



CNL(13)47

NASCO Implementation Plan for the period 2013-18

EU – UK (Northern Ireland)

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The main purpose of this Implementation Plan is to demonstrate what actions are being taken by the jurisdiction to implement NASCO Resolutions, Agreements and Guidelines.

Questions in the Implementation Plan refer to the following documents:

- *NASCO Guidelines for Management of Salmon Fisheries, CNL(09)43 (referred to as the 'Fisheries Guidelines');*
- *Minimum Standard for Catch Statistics, CNL(93)51 (referred to as the 'Minimum Standard');*
- *NASCO Guidelines for Protection, Restoration and Enhancement of Atlantic Salmon Habitat, CNL(10)51 (referred to as the 'Habitat Guidelines');*
- *Williamsburg Resolution, CNL(06)48; and*
- *Guidance on Best Management Practices to address impacts of sea lice and escaped farmed salmon on wild salmon stocks (SLG(09)5) (referred to as the 'BMP Guidance').*

Party:	European Union
Jurisdiction/Region:	UK (Northern Ireland)

1. Introduction		
1.1 What are the objectives for the management of wild salmon? (Max 200 words)		
<p>The central aims of management in the DCAL and Loughs Agency area will be to conserve, enhance, restore and manage wild salmon stocks in catchments throughout Northern Ireland (NI) by continuing to:</p> <ol style="list-style-type: none"> 1) Monitor the river or catchment for salmon numbers. 2) Ensure that in most rivers, in most years, sufficient adult salmon are spawning to optimise output of smolts from freshwater. 3) Only allow the exploitation of salmon where there is a sustainable surplus above the conservation limit. 4) Identify and address problems where possible in rivers where target levels are not attained. 		
1.2 What reference points (e.g. conservation limits, management targets or other measures of abundance) are used to assess the status of stocks? (Max 200 words) <i>(Reference: Sections 2.4 and 2.5 of the Fisheries Guidelines)</i>		
<p>Biological reference points, for individual catchments, have been established in both DCAL and Loughs Agency jurisdictions. The status of stocks in the DCAL area are assessed against Conservation Limits (CL's) while Management Targets (MTs) based on CL's are used to manage in real time within the Loughs Agency area. In the DCAL area there are still a number of principle salmon rivers where CLs have not been derived and these are scheduled to be completed during the period of this implementation plan. These rivers include principally the Agivey, Glenarm and Kilkeel rivers.</p> <p>The River Bush salmon population has been monitored since the 1970's and represents the main indicator stock for Northern Ireland. Emigrating smolts and returning adults are monitored at a series of traps on the River Bush and estimates of freshwater and marine survival are determined annually.</p>		
1.3 To provide a baseline for future comparison, what is the current status of stocks relative to the reference points described in 1.2, and how are threatened and endangered stocks identified?		
Category	Description of category and link to reference points	No. rivers
1	All catchment / tributaries attaining CL and MT's in 2011	Faughan, Roe
2	All catchment / tributaries partially attaining targets	Lower Bann,
3	All catchment / tributaries failing to attain MT's	Bush, Glendun, Shimna, Erne, Finn

4	All catchment / tributaries where stock status is unknown	Lagan, Carey / Glenshesk, Glenarm, Glendall, Glenarriff, Glencloy, Ballygalley, Inver, Glynn, Kilroot, Copeland, Woodburn, Threemilewater, Enler, Strangford Blackwater, Quoile, Blackstaff, Ardilea, Moneycarragh, Carrigs, Annalong, Kilkeel, Mourne
<i>Insert additional categories as required</i>		
TOTAL:	29 Catchments DCAL area,	
Additional comments:		
<p>Note that 1) some DCAL area catchments represent cross border rivers with the Republic of Ireland (i.e. Melvin), but only those with the outflow to the sea entirely within the DCAL area are included in this summary 2) In the DCAL area under category 4 rivers named not in bold are considered small coastal catchments of limited or ephemeral production potential for Atlantic salmon and many have limited or no exploitation. 3) The Lower Bann represents the greater Neagh / Bann catchment inclusive of rivers - includes: Agivey, Clady, Main, Sixmile water, Moyola, Ballinderry, Blackwater and Upper Bann.</p>		
1.4 How is stock diversity (e.g. genetics, age composition, run-timing, etc.) taken into account in the management of salmon stocks? (Max 200 words)		
<p>The Loughs Agency initiated a genetics programme in 1999. As a result there is a very good base line data to monitor the populations into the future. This information informs management and played a significant role in the decision to reduce the commercial exploitation of salmon in the Foyle so that currently there no commercial exploitation being undertaken. This work now covers the main salmon producing rivers in the DCAL area as well.</p> <p>Salmon stocks tend towards a relatively low age diversity within the DCAL and Loughs Agency areas. Smolt age is typically 1 or 2 years (mostly 2 years) and the majority of fish spend 1 or 2 years at sea (mostly 1 Sea Winter). Age composition and run timing are routinely monitored on the R Bush. Since 2003 special protection has been given to early season running fish (2 Sea Winter) within DCAL and similar regulations apply in the Loughs Agency area.</p>		
1.5 To provide a baseline for future comparison, what is the current and potential quantity of salmon habitat? (Max 200 words) <i>(Reference: Section 3.1 of the Habitat Guidelines)</i>		
<p>Salmon habitat resources have been assessed on a range of representative rivers in NI and the cross border Loughs Agency area using walk over surveys. This has been reported in the NI FAR report on habitat 2009. During the term of the current NASCO Implementation Plan 2013-2018 it is planned to survey all outstanding channels within the region and to produce an overall inventory of current and potential salmon habitat. We will seek to work with partners in the Republic of Ireland (ROI) to complete these within cross border catchments.</p>		

