other justified evaluation, of	a) In England, two abstraction licence on a principal salmon river were reviewed under the RSA programme in 2020. Both were on the Wyre and Calder in Cumbria and Lancashire. In Wales, NRW are progressing discussions with holders of abstraction and impoundment licences within the RSA programme. For example, work on abstraction control (alongside other measures) is continuing in partnership with major industrial water users in the lower reaches of the Afan in order to facilitate salmon passage at significant barriers and improve river and estuarine flow conditions for migration.
	progress. Other material (e.g. website links) will not be evaluated):	b) One time-limited licences on England's principal salmon rivers was reviewed in 2020. This licence was issued with more restrictive conditions on the River Teme, West Midlands. In Wales, NRW continues to review all time-limited licences in accordance with the review schedule.
		c) In England, one licence that has been shown to be seriously damaging to salmon was modified in 2020. This licence was included within the RSA programme in the Wyre and Calder in Cumbria and Lancashire. There are no licences in this category in Wales.
		d) In England, 116 unused licences that are no longer needed have been revoked under phase one of this programme. In 2020, 3 unused licences were revoked, on the Stour Dorset, Dorset in Wessex, Rea Brook, Severn Uplands in West Midlands and the Avon, Warwickshire in West Midlands. This action is not applicable to Wales.
		e) In England, 1,632 applications for significant abstractions to be brought into regulation have been received, which will be determined between 2020 and 2022. It is not yet clear how many of these affect principal salmon catchments. In Wales, the application window for previously exempt abstractors to apply closed on the 31st December 2019; 122 Transitional licence applications were received. NRW is progressing these applications to meet the statutory 31st December 2022 determination deadline. A number of applications fall within rivers designated as Special Areas of Conservation for salmon, amongst other

	species. This is a key part of wider work to manage water resources more effectively and to create a cleaner, healthier water environment.
	f) On England's 42 principal salmon rivers, to secure sufficient flows for salmon under PR14 (2014-2019), 25 water resource investigations were completed by 31 March 2020. In Wales, NRW is progressing discussions with water companies on water resources schemes within the National Environment Programme. 9 sites have been identified for either improvement to flow or sediment management to meet Water Framework Directive requirements for Heavily Modified Water Bodies by 2025.
	g) In England, in 2020, the Environment Agency has continued to develop the hydroecology toolkit project. Further work is needed over the next 2-3 years to enable the toolkit to be fully operational both within and outside of the Environment Agency. COVID-19 and dry weather incidents have caused some delay. This action is not applicable to Wales.
	h) In England, the Environment Agency has a model in place that triggers Kielder releases. It is based on freshwater flow and water temperature in the River Tyne and predicts whether there will be an oxygen deficit in the Tyne estuary. This is used to prompt the request for a release - via the Environment Agency's Hydrology team. There were two requested releases in 2020 one in the spring to aid smolt migration and one in the summer for adults. In Devon, to aid smolt migration, one 'fish bank' reservoir release was made from the Wimbleball dam which supplies the Haddeo, a tributary of the Exe, and two 'fish bank' reservoir releases were made from the Avon dam on the (Devon) Avon. Both were due to extended periods of low flows. In Wales, NRW applies its hydropower guidance when licensing HEP schemes - ensuring residual flows are protective of salmon habitat and flow requirements, and new impoundments are sited and designed to protect upstream and downstream passage. There has been limited further development of new hydro schemes in Wales following changes in financial support for renewable energy schemes, but the focus remains on ensuring that such schemes comply with licence conditions for protecting river flows. Work is continuing by NRW and others to improve understanding of reservoir operation and flow regulation on the Dee, Wye, Usk and Severn in relation to salmon migration. Adaptive management has been put in place at Bala Sluices on the Dee catchment to assist upstream and downstream salmon passage at this structure in response to the findings of an ongoing investigative programme.
Current status of	Ongoing
action:	
Completed',	
has the	

