



CNL(17)63

NASCO Implementation Plan for the period 2013-18

EU - UK (Northern Ireland)

Updated December 2017

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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').*

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

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| 1. Introduction |
| 1.1 What are the objectives for the management of wild salmon? (Max 200 words) |
| The central aims of management in the Department of Agriculture, Environment and Rural Affairs (DAERA) and Loughs Agency area will be to conserve, enhance, restore and manage wild salmon stocks in catchments throughout Northern Ireland (NI) by continuing to: 1) Monitor the primary salmon river or catchment for salmon numbers 2) Ensure that in most primary salmon 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 primary salmon rivers where the number of returning adults is consistently below management targets. |
| 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> |
| Biological reference points, for individual catchments, have been established in both DAERA and Loughs Agency jurisdictions. The status of stocks in the DAERA 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 DAERA area all major salmon rivers have now CLs determined. The River Bush salmon population has been monitored since the 1970's and represents the long term index river for NI. 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. |

| 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? | | |
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| 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 NI | |
| Additional comments: | | |
| <p>Note that 1) some DAERA area catchments represent cross border rivers with the Republic of Ireland (e.g. Melvin, Fane), but only those with the outflow to the sea entirely within NI are included in this summary 2) In the Northern Ireland 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 DAERA area as well.</p> <p>Salmon stocks tend towards a relatively low age diversity within the DAERA 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 DAERA and similar regulations apply in the Loughs Agency area.</p> | | |

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| 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> | |
| Salmon habitat surveys have been completed on all the primary salmon rivers in NI and the cross border Loughs Agency area using walk over surveys. We will seek to work with partners in the Republic of Ireland (ROI) to refresh and update habitat inventory of primary salmon catchments as resources permit. | |
| 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. | |

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| 2. Fisheries Management: | |
| 2.1 What are the objectives for the management of the fisheries for wild salmon? <i>(Max. 200 words)</i> | |
| The central aims of management in the Department of Agriculture, Environment and Rural Affairs (DAERA) and Loughs Agency area will be to conserve, enhance, restore and manage wild salmon stocks in catchments throughout NI by continuing to: 1) Monitor the primary salmon river or catchment for salmon numbers 2) Ensure that in most primary salmon 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 primary salmon rivers where the number of returning adults is consistently below management targets. | |
| 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> | |
| 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 was introduced for the DAERA area in 2014 which will prevent commercial netting for salmon until a series of criteria have been met. This may only allow consideration of exploitation where all affected stocks are above their CL and have a sufficient identifiable surplus. | |

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| <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/nistr/2010/199/regulation/3/made. Legislation was put in place for the DAERA area in 2014 which will prevent recreational fishing for salmon except for catch & release until a series of criteria have been met. This will only permit exploitation on stocks which are above their CL and have an identifiable surplus.</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 provision in legislation that there is no exploitation on stocks which are below MTs and this applies to both commercial and recreational fisheries.</p> <p>Legislation has been in place in the Loughs Agency area (from 1975) to prohibit exploitation 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/nistr/2010/199/regulation/3/made.</p> <p>In the DAERA area legislation was put in place in 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. 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) None from 2012</p> |
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| <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 annual average), 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 DAERA) and also with angling clubs / fishery owners which can help identify any illegal</p> |

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| fishing activity. Enforcement actions are regularly reported and compiled. Both Loughs Agency and DAERA 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 | Management and control of mixed stock commercial fisheries |
| Threat/ challenge F2 | Management and control of recreational fisheries |
| Threat/ challenge F3 | Management and protection of vulnerable Multi Sea Winter (MSW) stocks |
| Threat/ challenge F4 | Setting of Conservation limits and Management targets for primary salmon rivers in Northern Ireland |
| Threat/ challenge F5 | Long Term Monitoring of Salmon Stocks in an Index River (R Bush) for Northern Ireland |
| Threat/ challenge F6 | Fin Clipping and Coded Wire tagging of reared salmon |
| Threat/ challenge F7 | Assessment of Inshore and Riverine survival of salmon smolts |
| Threat/ challenge F8 | Improving recreational catch returns and statistics |
| Threat/ challenge F9 | Monitoring recruitment of 0+ age class in primary salmon rivers in Northern Ireland |
| Threat/ challenge F10 | Fishery Protection and Enforcement Activities |

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

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| 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: | Management and control of mixed stock commercial fisheries |
| | Planned timescale: | Within the current plan period 2013-2018 |
| | Expected outcome: | Legislation in place preventing any commercial mixed stock fishery when any contributing stock is below MT. |
| | Approach for monitoring effectiveness & enforcement: | Compliance against CIs to be assessed annually for all primary salmon catchments. Fishery monitoring, patrolling and enforcement activities to detect, disrupt and deter any illegal harvesting of salmon in marine or freshwater waters. |
| Action F2: | Description of action: | Management and control of recreational fisheries |
| | Planned timescale: | Within the current plan period 2013-2018 |
| | Expected outcome: | Legislation in place to prevent the recreational exploitation on primary salmon rivers where stocks are below MT |

