



Department of  
**Agriculture, Environment  
and Rural Affairs**

[www.daera-ni.gov.uk](http://www.daera-ni.gov.uk)

**A progress report on the  
Invasive Alien Species Strategy for Northern Ireland**

**January 2017**

## Background

Invasive alien species are now widely recognised as a major threat to biodiversity loss worldwide. These impacts can be far reaching – disrupting ecosystems, threatening economic interests such as agriculture, forestry, fisheries and land use development as well as impacting on our general quality of life.

Acknowledging the growing threat from invasive alien species the Convention on Biological Diversity (CBD) provides a major driver for international action.


At an EU level, Regulation (EU) 1143/2014 on the prevention and management of the introduction and spread of invasive alien species came into force on 1 January 2015 and requires Member States to implement a range of measures for the prevention and management of invasive alien species. The first list of 37 species (14 plants and 23 animals) to which the Regulation applies came into force on 3 August 2016.

In response to the threats posed by invasive species in Northern Ireland the then Department of the Environment published 'An Invasive Alien Species Strategy for Northern Ireland' in 2013. The scope of the Strategy covers all non native species of flora and fauna with the exception of genetically modified organisms (GMOs), bacteria and viruses. Its full effect, however, is aimed at those non native species that are known to be or are potentially harmful. The Strategy set out key aims and actions to deliver a co-ordinated approach for addressing the threats posed by these species. A key aspect of the Strategy is the Implementation Plan. This was developed in partnership with stakeholders and identified key actions to help address some of the threats posed by invasive alien species. It includes a recommendation for a first review in 2016 and an evaluation every 5 years thereafter.

## Report

This is the first report of the Invasive Alien Species Strategy for Northern Ireland and covers the 30 key actions set out in the Implementation Plan. Since 2013, there has been good progress underpinned by the Strategy with the majority of the targets being achieved and steady progress being made against targets that are non time limited. The table, at **Annex A**, reports on the progress of each key action in the Implementation Plan. The key actions are numbered in accordance with their original numbering in the Strategy document. A glossary of key terms used in the Report is attached at **Annex B**.

It is the Department's intention, subject to Ministerial agreement, to review and update the current Implementation Plan to reflect any changes emerging from the EU legislation and any other policy changes in relation to invasive species. The revised Plan will be developed through stakeholder engagement and subject to a formal consultation process.

Associated Key Objective/ Theme	Key Action	Lead	Report on Implementation	
Objective 1 Prevention and Exclusion	1.1	Update risk assessment and carry out horizon scanning exercise	NIEA (NED)	Horizon scanning is a key element in prevention and important for guiding our efforts on risk analysis. A horizon scanning exercise was carried out in March 2013 to identify invasive species that could potentially arrive in Northern Ireland. As a result of the scanning exercise, risk assessments were carried out on 834 potential and established species.
	1.2	Develop and implement exclusion and action plans for high risk species and pathways	NIEA (NED)	<p>Preventing the introduction and establishment of new invasive species is a priority in Northern Ireland. In conjunction with ISI and GBNNSS a suite of 25 contingency plans has been developed for high risk invasive species which set out the roles and responsibilities of organisations. Plans have been produced for Water primrose, Giant rhubarb, Chinese mitten crab, Fringed water lily, Hottentot fig, Parrot's feather, Wild boar, Water fern, New Zealand pigmyweed, Non- native deer, Non - native crayfish, Carpet sea squirt and Wakame.</p> <p><a href="http://invasivespeciesireland.com/wp-content/uploads/2011/01/Non-native_crayfish_ISAP.pdf">http://invasivespeciesireland.com/wp-content/uploads/2011/01/Non-native_crayfish_ISAP.pdf</a></p> <p><a href="http://invasivespeciesireland.com/species-alerts/wild-boar/">http://invasivespeciesireland.com/species-alerts/wild-boar/</a></p> <p>Within DAERA:</p> <ul style="list-style-type: none"> <li> M&amp;FD staff annually undertakes a control project to contain Carpet sea squirt <i>Didemnum vexillum</i> (<i>D. vex</i>) on Strangford Lough. In 2016 monitoring of this species was extended to other suspect areas within Strangford Lough linked by</li> </ul>