	action achieved its	
	objective?	
ActionDescriptionH5:of action	Description of action	To maximise the production of healthy smolts by improving water quality (H5), we will:
	(as submitted in the IP):	<ul> <li>a) influence River Basin Management Plans to deliver the necessary water quality improvements to protect and enhance salmon populations (England baseline principal salmon water body status (2016): 25% Good/High, 54% Moderate, 19% Poor, 2% Bad; Wales overall minimum target 42% water bodies Good or better status by 2021);</li> </ul>
		<ul> <li>b) deliver &gt;100 Water Industry National Environment Programme water quality investigations on salmon rivers during PR14 (2015-2020) and PR19 (2020- 2025);</li> </ul>
Expected outcome (as submitted in the IP): Progress on action to date (Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):		c) improve conditions for salmon through targeted agri-environment schemes e.g. Catchment Sensitive Farming, Environmental Stewardship, Countryside Stewardship and regulatory approaches such as Farming Rules for Water (or the equivalent initiatives in Wales e.g. Glastir schemes, Farm Business and Sustainable Production grants and New Water regulations ~2020); and
		<ul> <li>d) seek to reduce 'serious environmental incidents' (e.g. from 419 in 2017 in (England). Includes delivery through Wales Land Management Forum sub- group on agricultural pollution and provision of advice by Farming Connect Agricultural Pollution Prevention Campaign).</li> </ul>
	Expected outcome (as submitted in the IP):	Improved water quality to sustain the various life stages of salmon in freshwater (and the wider ecology of rivers) resulting in improved survival of salmon.
	Progress on action to date (Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be	a) In England, the latest water classification results under the WFD are for 2019. They show that water quality is a long way from government ambitions with 14% of all rivers achieving 'good ecological status'. The results in part reflect a change in the methods to classify English water bodies to more accurately report on the presence of certain chemicals that do not break down easily in the environment. In Wales, WFD cycle 2 interim classifications were undertaken in 2018. The next update (3- year cycle) is due in 2021. Since the last classification in 2015, the number of river water bodies meeting 'good' or better status has increased by 32. However, the number of water bodies at 'bad' status has increased by one. Of the 725 river water bodies in Wales (including seven canals and one 'Surface water transfer'), ~91% were classified as 'good' or 'moderate' in 2018.
	evaluated):	b) 39 projects are listed on the Water Industry National Environment Programme (WINEP) tracker on England's principal salmon rivers and are scheduled to be completed during 2021. They include measures to address 'intermittent discharge' and screening.



River Itchen 3mm screen for eels, which also benefits smolts

The National Environment Programme (NEP) PR19 for Wales identifies a number of actions by the lead water company – Dwr Cymru/Welsh Water (DCWW) – to improve environmental quality over the lifetime of the plan (2020-2025). This includes targeting improvements to 418km of rivers over the course of the AMP7 period (to 2025) and a further 128km during AMP8 – to 2030. These figures have been agreed with NRW and the Environment Agency as part of the NEP process, and as such have the status of formal legal obligations. NRW's latest Annual Performance report for DCWW in 2019 awarded a '3 star' or 'good' rating overall including 100% delivery of the AMP programme. Similar performance reporting was carried out on Hafren Dyfrdwy (see: <u>https://naturalresources.wales/evidence-and-data/research-andreports/water-reports/annual-performance-report-for-dwr-cymru-welshwater/?lang=en</u>)

c) To improve conditions for salmon through targeted agri-environment schemes, uptake by farms within England's 42 principal salmon catchments to the end of 2020 was: Catchment Sensitive Farming: 8,728 farms covering 1,872,426 hectares (To Feb. 2021); Countryside Stewardship (water quality grants only) 7,445 farms and Environmental Stewardship 3,698 farms in salmon catchments.

The Wales Land Management Forum (WLMF) allows NRW to engage at a strategic level with organisations that have a direct land management role; e.g. Farmers' Union of Wales (FUW), Country Land and Business Association (CLA), DCWW, Welsh Government, etc. WLMF and a subgroup on agricultural pollution continued to meet during 2020. The broad aim of WLFM is to develop mutual understanding of the root causes of pollution and to identify a spectrum of approaches for driving improvements. The focus has been on slurry and nutrient management alongside water quality issues relating to soil runoff and use of agrichemicals.

Initiatives such as the Farming Connect programme and the Dairy Project have continued to advise and support farmers in tackling agricultural pollution. The latter seeks to visit every dairy farm in Wales

(~1,700); 688 visits had been conducted by April 2020, although visits had to be paused due to the COVID-19 restrictions.

d) In England, the most recent published information on serious pollution incidents is for 2019. In 2019, there were 467 serious pollution incidents, 12% fewer than 2018. Of these 17% attributed to illegal waste activities, 15% waste management activities, 11% water and sewerage companies and 9% farming activities.



Figure 5. All serious pollution incidents (caused by activities that the EA permit and those it does not) by sector in 2019. From report: Regulating for people, the environment and growth, 2019.