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| | Approach for monitoring effectiveness & enforcement: | Compliance against CIs to be assessed annually for all primary salmon catchments. Fishery monitoring, patrolling and enforcement activities to detect, disrupt and deter any illegal harvesting of salmon on primary salmon rivers that are operating under catch & release only. |
| Action F3: | Description of action: | Management and protection of vulnerable MSW stocks. |
| | Planned timescale: | Legislation requiring compulsory catch & release for MSW stocks in place for DAERA area since 2003. Loughs Agency conservation measures to be drafted to follow on from the public consultation exercise by 2014. |
| | Expected outcome: | Reduced exploitation and mortality of MSW component. |
| | Approach for monitoring effectiveness & enforcement: | Compliance against CIs to be assessed annually for all primary salmon catchments. 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. Fishery monitoring, patrolling and enforcement activities to detect, disrupt and deter any illegal harvesting of salmon on primary salmon rivers that are operating under catch & release only. |
| Action F4: | Description of action: | Setting & monitoring conservation limits and management targets for salmon rivers in NI. |
| | Planned timescale: | Within the current plan period 2013-2018 |
| | Expected outcome: | To set an MT and provide an annual assessment of compliance with CLs for all primary salmon rivers to assist with the effective management and exploitation of those stocks. |
| | Approach for monitoring effectiveness & enforcement: | Compliance against CIs to be assessed annually for all primary salmon catchments. Catch and release only for rivers not attaining their MT. Fishery monitoring, patrolling and enforcement activities to detect, disrupt and deter any illegal harvesting of salmon on primary salmon rivers that are operating under catch & release only. |
| Action F5: | Description of action: | Long Term Monitoring of Salmon Stocks in an Index River (R Bush) for NI |
| | Planned timescale: | Already in place since 1972 |
| | Expected outcome: | Long term dataset of adult returns, smolt migration, stock recruitment data, freshwater survival, marine survival, biological characteristics of the R Bush stock. |
| | Approach for monitoring effectiveness & | Full time adult trap in place and smolt trap for smolt run period, an annual programme of juvenile fry surveys of the main spawning areas and an annual assessment of both |

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| | enforcement: | freshwater and marine survival for R Bush stocks. Data collected provided to the public once completed. Fishery monitoring, patrolling and enforcement activities to detect, disrupt and deter any illegal harvesting of salmon on primary salmon rivers that are operating under catch & release only. |
| Action F6: | Description of action: | Fin-clipping and coded-wire tagging of reared salmon. |
| | Planned timescale: | Already in place |
| | Expected outcome: | All reared salmon to be readily identified from wild fish and removed to be incorporated into the captive breeding programme. |
| | Approach for monitoring effectiveness & enforcement: | Full time adult trap in place at the River Bush Salmon Station and every returning adult assessed for fin clip marking. |
| Action F7: | Description of action: | Assessment of riverine and inshore survival of salmon smolts. |
| | Planned timescale: | Studies to be commenced within the current plan period 2013-2018 |
| | Expected outcome: | Acoustic telemetry studies of smolts on the River Bush and other target catchments to assess riverine mortality and identify possible areas of significant losses. |
| | Approach for monitoring effectiveness & enforcement: | Programmes of tagged smolts actively monitored in freshwater and into the marine environment using automatic listening stations. Reports completed on each study carried out. |
| Action F8: | Description of action: | Improving recreational catch returns and statistics |
| | Planned timescale: | To be commenced within the current plan period 2013-2018 |
| | Expected outcome: | Development of electronic recreational licencing and catch return system. |
| | Approach for monitoring effectiveness & enforcement: | Monitoring use of digital licensing system and any trends in the number of catch returns completed by recreational anglers. |
| Action F9: | Description of action: | Monitor recruitment of 0+ age class salmon in all primary salmon rivers in NI. |
| | Planned timescale: | To be commenced within the current plan period 2013-2018 |
| | Expected outcome: | Annual monitoring of 0+ recruitment in all primary salmon rivers. |
| | Approach for monitoring effectiveness & enforcement: | Annual electrofishing programme carried out each year with results assessed to assist with reviewing compliance with CLs for primary salmon rivers. |
| Action F10: | Description of action: | Fishery protection and enforcement activities |
| | Planned timescale: | Already commenced |

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| | Expected outcome: | To protect salmon stocks by detecting, deterring and disrupting any illegal activity directed at damaging or removing salmon stocks |
| | Approach for monitoring effectiveness & enforcement: | Enforcement activities are recorded and the number of patrols / enforcement outcomes are compiled and regularly reported. There is a good communication / co-operation system in place between fisheries agencies (Loughs Agency, Inland Fisheries Ireland (IFI) and DAERA) 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. |

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) (Reference: Section 3 of the Habitat Guidelines)

DAERA and Loughs Agency are statutory consultees in the planning process and address concerns through the formal mechanism.