1.6 What is the current extent of freshwater and marine salmonid aquaculture?	
Number of marine farms	1 marine fish farm (2 sites)
Marine production (tonnes)	292.094 tonnes (2011)
Number of freshwater facilities	22 (trout)
Freshwater production (tonnes)	768.11 tonnes (trout) (2011)
Append one or more maps showing the location of aquaculture facilities and aquaculture free zones in rivers and the sea.(see map at end of report)	
1.7 To aid in the interpretation of this Implementation Plan, have complete data on rivers within the jurisdiction been provided for the NASCO rivers database? <i>Yes/no/comments</i>	
Available information on catchments and where appropriate sub-catchments has been provided and will be updated as new data becomes available.	
2. Fisheries Management:	
2.1 What are the objectives for the management of the fisheries for wild salmon? (Max. 200 words)	
<p>The central aims of management in the DCAL and Loughs Agency area will be</p> <ol style="list-style-type: none"> 1) To monitor the river or catchment for salmon numbers 2) To ensure that in most rivers, in most years, sufficient adult salmon are spawning to optimise output of smolts from freshwater 3) Only where there is a sustained identifiable surplus above this limit, will exploitation of salmon be permitted. 4) Where target levels are not attained to identify and address the problem where possible. 	
2.2 What is the decision-making process for fisheries management, including predetermined decisions taken under different stock conditions (e.g. the stock level at which fisheries are closed)? (Max. 200 words) <i>(This can be answered by providing a flow diagram if this is available.)</i> <i>(Reference: Sections 2.1 and 2.7 of the Fisheries Guidelines)</i>	
<p>There is a current presumption against permission of fisheries on stocks which are below reference points. In the Loughs Agency area this is defined as part of the Foyle Area (Control of Fishing) Regulations 2010 http://www.legislation.gov.uk/nisr/2010/199/regulation/3/made. Legislation will be in place for the DCAL area by 2014 which will prevent commercial netting for salmon until a series of criteria have been met. These criteria are currently being drafted as part of the legislation process and will only permit exploitation on stocks which are above their CL and have an identifiable surplus. A technical panel will meet to determine this and to decide on other restrictions on how the fishery would operate for e.g. quotas etc.</p> <p>Recreational fishing is controlled in legislation and defined as part of the Foyle Area (Control of Fishing) Regulations 2010 http://www.legislation.gov.uk/nisr/2010/199/regulation/3/made. Legislation will be in place for the DCAL area by 2014 which will prevent recreational fishing for salmon except for catch & release until a series of criteria have been met. These criteria are currently being drafted as part of the legislation process and will only permit exploitation on stocks which are above their CL and have an identifiable surplus. A technical panel will meet to determine this and to decide on other restrictions on how the fishery would operate.</p>	