In Wales, the frequency of agricultural pollution incidents is a source of concern to NRW. The agricultural industry has been responsible for between 120 to 170 substantiated pollution incidents in recent years. Over 60% of these incidents took place within South West Wales, peaking in January to May. Some 50% of substantiated agricultural pollution incidents have been traced back to dairy farming (incidents involving less than 4% of dairy farms and  $\sim$ 1% of all farms). Even with a steady decline in the last two years, 2020 saw 141 confirmed pollution incidents in Wales, impacting on rivers. On 1 April 2021 new regulations for agricultural pollution will come into force. These will address areas such as when to spread fertiliser and make or store silage. The new regulations will be introduced over the course of 3 years, providing time for farmers to plan for any changes. Ongoing 'Completed',

Current

status of action: If

has the action

	achieved its	
Action	Description	To reduce the risk of salmon stock depletion as a result of predation (H6), we will:
по:	of action (as submitted in the IP):	<ul> <li>a) support the continued issue of licences to control cormorants and goosanders, including the use of area-based licences and the coordination of management actions;</li> </ul>
		<ul> <li>b) complete a preliminary review of the current management of fish-eating birds in Wales and undertake a subsequent full evidence-based review of policy if a decision is made to undertake this;</li> </ul>
		c) explore options for better protecting salmon at sensitive life stages and potential predation 'pinch points' (e.g. around barriers to smolt migration) and introduce new measures where appropriate; and
		d) review changes in the abundance and distribution of potential predator species to facilitate management decisions (e.g. seals and fish-eating birds).
	Expected outcome ( <i>as submitted</i>	Ensuring that licensing policy for the control of fish-eating birds remains fit for purpose and strikes an appropriate balance between safeguarding fish stocks and the conservation status of the birds.
	in the IP):	Better protection of salmon during sensitive life stages through co-ordinated activities at potential 'pinch points'.
	Progress on action to date (Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):	a) In England, in 2020, for cormorants, 375 individual licences and 18 area licences were issued; and for goosanders, 25 individual licences and five area licences were issued. In Wales, 12 catchment-based licences were issued in 2020 for control of cormorants and goosanders.
		b) Fish Eating Bird (FEB) surveys of cormorant and goosander have been carried out in Winter 2020 in the 10 most important salmonid catchments in Wales (work contracted to the British Trust for Ornithology by NRW). Resulting population estimates and other demographics will be used to model and evaluate catchment-specific control scenarios. This work is guided by an FEB external advisory group as part of a wider review of the evidence and policy basis for NRW's regulatory decision-making re. shooting and trapping of all wild birds in Wales.
		c) A review of obstructions across England and Wales is yet to be completed. The River Derwent smolt tracking project, in 2020, tagged 100 smolts to understand the loss rate as they migrate down river and at sea, in particular through Bassenthwaite Lake and in association with a number of weirs and to track marine migrations offshore through the Compass and Sea Monitor arrays. The project is being delivered through a PhD at Glasgow University. A three-year salmon smolt tracking study by NRW and partners on the River Usk (2020 onward), aims to examine the impact of barriers (and their alleviation) on predation losses.
		d) The most recent estimates of the abundance of grey and harbour seals are presented in the annual "Scientific Advice on Matters Related to the

	Management of Seal Populations: 2019", available at SCOS-2019.pdf (st-andrews.ac.uk). Grey seal pup production in 2016 was 8,550 in England and 2,000 in Wales, and trends in population growth from 2014 to 2016 were about +10%. Minimum population estimates for harbour seals were 5,100 in England and <10 in Wales, with a general increasing trend of around 2.8% per annum in south east England (numbers are too low in Wales to report a trend).
	An estimate of the abundance of otters for Britain gives a value of about 11,000 reported in 2018, with a 49% increase since the previous estimate in 1995 (Mathews et al., 2018: MAMMALS-Technical-Summary-FINALNE-Verision-FM2.pdf). The most recent survey for England appears to have been the years 2000-2002 (England Otter Survey Database   NBN Atlas).
	Concerning fish-eating birds, the British Trust for Ornithology (BTO) report (Frost et al., 2020) states that the non-breeding trend for cormorants across England and Wales between 2007/08-2017/18 increased over this period by 37% and 26% respectively, and the estimate of wintering cormorants for the Britain was 62,000. Goosanders showed 7% and 57% increases over the same time period. Red-breasted mergansers showed 38 and 39% decreases. (Frost, T.M., Calbrade, N.A., Birtles, G.A., Mellan, H.J., Hall, C., Robinson, A.E., Wotton, S.R., Balmer, D.E. & Austin, G.E. 2020. Waterbirds in the UK 2018/19: The Wetland Bird Survey. BTO, RSPB and JNCC, in association with WWT. British Trust for Ornithology, Thetford.
Current status of action:	Ongoing
If 'Completed' has the action achieved its objective?	