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.

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).

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.

DAERA, Loughs Agency, NIEA and Rivers Agency have funds for improving and restoring degraded salmon habitat in prioritised catchments by agreement.

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.

3.2 How are socio-economic factors taken into account in making decisions on salmon habitat management? (Max. 200 words) (Reference: Section 3.9 of the Habitats Guidelines)

Management of fisheries does not always have primacy over factors affecting salmon habitat including economic development. By statutory consultation DAERA and Loughs Agency seek to ensure that losses are minimised and appropriate mitigation measures implemented on any impact to salmonid habitat.

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| 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 | Licensing, best practice advice and monitoring of hydro electric installations |
| Threat/ challenge H2 | Mitigating the impact of drainage schemes on salmon habitat |
| Threat/ challenge H3 | Management and Control of water quality in salmon producing rivers in Northern Ireland |
| Threat/ challenge H4 | To improve the connectivity of salmon rivers in NI |
| Threat/ challenge H5 | To protect salmon rivers against illegal impacts |
| Threat/ challenge H6 | To produce an overall inventory of current and potential salmon habitat on primary salmon rivers in NI |
| Threat/ challenge H7 | To enhance degraded habitat on salmon rivers in NI |

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

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| 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 | Licensing, best practice advice and monitoring of hydro-electric installations. |
| | Planned timescale: | Within the current plan period 2013-2018 |
| | Expected outcome: | Maximum possible consideration of fisheries and ecological issues in licencing for hydro schemes. |
| | Approach for monitoring effectiveness & enforcement: | Monitoring of hydro schemes for compliance against licence conditions and fisheries legislation. An annual inspection programme is in place and enforcement action maybe taken for non compliance issues. |
| Action H2: | Description of Action | Mitigating the impact of drainage maintenance schemes on salmon habitat. |
| | Planned timescale: | Already in place |
| | Expected outcome: | Ensure sensitive / mitigated engineering solutions & seek opportunities to restore and enhance salmonid habitat within the impacted stretch |
| | Approach for monitoring effectiveness & enforcement: | Regular monitoring and inspection of all affected stretches where river drainage maintenance works and habitat improvements are carried out to assess the impact on fish stocks. |
| Action H3: | Description of Action | Management and control of water quality in salmon producing rivers in NI. |
| | Planned timescale: | Already in place |
| | Expected outcome: | Protection against degradation of salmonid habitat through pollution or waste disposals |

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| | Approach for monitoring effectiveness & enforcement: | Water quality is regularly assessed and reported on as part of the EU WFD requirements. All discharges are licensed and conditions of that licence are regularly assessed for compliance. Enforcement action maybe taken for non compliance issues. Pollution incidents are investigated and appropriate enforcement action maybe taken which in some cases may result in a criminal prosecution for offenders. All enforcement activity is regularly reported to the public. |
| Action H4: | Description of Action | To improve connectivity of salmon rivers in NI. |
| | Planned timescale: | Initial work to be commenced within the current plan period 2013-2018 |
| | Expected outcome: | To gather information and carry out surveys to identify potential barriers to fish passage in primary salmon rivers in NI subject to resources. Where opportunities are identified and the necessary resources / permissions obtained to mitigate and reduce the number of barriers. |
| | Approach for monitoring effectiveness & enforcement: | Barrier surveys carried out and any mitigation / removal works to be reported as part of the NASCO APR process. |
| Action H5: | Description of Action | To protect salmonid habitat against illegal impacts. |
| | Planned timescale: | Already commenced |
| | Expected outcome: | Reduction in illegal alterations of salmonid habitat. Increase education and awareness of stakeholders and wider public on the negative impacts of habitat loss for salmon stocks. |
| | Approach for monitoring effectiveness & enforcement: | Fishery monitoring, patrolling and enforcement activities to detect, disrupt and deter any illegal alterations to salmon habitat on primary salmon rivers. All incidents of habitat alteration / removal are investigated and appropriate enforcement action maybe taken which in some cases may result in a criminal prosecution for offenders. All enforcement activity is regularly reported to the public. |
| Action H6: | Description of Action | To produce an overall inventory of current and potential salmon habitat on primary salmon rivers in NI. |
| | Planned timescale: | To be completed within the current plan period 2013-2018 |
| | Expected outcome: | To have surveyed all the major salmon rivers within NI and to have salmon habitat inventory data on a GIS database. To help identify and prioritise subsequent habitat enhancement actions. |
| | Approach for monitoring effectiveness & enforcement: | Habitat surveys carried out to be reported as part of the NASCO APR process. |