<p>2.3 Are fisheries permitted to operate on salmon stocks that are below their reference point and, if so, how many such fisheries are there and what approach is taken to managing them that still promotes stock rebuilding? <i>(Max 200 words.)</i> <i>(Reference: Section 2.7 of the Fisheries Guidelines)</i></p>										
<p>There is a current presumption against permission of fisheries on stocks which are below reference points and these rivers are listed in section 1.3. Legislation is already in place in the Loughs Agency area (from 1975) to prohibit exploitation (both commercial and recreational) for salmon if management targets have not been met in season. The most recent Loughs Agency regulations are contained in the Foyle Area (Control of Fishing) Regulations 2010 http://www.legislation.gov.uk/nisr/2010/199/regulation/3/made. In the DCAL area legislation is being brought in for 2014 which will prevent commercial salmon fishing and restrict angling on a catch & release basis only until there is a sustainable surplus of fish to be harvested above the CL. Until this legislation is in place no commercial salmon fishing has taken place on the coastal nets in the DCAL area and all DCAL recreational owned fisheries operate a mandatory catch and release for salmon. The DCAL Minister has made a request that other fishery owners operate a voluntary catch and release as well. Figures compiled for 2012 indicate that there has been a good response to the request for catch & release angling, with the 2012 rate exceeding 60% in comparison to around 20% for the previous years. Some habitat improvement works have also been carried out on selected rivers and habitat information gathered will be used to identify areas where such improvement works can be carried out over the period of the plan. This will of course be subject to the necessary agreements and funding being available. Enforcement patrols are carried out on a regular basis to ensure full compliance with existing legislation and to prevent any illegal fishing activity directed at salmon stocks.</p>										
<p>2.4 Are there any mixed-stock salmon fisheries and, if so, (a) how are these defined, (b) what was the mean catch in these fisheries in the last five years and (c) how are they managed to ensure that all the contributing stocks are meeting their conservation objectives? <i>(Max. 300 words in total)</i> <i>(Reference: Section 2.8 of the Fisheries Guidelines)</i></p>										
<p>(a) No (2012-13) Yes prior to 2012</p>										
<p>(a) (b) Number of fish per year listed below;</p> <table border="1" data-bbox="279 1335 935 1406"> <thead> <tr> <th>2008</th> <th>2009</th> <th>2010</th> <th>2011</th> <th>2012</th> </tr> </thead> <tbody> <tr> <td>1885</td> <td>1537</td> <td>1905</td> <td>1110</td> <td>0</td> </tr> </tbody> </table>	2008	2009	2010	2011	2012	1885	1537	1905	1110	0
2008	2009	2010	2011	2012						
1885	1537	1905	1110	0						
<p>(c) The DCAL coastal fishery was identified as a mixed stock salmon fishery. The failure of many local stocks to attain CL has led to the cessation of this mixed-stock commercial fishery, to maximise spawning escapement to local salmon producing rivers.</p>										
<p>2.5 How are socio-economic factors taken into account in making decisions on fisheries management? <i>(Max. 200 words)</i> <i>(Reference: Section 2.9 of the Fisheries Guidelines)</i></p>										
<p>In evaluating management options conservation of the salmon resource takes precedence. Mechanisms exist for consultation with stakeholders, some earlier fishery closures have been accompanied by financial measures.</p>										
<p>2.6 What is the current level of unreported catch and what measures are being taken to reduce this? <i>(Max. 200 words)</i> <i>(Reference: Section 2.2 of the Fisheries Guidelines and the Minimum Standard)</i></p>										
<p>Levels of unreported catch are deemed low (0.2 tonnes for 2012), some may occur in freshwater and estimates are made annually in returns to ICES and NASCO. Enforcement activities are regularly monitored and there is a good communication / co-operation system in place between fisheries agencies (Loughs Agency, Inland Fisheries Ireland (IFI) and DCAL)</p>										

and also with angling clubs / fishery owners which can help identify any illegal fishing activity. Enforcement actions are regularly reported and compiled. Both Loughs Agency and DCAL operate significant levels of protection, with regular patrols being carried out and a 24 hour telephone contact number available to report illegal fishing activity.

2.7 What are the main threats to wild salmon and challenges for management in relation to fisheries, taking into account the Fisheries Guidelines and the specific issues on which action was recommended for this jurisdiction in the Final Report of the Fisheries Management FAR Review Group, (CNL(09)11)?

Threat/ challenge F1	Mixed stock fisheries within DCAL area and Loughs Agency areas.
Threat/ challenge F2	Angling exploitation on fisheries under CL.
Threat/ challenge F3	Exploitation of vulnerable Multi Sea Winter (MSW) stocks.
Threat/ challenge F4	Potential illegal exploitation.

Copy and paste lines to add further threats/challenges which should be labelled F5, F6, etc.

2.8 What actions are planned to address each of the above threats and challenges in the five year period to 2018?

Action F1:	Description of action:	A voluntary cessation of remaining commercial mixed stock commercial salmon fisheries was obtained in 2012 in the DCAL area and discussions are underway to repeat this for the 2013 season. Legislation will be in place for the DCAL area by 2014 which will prevent commercial netting for salmon until a series of criteria have been met. These criteria are currently being drafted as part of the legislation process and will only permit exploitation on stocks which are above their CL and have an identifiable surplus. A technical panel will meet to determine this and to decide on other restrictions on how the fishery would operate for e.g. quotas etc. No commercial salmon licences have been issued since 2010 in the Loughs Agency area and are contained in the Foyle Area (Control of Fishing) Regulations 2010 http://www.legislation.gov.uk/nisr/2010/199/regulation/3/made .
	Planned timescale:	Legislative process is to be complete by 2014 in the DCAL area Legislation is complete within Loughs Agency area.
	Expected outcome:	No commercial mixed stock fishery permitted on stocks which are below CL.
	Approach for monitoring effectiveness & enforcement:	Fishery monitoring, patrolling and enforcement activities to ensure no commercial fishing activity has taken place. Efficacy of conservation measures to be assessed on indicator catchments.
Action F2:	Description of action:	Voluntary catch and release requested in the DCAL area for 2012 and 2013. Compulsory catch & release on salmon rivers in the Public Angling Estate (PAE) in the DCAL area. Figures compiled to date indicate that there has been a good response to