			<p>tidal current movements from the main infestation site at Skettrick.</p> <ul style="list-style-type: none"> <li>Veterinary Service contingency plans for epizootic disease apply to those invasive species presenting epizootic risk at ports. Portal staff uses ID cards to monitor for known invasive species.</li> </ul> <p>DfI, Rivers Agency staff have developed protocols and technical guidance for the management of Japanese knotweed, Himalayan balsam and Giant hogweed where they pose a flood risk on their land.</p> <p>Loughs Agency staff monitor their sites for IAS and in 2016 their staff recorded the first sighting of Asian clam in the River Foyle. Reference to invasive species is also included in their electro - fishing surveys standard protocol.</p> <p>AFBI reviewed their aquaculture licences to include conditions on stock seed to ensure the licensee demonstrates the stock is IAS free.</p> <p>NI Water has an ongoing programme for the clearance of Cotoneaster and Rhododendron in the Mourne. Mapping of cleared areas is also taking place. In all capital projects and maintenance programmes, NI Water ensures that action against IAS is taken into consideration. In 2015, NED staff drafted guidelines for NI Water contractors to manage IAS on their sites.</p>
	1.3	Introduce subordinate legislation prohibiting sale of high risk species	<p>RNRPD</p> <p>The introduction of legislation to ban the sale of high risk species in Northern Ireland has not been initiated as no candidate species have been identified. However, Regulation (EU) 1143/2014 bans the sale of 13* species listed on Schedule 9 of the Wildlife (Northern Ireland) Order 1985 as well as 5** other species present in Northern Ireland.</p> <p><b>*Schedule 9 species:</b> Signal crayfish; Spiny-cheek crayfish; Marbled crayfish; Muntjac deer; Grey squirrel; American skunk cabbage; Fanwort; Mile-a-minute weed; Parrot's feather; Floating pennywort; Water primrose; Curly waterweed.</p> <p><b>**Other species present in Northern Ireland:</b> Coati; Sacred ibis; Siberian chipmunk:</p>

				Raccoon; Red-eared terrapin
	1.4	Develop Codes of Practice with key sectors and integrate invasive alien species into industry standards	NIEA (NED)	<p>Codes of Practice have been developed for the following key sectors considered to be at high risk of introducing or spreading invasive species - Horticultural, Aquaculture, Marina Operators, and Water Users. These are available to view/download on the ISI website at <a href="http://invasivespeciesireland.com/cops/">http://invasivespeciesireland.com/cops/</a>. NED staff review and update the Codes of Practice as new information becomes available and provide advice on request.</p> <p>Conservation Designations and Protection staff provide advice on the management of invasive alien species on ASSI, SPA and SAC sites and can undertake one off capital works projects to control invasive species through the Management of Sensitive Sites (MOSS) programme. Examples of projects undertaken as part of the MOSS scheme include eradication of Japanese knotweed at Dernish Island, Upper Lough Erne ASSI; Sea buckthorn removal at Bann Estuary ASSI; and removal of invasive species such as Rhododendron, Laurel and Sycamore from woodland ASSIs.</p> <p>M&amp;FD staff are developing a Marine Biosecurity Planning Guide for Northern Ireland, similar to the Guidance for Producing Site and Operation-based Plans for Preventing the Introduction of Non-Native Species published by Scottish Natural Heritage. <a href="http://www.snh.gov.uk/docs/A1294630.pdf">http://www.snh.gov.uk/docs/A1294630.pdf</a></p> <p>A draft Ports and Harbours Guide contains information on non-native invasive species. Where appropriate, M&amp;FD include mitigation measures for the prevention of arrival or spread of alien invasive marine species as conditions within marine licences for works/developments below mean high water mark.</p> <p>The WADE Team, RED, implement an in-house procedure for biosecurity to prevent the spread of non-native species</p> <p>AFBI implement the Inland Fisheries Ireland Biosecurity Protocol which details the correct procedures to stop the spread of IAS or harmful fish pathogens. AFBI also implement a Code of Practice to prevent the spread of non indigenous flatworms.</p>