**3.3 Provide an update on progress on actions relating to Aquaculture, Introductions and Transfers and Transgenics** (section 4.11 of the Implementation Plan).

Note: the reports under 'Progress on action to date' should provide a **brief overview** of each action. For all actions, provide **clear and concise** quantitative information to demonstrate progress. In circumstances where quantitative information cannot be provided for a particular action because of its nature, a clear rationale must be given for not providing quantitative information and other information should be provided to enable progress with that action to be evaluated. 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 (as submitted in the IP):	In response to pressure to increase salmon stocking as a means to support fisheries and/or stocks (A1), we will:
		a) regulate salmon stocking in English rivers by implementing

		the Environment Agency's stocking policy which requires
		the production of a stocking plan;
		b) continue to highlight the evidence about the impacts of salmon stocking; and
		c) not allow salmon stocking in Wales.
		These actions will also address the threat from the introduction and spread of non-native fish, invertebrate species, parasites and diseases, excluding <i>G. salaris</i> .
	Expected outcome (as submitted in the IP):	All authorised stocking operations ensure the protection of genetic integrity and fitness of wild salmon populations.
	Progress on action to date (Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be	<ul> <li>a) Five re-stocking hatcheries operate across England and are required to adhere to the Environment Agency's stocking policy. In 2020, stocking on the Tyne was reduced to 177,541, which is the mitigation stocking for the impact of Kielder Reservoir. There was no estuary mortality mitigation stocking in 2020.</li> <li>b) In 2020, the Environment Agency has continued to</li> </ul>
	evaluated):	highlight the impacts of salmon stocking.
		c) ~6,500 salmon parr/smolts were stocked in the River Usk in Wales in 2020 for experimental purposes. No other salmon stocking was carried out in line with policy.
	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> ):	To prevent the introduction and spread of non-native fish, invertebrate species, parasites and diseases, excluding <i>G. salaris</i> (A2), we will:
		a)implement and enforce Keeping and Introduction of Fish Regulations (in 2015, the Environment Agency issued 5,207);
		b) implement 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;
		c) monitor disease threats (e.g. <i>Saprolegnia</i> and red vent syndrome) and the occurrence of non-native species (e.g. pink salmon) together with providing timely management advice;
		d) implement biosecurity protocols including the 'Check, Clean, Dry' campaign: and
		e) remove non-native fish at high-risk sites and/or applying Import of Live Fish Act (IFLA) or fish movement regulations to take appropriate enforcement action where site owners are not compliant.

Expected outcome	Containment and/or eradication of undesirable non-native fish
(as submitted in the IP):	species and prevention of <i>G. salaris</i> and other parasites and
· · · · · · · · · · · · · · · · · · ·	diseases occurring in England and Wales.
Progress on action to	a) Since the implementation of the Keeping and
date	Introduction of Fish Regulations in 2015, the total number
(Provide a brief overview	of live/active permits issued by the Environment Agency is
with a quantitative	5,652 Site Permits and 410 Supplier Permits (for
measure, or other justified	introductions of non-native fish) up to 31 December 2020.
evaluation, of progress.	
Other material (e.g. website links) will not be evaluated):	b) There have been no applications to culture non-native or locally absent fish species in natural waters in England and Wales in 2020. Defra policy remains to prohibit the culture of any non-native species in sites connected to natural waters.
	c) The ILFA Orders prohibit the keeping of any non-native freshwater fish in England and Wales without a licence. Illegally imported species are routinely seized at Border Inspection posts and the Fish Health Inspectorate (FHI) acts to prevent the introduction and marketing of unlicensed non-native fish from EU sources. Guilty parties face seizure and destruction of their stock and prosecution for serious or repeat offences.
	The FHI carried out 54 investigations relating to suspicions of notifiable disease in 2020, the majority in fishery waters. In addition, 26 fish samples were screened for notifiable diseases on import.
	The only listed disease detected was Koi Herpesvirus: 9 fishery sites were subject to formal controls for this disease.
	These numbers are considerably lower than usual as a result of the impact of COVID-19, reducing numbers of fish movements which in turn reduces disease outbreaks.
	d) All fish farms and ornamental fish import businesses operate in accordance with a biosecurity measures plan, which is aimed at minimising the risk of introduction of pathogens to the business and their spread to other businesses or the wider environment.
	The FHI audits biosecurity measures on aquaculture premises in England and Wales, to ensure that the risk of disease spread between farmed and natural waters is minimised. The FHI provides advice to industry on biosecurity and publicises the wider 'Check, Clean, Dry' campaign which aims to educate all water users on the risks