		<p>this request with catch & release for recreational angling 22% in 2011 and around 60% in 2012. Legislation will be in place for the DCAL area by 2014 which will prevent recreational fishing for salmon except for catch & release until a series of criteria have been met. These criteria are currently being drafted as part of the legislation process and will only permit exploitation on stocks which are above their CL and have an identifiable surplus. A technical panel will meet to determine this and to decide on other restrictions on how the fishery would operate.</p> <p>Compulsory catch and release for the River Finn in the Loughs Agency area from 2010. Continued assessment of adult runs each year against derived management targets.</p> <p>Further salmon conservation measures for the Loughs Agency area now under public consultation.</p>
	Planned timescale:	<p>Legislation for the River Finn in the Loughs Agency area was completed in 2010.</p> <p>Further conservation measures for the Loughs Agency area will be in place by 2014 following the outcome of the public consultation exercise.</p> <p>Legislation will be in place for 2014 to require catch & release only for all rivers in the DCAL area except where rivers are identified as having a sustainable surplus above their CL.</p>
	Expected outcome:	Reduce exploitation on stocks below CL
	Approach for monitoring effectiveness & enforcement:	<p>Fishery monitoring, patrolling and enforcement activities</p> <p>Efficacy of conservation measures to be assessed on each catchment</p>
Action F3:	Description of action:	<p>Mandatory catch and release of all rod caught salmon before 1st June in DCAL area to protect MSW stocks which tend to arrive early in the season. Numbers of MSW fish are low compared to historical data collected. A scientific review of the age structure, run timing and the efficacy of early season exploitation controls will be undertaken.</p> <p>Public consultation underway to review exploitation of MSW stocks in the Loughs Agency area.</p>
	Planned timescale:	<p>Legislation requiring compulsory catch & release for MSW stocks in place for DCAL area since 2003. A scientific review of the age structure, run timing and the efficacy of early season exploitation controls will be undertaken during the current implementation plan time period.</p> <p>Loughs Agency conservation measures to be drafted to follow on from the public consultation exercise by 2014.</p>
	Expected outcome:	Reduced exploitation of MSW component.
	Approach for monitoring	Fishery monitoring, patrolling and enforcement activities.

	effectiveness & enforcement:	Efficacy of conservation measures to be assessed on each catchment.
Action F4:	Description of action:	Fishery patrolling and enforcement activities. Efficacy of conservation measures to be assessed on each catchment.
	Planned timescale:	Ongoing
	Expected outcome:	Prevention of illegal activity.
	Approach for monitoring effectiveness & enforcement:	Enforcement activities are regularly monitored and there is a good communication / co-operation system in place between fisheries agencies (Loughs Agency, Inland Fisheries Ireland (IFI) and DCAL) and also with angling clubs / fishery owners which can help identify illegal fishing activity. A 24 hour telephone service is available to report illegal fishing activity and on call staff can respond if required. Enforcement actions are regularly reported and compiled.

Copy and paste lines to add further actions which should be labelled F5, F6, etc.

3. Protection and Restoration of Salmon Habitat:
3.1 How are risks to productive capacity identified and options for restoring degraded or lost salmon habitat prioritised, taking into account the principle of ‘no net loss’ and the need for inventories to provide baseline data? (Max. 200 words) <i>(Reference: Section 3 of the Habitat Guidelines)</i>
<p>DCAL and Loughs Agency are statutory consultees in the planning process and address concerns through the formal mechanism.</p> <p>Risks are identified through statutory consultation processes and multi stakeholder engagement processes, which include planning application, water abstraction, drainage maintenance, alterations to weirs or barriers, approvals to remove river bed materials, etc.</p> <p>Public stakeholder engagement is facilitated by regular Water Framework Directive (WFD) catchment stakeholder liaison groups, facilitated by Northern Ireland Environment Agency (NIEA) and inclusive of all statutory stakeholder bodies. Informal public contacts are also carried out such as meetings with angling clubs, Non-Government Organisations (NGO’s).</p> <p>Interrogation of existing datasets prioritise areas for improvement. Loughs Agency produce Catchment Status Reports annually which are used to aid identification and prioritisation of works.</p> <p>DCAL, Loughs Agency, NIEA and Rivers Agency have funds for improving and restoring degraded salmon habitat in prioritised catchments by agreement.</p> <p>Inter-Agency co-operation is ongoing through SLAs and various working groups to identify habitat problems and areas for improvement / restoration. NIEA and Rivers Agency are co-funders of the Rivers Restoration Centre.</p>