	1.5	Provide information for public on the threats from invasive alien species	NIEA (NED)	<p>The threats posed by invasive species continue to be highlighted to the public through information awareness raising measures as detailed below.</p> <p>NED staff provide information and advice to the public through:</p> <ul style="list-style-type: none"> <li>✚ a range of methods including social media such as Twitter and Facebook and attending events (Belfast Zoo: Marine Festivals: Game Shows);</li> <li>✚ working with the Local Government Biodiversity officers and assisting with the drafting of guidelines for the <b>Magnificent Meadows</b> and <b>Don't Mow Let It Grow</b> projects to manage IAS;</li> <li>✚ the use of the ISI website; and</li> <li>✚ displaying information at NIEA Country Parks and visitor centres, for example, posters on the Asian clam outbreak, Giant hogweed, Check Clean Dry campaign and Stop the Spread of Aquatic Species.</li> </ul> <p>RED staff provides information at catchment stakeholder meetings and events. TCV NI staff also disseminate information on IAS at events and deliver training to the general public.</p> <p>The Lough Neagh Partnership Alien Invaders project created a website which contains multimedia IAS messages and videos that can be utilised to educate on IAS.</p> <p>The Loughs Agency IBIS INTERREG IV funded project ran two workshops on the <i>Identification of Marine Invasives</i> at Queen's University Marine Laboratory (Portaferry) and the <i>Identification of Freshwater Invertebrates</i> which covered the identification of a number of key invasive species at Loughs Agency (Prehen) in July and November 2013 respectively.</p> <p>The DAERA website provides information for the general public on invasive species. <a href="https://www.daera-ni.gov.uk/articles/invasive-alien-species">https://www.daera-ni.gov.uk/articles/invasive-alien-species</a></p> <p>In 2016 the guidance was produced for the DAERA Environment Farming Scheme</p>
--	-----	---	------------	--

			<p>(EFS) and addressed invasive species through their management schemes to educate farmers and encourage them to carry out practical management. From January 2016, the Northern Ireland Cross Compliance verifiable standards requires farmers to deal with the following invasive species on their land - Rhododendron, Giant hogweed, Japanese knotweed, Himalayan balsam, wild oat (<i>Avena fatua</i> L, and <i>Avena lodoviciana</i> Durieu) dock (<i>Rumex obtusifolius</i> L and <i>Rumex crispus</i> L.) thistle (<i>Cirsium vulgare</i> (Savi) Ten and <i>Cirsium arvense</i> (L.) Scop.) and ragwort (<i>Senecio jacobaea</i> L.).</p>
1.6	Consider mechanisms to control the import and possession of high risk invasive alien species at all points of entry	RNRPD	<p>RNRPD staff is working with colleagues from DEFRA and the other devolved administrations to bring forward domestic legislation to fulfil our obligations under Regulation (EU) 1143/2014. The EU Regulation bans the import of 13* species listed on Schedule 9 of the Wildlife (Northern Ireland) Order 1985 as well as 5** other species in Northern Ireland.</p> <p><b>*Schedule 9 species</b> : Signal crayfish; Spiny-cheek crayfish; Marbled crayfish; Muntjac deer; Ruddy duck; Grey squirrel; American skunk cabbage; Fanwort; Mile-a-minute weed; Parrot's feather; Floating pennywort; Water primrose; Curly waterweed.</p> <p><b>**Other species present in Northern Ireland:</b> Coati; Sacred ibis; Siberian chipmunk; Raccoon; Red-eared terrapin</p> <p>Under the Customs and Excise Management Act 1979, Border Force has powers to carry out import controls for the invasive species on the Union list. Identification factsheets have been developed for some of the most invasive species and are used by Border Force and Veterinary Service Portal staff to help recognise species on the Union list at points of entry.</p> <p>FHI use the Health Certification/TRACES system to provide traceability and surety about source of incoming consignments to mitigate against the potential risk of other species coming in as part of aquaculture consignments for relaying, with probably the highest potential risk from seed mussel imports. A protocol is in place for assessing the source of the mussel if from a non NI/ROI supplier, before authorising its import and inspection</p>