		of moving non-native species or pathogens between water bodies. FHI also provides guidance on best practice. The Great Britain Invasive Non-native Species Strategy 2015-20 is being reviewed. NRW's Biosecurity Risk Assessments and practices are currently under review. The Angling Trust's 2020 survey of anglers' awareness of invasive species and uptake of biosecurity best practice, indicates improvement in 2020, e.g. from 4,115 responses the proportion of anglers cleaning their equipment after every fishing trip has risen since the launch of Check, Clean, Dry, from 21% in 2011, to 47.2% in 2020. Figure 6. $\int_{0}^{0} \int_{0}^{0} \int_{$
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	
Action A3:	Description of action (as submitted in the IP):	To prevent the introduction and spread of the non-native parasite <i>G. salaris</i> (A3), we will: a) deliver the <i>G. salaris</i> surveillance programme, contingency
		planning and scenario testing/exercises; and
	Expected outcome	<ul> <li>b) implement biosecurity protocols, including ensuring in-river operations comply with best practice and 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)</li> <li>Protection of salmon from impact of <i>G. salaris</i>.</li> </ul>
		received of Sumon from impact of 0, Sului 15.

	(as submitted in the IP):	
	Progress on action to date (Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated):	<ul> <li>a) G. salaris contingency plans continue to be developed and tested. There was no exercise in 2020 with the last exercise carried out in 2019. This highlighted the need to improve communications in the event of an outbreak, and further refinements to the plan to address these issues have been made.</li> <li>b) Wild salmonid samples were taken from 11 river catchments in 2020 and all were negative for the presence of G salaris. There was no suspicion of the presence of the parasite during routine inspections of salmonid farms, and no reports of unusually low levels of natural salmon parr populations that would have triggered specific investigation.</li> </ul>
	Current status of action:	Ongoing
	If 'Completed', has the action achieved its objective?	
Action	Description of action	To prevent adverse environmental impacts of aquaculture on
A4:	(as submitted in the IP):	adjacent water bodies and ecosystems (A4), we will:
		<ul> <li>a) for freshwater aquaculture sites, fish farm discharge controls and EU restrictions on prohibited substances will continue to be applied and any breaches in consents will be reported; and</li> <li>b) for marine aquaculture sites, any proposal must comply with the Aquatic Animal Health (England and Wales) Regulations 2009 and will be subject to consultation with the Environment Agency, Natural England and NRW to protect wild fish populations, including wild salmonids and the aquatic environment.</li> </ul>
	Expected outcome (as submitted in the IP):	Avoidance of deleterious impacts on water quality to ensure waters achieve compliance with WFD GES/GEP status and requirements of protected sites.
	Progress on action to date (Provide a brief overview with a quantitative measure, or other justified evaluation, of progress. Other material (e.g. website links) will not be evaluated): Current status of action:	In the application of fish farm discharge controls across England by the Environment Agency, in 2020, there were 33 consent breaches, in 2019, 98 and 2018, 176 (CCS- NCAD Report). Breaches included: oxygen, ammonia and suspended solids with action required to ensure compliance. In 2020, COVID-19 significantly impacted on the sampling programme.
	If 'Completed', has the action achieved its objective?	<i>o</i> ' <del>o</del>

### 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.		
In Wales, new All Wales Fishing Byelaws came into force 1 January 2020 and Cross-Border		
(Wye and Dee) angling byelaws came into force on the 31 January 2020.		
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.		
N/A		
4.3 Details of any new actions to prohibit fishing for salmon beyond 12 nautical miles.		
N/A		
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.		
N/A		
4.5 Details of any actions taken to implement regulatory measures under Article 13 of the		
Convention including imposition of adequate penalties for violations.		
N/A		
North American Commission Members only:		
4.6 Details of any new measures to minimise bycatches of salmon originating in the rivers of the		
other member.		
4.7 Details of any alteration to fishing patterns that result in the initiation of fishing or increase		
in calches of samon originating in the rivers of another Party except with the consent of the		
latter.		