3.2 How are socio-economic factors taken into account in making decisions on salmon habitat management? (Max. 200 words) <i>(Reference: Section 3.9 of the Habitats Guidelines)</i>	
Management of fisheries does not always have primacy over factors affecting salmon habitat including economic development. By statutory consultation DCAL and Loughs Agency seek to ensure that losses are minimised and appropriate mitigation measures implemented on any impact to salmonid habitat.	
3.3 What are the main threats to wild salmon and challenges for management in relation to estuarine and freshwater habitat taking into account the Habitat Guidelines, and the specific issues on which action was recommended for this jurisdiction in the Final Report of the Habitat Protection, Restoration and Enhancement FAR Review Group, (CNL(10)11)?	
Threat/ challenge H1	Over or under development of small scale hydro power in response to need for renewable energy and associated poor management of fish protection screens or fish passes by operators and reduction of salmon habitat in depleted stretches.
Threat/ challenge H2	Drainage and drainage maintenance works on salmon rivers can significantly reduce the amount and quality of suitable habitat available for fish.
Threat/ challenge H3	Environmental impacts on salmon habitat , WFD.
Threat/ challenge H4	Impacts on salmon habitat through loss of or poor connectivity between other river habitat areas.
Threat/ challenge H5	Unauthorised habitat manipulations which remove or destroy salmon habitat in rivers.
Threat/ challenge H6	Lack of an overall inventory of the current and potential salmon habitat to identify habitat related bottlenecks and inform management of where habitat management, refurbishment or enhancement works are required.

Copy and paste lines to add further threats/challenges which should be labelled H5, H6, etc.

3.4 What actions are planned to address each of the above threats and challenges in the five year period to 2018?		
Action H1:	Description of action:	<p>A DCAL panel of fisheries experts assess all applications for hydro electric generation and applies DCAL powers relating to fish passage at weirs and utilising current Environment Agency guidelines. Loughs Agency and DCAL also advise NIEA on issues relating to salmon habitat protection. Hydro electric schemes require statutory licensing by the NIEA and consideration is given to fish passage issues at each site by setting limits on the amount of water that can be abstracted at any site. All associated river works are subject to assessment by DCAL, Loughs Agency and NIEA to ensure protection of the fisheries habitat present at the site.</p> <p>Compliance inspections by the statutory agencies and the assessment of monitoring returns are carried out by the NIEA. Guidance on “Run of River Hydros” is available on the NIEA website. Loughs Agency has commissioned research funded by Interreg IVA into the impact on fisheries of run of river hydros. Loughs Agency also has a set of guidelines for hydro applications received adopted from IFI.</p>

	Planned timescale:	Ongoing
	Expected outcome:	Maximum possible consideration of fisheries and ecological issues for hydro schemes
	Approach for monitoring effectiveness & enforcement:	Post construction assessments by DCAL, Loughs Agency and NIEA staff along with monitoring of compliance with license conditions.
Action H2:	Description of action:	To reduce the impact of drainage/ other works. As statutory consultees DCAL and Loughs Agency provide fisheries advice to review and assess all works proposed. Advice is developed to ensure that that works are carried out in such a manner as to protect habitat present or to mitigate potential impacts and /or seek opportunities to improve fish habitat / passage where possible at the sites where works are carried out.
	Planned timescale:	Ongoing
	Expected outcome:	Ensure sensitive / mitigated engineering solutions To seek opportunities to restore and enhance salmonid habitat within the impacted stretch
	Approach for monitoring effectiveness & enforcement:	Habitat monitored by DCAL staff post works with potential to commission detailed fishery surveys as required.
Action H3:	Description of action:	Under the Water (Northern Ireland) Order 1999, the consent of NIEA is required to discharge any trade or sewage effluent into our waterways or underground strata. This includes any potentially polluting matter (including site drainage liable to contamination) from commercial, industrial or domestic premises to waterways or underground strata. Both DCAL and Loughs Agency are consulted on discharge consent applications and provide fisheries advice on them. NIEA also have responsibility for 1) Silage Slurry and Agricultural Fuel Oil (SSAFO), the EC Nitrates Directive, and Groundwater Authorisations and 2) authorise the deposit, treating, keeping or disposal of controlled waste on any land, or treatment or disposal of controlled waste by means of mobile plant.
	Planned timescale:	Ongoing
	Expected outcome:	Reduction in degradation of salmonid habitat through pollution or waste disposals
	Approach for monitoring effectiveness & enforcement:	Water Framework Directive monitoring programme and the associated programme of measures in place. Statutory monitoring of the environment is also in place to ensure compliance with licence conditions. A 24-hour water pollution incident reporting hotline is in operation. Where licence conditions are not complied with or no consent has been sought for the activity, NIEA staff will take enforcement action as