				on arrival.
Objective 2  Early detection, surveillance and rapid response	2.1	Further develop an early warning system	NIEA (NED)	<p>A list of species that are high risk to Northern Ireland and deemed important for research and mapping purposes has been developed and is updated on a regular basis by NED staff.</p> <p>An Expert Registry has been set up which feeds into the National Alerts Networks Records on annual fieldwork data recording and monitoring programmes. Records are fed directly into the NBDC database. Stakeholders using this database include NIEA, M&amp;FD, Forest Service, Rivers Agency, Loughs Agency, AFBI, NI Water, and Transport NI.</p> <p>NED staff have produced draft species alerts for the 37 species on the initial Union list as set out in the Commission Implementing Regulation (EU) 2016/1141 of 13 July 2016 adopting a list of invasive alien species of Union concern.</p> <p>M&amp;FD staff feed fieldwork records from their annual programme of marine monitoring into the online databases.</p> <p>The WADE Team, RED, submit records on non-native species from their monitoring programmes into the NBDC.</p> <p>M&amp;FD staff undertake annual surveillance visits to a sample of coastal marinas as part of a three-year rolling programme to check for new arrivals via this pathway. A sample of sea lough shorelines is also checked.</p> <p>In 2016, the Loughs Agency staff reported sightings of Asian clam in the River Foyle to NED and NPWS staff.</p>



	2.2	Maximise the potential of ongoing surveillance programmes	NIEA (NED)	<p>A suite of risk assessments was produced in 2013 and updated in 2015/16 to include some of the 37 species on the Union list relevant to the island of Ireland. NED staff update the list of high risk invasive alien species for Northern Ireland as any new species are sighted e.g. Asian clam, or when new information becomes available e.g. Harlequin ladybirds are breeding in Northern Ireland for the first time.</p> <p>CEDaR forwards notifications, on manual records submitted to them, to NED. These records are being mapped internally using ArcGIS.</p> <p>There following surveillance programmes are in place to monitor and record invasive species:</p> <ul style="list-style-type: none"> <li>✚ Field work and site integrity monitoring the results from which are fed into the data recording systems by NED staff;</li> <li>✚ The WADE team, RED, submit ad hoc records of non-native species from their monitoring programmes into the NBDC;</li> <li>✚ Controls for the movement of shell fish from site to site by M&amp;FD staff;</li> <li>✚ A high impact species list is provided for use by M&amp;FD staff when carrying out monitoring assessments. Invasive species are important performance indicators for the Water Framework and Marine Strategy Framework Directives;</li> <li>✚ The WADE Team, RED, submit records on non-native species from their monitoring programmes into the NBDC.</li> <li>✚ Transport NI staff report sightings of IAS identified through routine maintenance inspections. NED staff, in partnership with Transport NI, worked on the 'Biodiverse Road Verges' Project as part of the ENVISION Community Heritage project out of which emerged the <b>'Don't Mow Let it Grow' project</b> - <a href="http://dontmowletitgrow.com/">http://dontmowletitgrow.com/</a> - led by Causeway Coast &amp; Glens Borough Council</li> </ul>
	2.3	Develop and implement a rapid	NIEA	At present, no formal procedure for rapid response has been set up.