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| Action H7: | Description of Action | To enhance degraded habitat on salmon rivers in NI. |
| | Planned timescale: | To carryout works within the current plan period 2013-2018 |
| | Expected outcome: | To support and provide advice for habitat enhancement schemes on salmon producing rivers in NI including both from government and stakeholder resources. |
| | Approach for monitoring effectiveness & enforcement: | Habitat works carried out to be reported as part of the NASCO APR process and where resources permit both pre and post assessments may also be carried out to consider the effectiveness of the works. |

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)

One salmon farm exists within this jurisdiction at 2 marine sites. There are no production facilities for salmon juveniles in freshwater.

- 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.
- b) It is an offence to operate any fish farm without a Fish Culture Licence (FCL) granted by DAERA or to breach any conditions of the licence.

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.

An authorisation is required under the Aquatic Animal Health Regulations (Northern Ireland) 2009. 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.

The Water (Northern Ireland) Order 1999, 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.

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 DAERA 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. DAERA'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 (NI) 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 introgression 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 DAERA 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 DAERA 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 |
| 2013 | 0 | 0 |
| 2014 | 3 | 0.31 |
| 2015 | 0 | 0 |

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)

Salmon enhancement stocking in both Loughs Agency and DAERA jurisdictions is conducted using local stocks where possible in compliance with the Williamsburg Resolution. Stocking of non-indigenous salmon species is prohibited. Introduction of salmon from outside NI is controlled under EU and domestic fish health legislation by DAERA.

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)

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 DAERA 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.

4.6 What measures are in place to prevent the introduction or further spread of *Gyrodactylus salaris*? (Max. 200 words)

NI has approved "national measures" under Article 43 of Council Directive 2006/88/EC for GS.

Any movements into Northern Ireland of species listed as susceptible to *Gyrodactylus salaris* (GS) must be accompanied by appropriate health certification declaring the place of origin to be disease free for GS. All consignments are inspected.

Exports from Northern Ireland require health certification following inspection of the consignment. Movements for further processing before human consumption also require health certification.

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.

In the event of identification of GS in either farmed or wild freshwater fish stocks, DAERA's objective is to take action to contain and, if possible, eradicate the parasite.

A Contingency Plan is in place for NI with cross-border contingency. 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.

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| 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 | Monitor sea lice levels in a wild salmon stock in Northern Ireland |
| Threat/ challenge A2 | Monitor for escapee aquaculture salmon in a wild stock in Northern Ireland |
| Threat/ challenge A3 | Monitoring sea lice levels in aquaculture salmon production in Northern Ireland |
| Threat/ challenge A4 | Monitoring levels of genetic introgression of aquaculture salmon into wild stocks in NI |

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

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| 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 | Monitor sea lice levels in a wild salmon stock in N. Ireland. |
| | Planned timescale: | Already in place |
| | Expected outcome: | Annual assessment of sea lice levels on adult salmon returning to the River Bush |
| | Approach for monitoring effectiveness & enforcement: | Full time adult trap in place to monitor all adults returning to the R Bush. All adults are assessed for a range of biological parameters. |
| Action A2: | Description of Action | Monitor for escapee aquaculture salmon in a wild salmon stock in N. Ireland. |
| | Planned timescale: | Already in place |
| | Expected outcome: | Escapee aquaculture salmon are monitored annually at the River Bush trap. |
| | Approach for monitoring effectiveness & enforcement: | Full time adult trap in place to monitor all adults returning to the R Bush. All adults are assessed for a range of biological parameters. All escapees are removed from the system and data recorded. |
| Action A3: | Description of Action | Monitoring sea lice levels in aquaculture salmon in N. Ireland. |
| | Planned timescale: | Already in place |
| | Expected outcome: | An annual assessment of sea lice levels of sea cage reared salmon in N. Ireland. |
| | Approach for monitoring effectiveness & enforcement: | All harvesting operations are inspected and DAERA staff collect data on sea lice levels on all fish which are regularly reviewed. |
| Action A4: | Description of Action | Monitoring levels of genetic introgression of aquaculture salmon into wild stocks in NI |
| | Planned timescale: | Every three years |
| | Expected outcome: | Triennial assessment of levels of genetic introgression of aquaculture salmon into wild stocks adjacent to the sites for salmon aquaculture in NI |
| | Approach for monitoring effectiveness & enforcement: | Every three years samples collected are assessed to monitor levels and trends of introgression in wild |

stocks of rivers adjacent to the salmon aquaculture site.

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

Northern Ireland Salmonid Aquaculture Sites