		required. Patrols / Inspections are regularly carried out to detect illegal activity. Some rivers are designated as salmonid Special Areas of Conservation under the Habitats Directive.
Action H4:	Description of action:	Inter-agency group to co-ordinate effort on river restoration and continuity issues has now been established and an inventory of connectivity issues will be drawn up and co-operation sought to address these impacts subject to funding and the access approvals in an agreed plan. Regular Inter agencies co-operation meetings are held, with stakeholder engagement, to identify, ground truth and address possible connectivity problems. Further research (through IBIS Interreg IVA funding & AFBI / DCAL) / monitoring has been commissioned to investigate specific anthropogenic impacts on connectivity.
	Planned timescale:	Inter-agency group on river restoration & continuity established in 2013 with first meeting in May 2013. Inventory of known connectivity issues to be drawn up by end of December 2013.
	Expected outcome:	To improve connectivity by reducing the number of barriers to fish passage.
	Approach for monitoring effectiveness & enforcement:	Inventory of connectivity issues to be drawn up and co-operation sought to address these impacts subject to funding and the access approvals in an agreed plan. Regular inter agency meetings to review progress of work to date on connectivity issues.
Action H5:	Description of action:	Protection against illegal impacts on salmonid habitat by carrying out regular patrols to identify and investigate breaches of fishery legislation e.g. removal of spawning gravels, unauthorised removal of material from the river bed etc. Routine patrols of rivers are carried out by enforcement staff from DCAL and the Loughs Agency and regular liaison / communication with angling clubs and the general public to identify habitat impacts. To create a public awareness campaign on the impacts of the removal of salmon habitat on salmon stocks. Consents to remove material from the river bed require authorisation from the statutory authorities.
	Planned timescale:	Ongoing and to agree a public awareness campaign for the period of the current implementation plan.
	Expected outcome:	Reduction in illegal alterations of salmonid habitat. Increase the education of landowners on the negative impacts of the loss of habitat for salmon stocks.
	Approach for monitoring effectiveness & enforcement:	Monitoring and standard fishery patrols and regular reporting of incidents and compilation of enforcement actions.

Action H6:	Description of action:	To survey all outstanding principle salmon rivers within the region and to produce an overall inventory of current and potential salmon habitat. We will seek to work with partners in the Republic of Ireland (ROI) to complete these within cross border catchments.
	Planned timescale	To be completed by 2018
	Expected outcome:	To have surveyed all the major salmon rivers within NI and to have salmon habitat inventory data on a GIS database. This will help to assess the quality and quantity of salmon habitat and identify habitat bottlenecks. This information will then be used to inform where habitat management, refurbishment and enhancement works are required.
	Approach for monitoring	Create a schedule of rivers to be completed and to review progress regularly with other stakeholders.

Copy and paste lines to add further actions which should be labelled H5, H6, etc

4. Management of Aquaculture, Introductions and Transfers, and Transgenics:
4.1 What is the approach for determining the location of aquaculture facilities in (a) freshwater and (b) marine environments to minimise the risks to wild salmon stocks? (Max. 200 words for each)
<p>One salmon farm exists within this jurisdiction at 2 marine sites. There are no production facilities for salmon juveniles in freshwater.</p> <p>(a) No aquaculture facilities for farmed salmon exist within this jurisdiction. The Licensing and authorisation process outlined in part (b) below also applies for any freshwater facility.</p>
<p>(b)</p> <p>It is an offence to operate any fish farm without a Fish Culture Licence (FCL) granted by the Department of Agriculture & Rural Development (DARD) or to breach any conditions of the licence.</p> <p>The application process involves direct consultation with interested parties and public consultation by way of newspaper advertisement. This procedure also involves the completion of a prior “appropriate assessment” in order to comply with Article 6(3) of the Habitats Directive.</p> <p>An authorisation is required under the <u>Aquatic Animal Health Regulations (Northern Ireland) 2009</u>. Prior to granting authorisation Fish Health Inspectorate inspect the facility for bio-security and containment. These are also part of the annual inspection regime. The Authorisation includes conditions to ensure good bio-security, risk based surveillance and movement and mortality recording and reporting.</p> <p>The <u>Water (Northern Ireland) Order 1999</u>, makes it an offence to operate a fin fish farm that includes feeding and/or treating the fish with chemicals except in accordance with the terms and conditions of a discharge consent granted by the NIEA. This consent forms part of the application process for a FCL.</p>

Applications for a FCL for a marine fin fish farm is also subject to the provisions of the Environmental Impact Assessment (Fish Farming in Marine Waters) Regulations 2007.