	response mechanism	(NED)	<p>The Asian hornet sighting in GB and the sighting of the Asian clam in the River Foyle have raised the profile of IAS and highlighted the need for a formal approach to rapid response and MOUs between Government departments with the relative expertise, staff and equipment.</p> <p>There is an informal agreement with Departmental contacts in some business areas whereby, if required and feasible, the provision of resources may be made available. Inventories of equipment and trained staff are available in some business areas.</p> <p>Forest Service staff applies a rapid response protocol in response to any reports of invasive alien species on their land – Himalayan balsam was successfully removed from Hillsborough Forest. In addition to the existing use of stealth cameras, Forest Service has procured a thermal binocular camera to aid in the detection of Muntjac deer and Roe deer on their land.</p>
2.4	Develop and implement contingency and eradication plans for high risk species	NIEA (NED)	<p>In conjunction with ISI and GBNNSS a suite of 25 contingency plans has been developed for high risk invasive species which set out the roles and responsibilities of organisations. Plans have been produced for Water primrose, Giant rhubarb, Chinese mitten crab, Fringed water lily, Hottentot fig, Parrot’s feather, Wild boar, Water fern, New Zealand pigmyweed, Non- native deer, Non - native crayfish, Carpet sea squirt and Wakame.</p> <p><a href="http://invasivespeciesireland.com/wp-content/uploads/2011/01/Non-native_crayfish_ISAP.pdf">http://invasivespeciesireland.com/wp-content/uploads/2011/01/Non-native_crayfish_ISAP.pdf</a></p> <p><a href="http://invasivespeciesireland.com/species-alerts/wild-boar/">http://invasivespeciesireland.com/species-alerts/wild-boar/</a></p> <p>There is a range of eradication and management projects ongoing to deal with high risk invasive species in Northern Ireland. These projects include:</p> <ul style="list-style-type: none"> <li>✚ The Oxyura Project Advisory Group (OPAG) has successfully eradicated a large population of Ruddy ducks in the UK. There are only a few remaining individual specimens in Northern Ireland;</li> </ul>

- |  |  |  |  |   |
|--|--|--|--|---|
|  |  |  |  | <ul style="list-style-type: none"><li>✦ A number of wild boar were successfully eradicated from Fermanagh and Armagh in 2015;</li><li>✦ M&amp;FD established the <i>Didemnum vexillum</i> working group in 2016 to help tackle the spread of the Carpet sea squirt and an annual programme of containment is now in place;</li><li>✦ The National Trust is involved in the eradication of Muntjac deer on their land at Mount Stewart. The Mount Stewart Muntjac Control Species Group meets twice a year to get an update on measures taken to eradicate Muntjac deer. The Action Group comprises of members from the National Trust, Forest Service, QUB, BASC, Clondeboye Estate and NIEA. An Action Plan for the eradication of Muntjac deer on the Mount Stewart Estate is currently under review by this group;</li><li>✦ A new HLF and Scirious LIFE project has secured £600,000 funding for 3 years to help local communities to become actively involved in regional Red squirrel conservation and the control of the invasive Grey squirrel;</li><li>✦ NED is working with a number of golf club owners to eradicate <i>Lagarosiphon Major</i> at ponds on their sites. Permission is being sought from QUB to carry out experimental eradication methods on some of the locations, one of which is within an ASSI and SPA;</li><li>✦ NIEA and Forest Service collaborated on a project to eradicate <i>Lagarosiphon major</i> from a fire dam at Lough Navar Forest. Forest Service staff continue to monitor this site and to date there has been no reoccurrence;</li><li>✦ Forest Service has an ongoing programme for the control/clearance of a nett area of 126ha of Rhododendron and Cherry laurel in 8 of their forests;</li><li>✦ An Asian clam survey was carried out on behalf of NED in May 2016. The survey results concluded that it may not be possible to eradicate the Asian clam but management and biosecurity would be a more viable option. NED staff is currently monitoring a project on eradication techniques for Asian clam through the EPA in the Republic of Ireland and may consider a future link in with this project;</li></ul> |
|--|--|--|--|---|

				<ul style="list-style-type: none"> <li>✚ The Loughs Agency in partnership with DAERA, NPWS, and the Marine Institute, Galway are developing a contingency and action plan for the eradication of the salmon parasite <i>Gyrodactylus</i>;</li> <li>✚ NI Water has a programme for the control of Cotoneaster and Rhododendron in the Mourne which takes place on an annual basis; and</li> <li>✚ Rivers Agency has developed a technical guidance note for the control of Japanese knotweed and Giant hogweed within designated flood defences.</li> </ul> <p>NIEA has supported numerous Environment Fund projects since 2013, to assist Non Government Organisations tackle invasive species across Northern Ireland. It has also funded projects through its 'Challenge' fund including the Glens Red Squirrel Group; Alien Invaders Lough Neagh Partnership; Invaders of a Natural Kind Field Studies Council; Belfast Hills Partnership; and Blackwater Wildlife Volunteers.</p> <p>District Councils control invasive species on their own land.</p>
	3.1	Develop and establish protocols for invasive alien species monitoring	NIEA (NED)	<p>Protocols for recording IAS have been drafted through ISI but these still need to be agreed with the reporting bodies such as the WADE Group within RED, and M&amp;FD before they can be included in their daily operations.</p> <p>Transport NI staff provide instructions for staff when carrying out inspections, monitoring and mapping of invasive species locations.</p> <p>An online recording system has been set up through funding from CEDaR. The iRecord system (<a href="http://www.brc.ac.uk/irecord/">www.brc.ac.uk/irecord/</a>) contains a list of species that are both of high risk and research interest in Northern Ireland. When any of the named species is entered on the online system, iRecord generates an email to inform NED staff.</p>