4.2 What progress can be demonstrated towards the achievement of the international goals for effective sea lice management such that there is no increase in sea lice loads or lice-induced mortality of wild stocks attributable to sea lice? (Max. 200 words)
(Reference: BMP Guidance)

Sea lice are monitored in the farm environment, results are depicted below and these are taken at the time of harvest.. The organic production model in combination with local environmental conditions (strong tidal streams) negate the requirement for sea lice treatment. There has been no historic requirement to treat lice as infestations remain very low and there is a strict monitoring regime in place by DARD to assess this. Results of the most recent inspections (see below) indicate that Northern Ireland’s one salmon farm is unlikely to have contributed significantly to sea lice loads of wild stocks in this period.

Date	No. of Lice Found	Max. No. of lice on a fish	Approximate No. of fish inspected
18/01/2012	64	1	1000
02/02/2012	29	1	900
07/03/2012	39	2	850
23/05/2012	9	1	420
13/06/2012	28	2	600
18/07/2012	14	1	900
01/08/2012	8	1	230
19/09/2012	16	2	464
03/10/2012	10	1	370
21/11/2012	16	1	484
05/12/2012	10	1	635

4.3 What progress can be demonstrated towards the achievement of the international goals for ensuring 100% containment in (a) freshwater and (b) marine aquaculture facilities? (Max. 200 words each)
(Reference: BMP Guidance)

Bio-security is a priority of the consenting authority and a requirement prior to granting of an Aquatic Animal Health Authorisation. DARD’s policy is to reduce opportunity for escape by ensuring good bio-security is in place. Bio-security and other conditions on the Aquatic Animal Health Authorisation and FCL are checked as part of an annual inspection programme.

An Escapes Monitoring Programme is in place, carried out by Agri Food Bioscience Institute (AFBI), which routinely examines the numbers of farm origin salmon in UK (N. Ireland) through both coastal and freshwater monitoring programmes. In freshwater, escaped salmon are monitored at the adult salmon trap at the River Bush Salmon Station. Escapees are identified through visual inspection of morphological characteristics typical of farm origin fish including; fin ray defects, gill cover shortening and heavy pigmentation. Data has also historically been collected from commercial fishermen on presumed escaped farmed salmon in the UK (NI) coastal fishery, although at present this fishery is closed.

A DARD funded project investigating the genetic intragression of farmed genes into wild fish has commenced and results will be known in 2014.

- (a) There is no aquaculture facility within this jurisdiction for farmed salmon in freshwater stage of the life cycle. The 22 facilities licensed by DARD have physical

containment measures as part of their consent conditions, which include grids / gratings and other barriers and are subject to inspection by fishery officers. Bio security measures are compulsory and must be in place and inspected prior to granting any authorisation by DARD under the Aquatic Animal Health Regulations and are subject to ongoing routine inspections.

- (b) In respect of marine farms, the Aquatic Animal Health Authorisation and Fish Culture License procedures and inspections are the same as for the freshwater facilities.

DARD monitor and inspect all salmon smolt imports to ensure there are no fish spillages or escapes. These inspections are documented by the Fish Health Inspectorate. DARD monitor harvest operations monthly to verify that fish escapes or spillages do not occur.

The site operators have an enforced policy of no cage towing between sites, specifically to negate risks of fish escapes. All Cage nets are subject to a maintenance programme which addresses fouling, and protocol requires these to be individually removed annually and cleaned before reuse. To prevent possibility of fish being washed out, all cages containing fish are enclosed with netting above the water surface.

In addition the operators have contracted commercial divers regularly on site to inspect and report on the structural integrity of fish holding units. A maintenance schedule is appropriately logged and checked by the consenting authority.

Legal protection given to salmon in the sea present difficult contingency arrangements for escapees, however arrangements exist to recover fish from the marine environment and the adjacent river in the event of a major escape. An Escapes Monitoring Programme is in place, carried out by Agri Food Bioscience Institute (AFBI), which routinely examines the numbers of farm origin salmon in UK (N. Ireland) through both coastal and freshwater monitoring programmes. In freshwater, escaped salmon are monitored at the adult salmon trap at the River Bush Salmon Station and details are shown below.

Year	No. escapees	% escapees
2003	2	0.28
2004	3	0.34
2005	0	0
2006	1	0.09
2007	0	0
2008	0	0
2009	0	0
2010	0	0
2011	1	0.18
2012	0	0

<p>4.4 What progress has been made to implement NASCO guidance on introductions, transfers and stocking? (Max. 200 words) (Reference: Articles 5 and 6 and Annex 4 of the Williamsburg Resolution)</p>
<p>Salmon enhancement stocking in both Loughs Agency and DCAL jurisdictions is conducted using local stocks where possible in compliance with the Williamsburg Resolution. Stocking of non-indigenous salmon fish species is prohibited. Introduction of salmon from outside NI is controlled under EU and domestic fish health legislation by DARD.</p>
<p>4.5 What is the policy/strategy on use of transgenic salmon? (Max. 200 words) (Reference: Article 7 and Annex 5 of the Williamsburg Resolution)</p>
<p>Northern Ireland has one salmon farm for the production of fish for human consumption. It abides by organic principles and adheres to the International Salmon Farmers Association (ISFA) adopted 'Policy on Transgenic Salmon', which states: "In accordance with sound environmental practices, the ISFA firmly rejects transgenic salmon production. In accordance with Article 7 there is a strong presumption against their use in NI. No applications have been received by DARD requesting permission to transfer any transgenic salmon into NI. Any application would be subject to existing process which includes consultation and appropriate assessment. Any consent would be based on NASCO principles and advice with regards to transgenic salmon.</p>
<p>4.6 What measures are in place to prevent the introduction or further spread of <i>Gyrodactylus salaris</i>? (Max. 200 words)</p>
<p>NI has approved "national measures" under Article 43 of Council Directive 2006/88/EC for GS.</p> <p>Any movements into Northern Ireland of species listed as susceptible to <i>Gyrodactylus salaris</i> (GS) must be accompanied by appropriate health certification declaring the place of origin to be disease free for GS. All consignments are inspected.</p> <p>Exports from Northern Ireland require health certification following inspection of the consignment. Movements for further processing before human consumption also require health certification.</p> <p>Northern Ireland's salmon and trout farms are subject to an annual sampling / testing regime in respect of listed diseases and risk-based surveillance under the Aquatic Animal Health Regulations (NI) 2009. Testing is carried out by the AFBI in accordance with EU guidelines and the OIE Manual.</p> <p>In the event of identification of GS in either farmed or wild freshwater fish stocks, DARD's objective is to take action to contain and, if possible, eradicate the parasite.</p> <p>A Contingency Plan is in place for Northern Ireland and a cross-border contingency plan for GS is being prepared. The Plan sets out responsibilities and actions to be taken in the event of suspicion or a confirmed outbreak in the cross-border area and ensures prompt communications and actions will take place.</p>

4.7 What are the main threats to wild salmon and challenges for management in relation to aquaculture, introductions and transfers, and transgenics, taking into account the Williamsburg Resolution, the BMP Guidance and specific issues on which action was recommended for this jurisdiction in the Final Report of the Aquaculture FAR Review Group, (CNL(11)11)?	
Threat/ Challenge A1	The Impact of aquaculture, introductions, transfers and transgenics on wild salmon stocks in Northern Ireland are not well known to date.
Threat/ challenge A2	
Threat/ challenge A3	
Threat/ challenge A4	

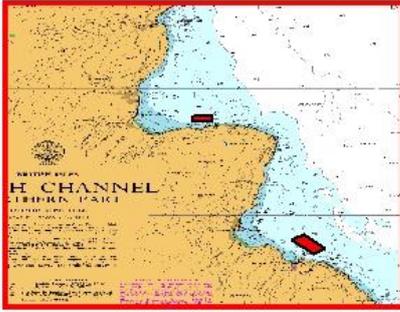
Copy and paste lines to add further threats/challenges which should be labelled A5, A6, etc.

4.8 What actions are planned to address each of the above threats and challenges in the five year period to 2018?		
Action A1:	Description of action:	Initiation of a research project by DARD aimed to; a) monitor sea lice levels in a single wild Northern Irish salmon stock (River Bush), and b) determine the level of genetic introgression of escaped aquaculture salmon on the wild salmon stocks of Northern Ireland.
	Planned timescale:	01/04/2012-31/03/2014
	Expected outcome:	An assessment of sea lice levels in a wild salmon stock in Northern Ireland. An assessment of the level of genetic introgression from salmon of aquaculture origin in the wild stocks in Northern Ireland
	Approach for monitoring effectiveness:	Further would be considered if significant levels of escapees and genetic introgression occur
Action A2:	Description of action:	
	Planned timescale:	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	
Action A3:	Description of action:	
	Planned timescale:	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	

Action A4:	Description of action:	
	Planned timescale:	
	Expected outcome:	
	Approach for monitoring effectiveness & enforcement:	

Copy and paste lines to add further actions which should be labelled A5, A6, etc

Northern Ireland Salmonid Aquaculture Sites



KEY

Sites

- Terrestrial Salmonid Sites
- Marine Salmonid Sites

Ireland

Region

- Northern Ireland
- Republic of Ireland
- Loughs Agency