Objective 3  Monitoring, recording and reporting			<p>M&amp;FD monitor a number of high priority invasive alien species at marinas, sea loughs and designated conservation sites using standardized methodologies.</p> <p>A reference to invasive species is in the Loughs Agency electro - fishing surveys standard protocol.</p> <p>Forest Service Plans deal with invasive species on a species by species and site by site basis when they appear on their land. A survey covering 1000ha of ancient woodland sites within Forest Service land was carried out to identify threats to biodiversity and cultural features. Threats from invasive plant species were identified in 15% of the survey area and follow up action has been incorporated into Forest Management Plans. 11% of the area is being cleared of Rhododendron/Cherry laurel.</p>
	3.2	Maximise potential of ongoing monitoring programmes	<p>NIEA (NED)</p> <p>A list of species that is either high risk to Northern Ireland or is deemed important for research and mapping purposes has been provided to CEDaR. As part of the recording process a notification is received by NIEA staff when a record of any listed species is entered onto the online iRecord system.</p> <p>A list of invasive species is included in the site feature monitoring programme for use by M&amp;FD staff.</p> <p>DAERA has included invasive species in the screening matrix for the Environment Farming Scheme (EFS). As of January 2016, the Northern Ireland Cross Compliance verifiable standards requires farmers to deal with the following invasive species on their land -- Rhododendron, Giant hogweed, Japanese knotweed, Himalayan balsam, wild oat (<i>Avena fatua</i> L, and <i>Avena lodoviciana Durieu</i>) dock (<i>Rumex obtusifolius</i> L and <i>Rumex crispus</i> L.) thistle (<i>Cirsium vulgare</i> (Savi) Ten and <i>Cirsium arvense</i> (L.) Scop.) and ragwort (<i>Senecio jacobaea</i> L.).</p> <p><a href="https://www.daera-ni.gov.uk/publications/cross-compliance-verifiable-standards">https://www.daera-ni.gov.uk/publications/cross-compliance-verifiable-standards</a></p>

			All NIEA contracts contain a clause specifically for invasive species in the template documents used by Central Procurement Directorate Construction Division when awarding contracts.
3.3	Provide a mechanism to allow stakeholders to monitor, record and report invasive alien species	NIEA (NED)	<p>The online alert reporting system (Alien Watch facility) was established in 2013 on the ISI website (<a href="http://invasivespeciesireland.com/alien-watch/">http://invasivespeciesireland.com/alien-watch/</a>) and contains several ID documents. NED staff monitor this facility and respond to the generic 'contact' email address</p> <p>NED staff guide the public to the ISI website, Facebook page and Twitter account.</p> <p>Records submitted to the NBDC through the ISI website are shared publically on the NBDC website. Records that go directly to CEDaR can be shared if an account is set up. However, some location details are hidden to protect species or landowner confidentially. CEDaR provides an information request service for more detailed data. NED staff map all of the records for Northern Ireland using ArcGIS but these are not available to the public.</p> <p>Under the Water Framework Directive (WFD), RED, M&amp;FD and NED staff are members of the UK Technical Advisory Group (Alien Aquatic Species sub-group) where principles to be adopted by agencies responsible for implementing the WFD are defined. (<a href="http://www.wfduk.org/tagged/uktag">http://www.wfduk.org/tagged/uktag</a>)</p>
3.4	Further development of databases	NIEA (NED)	<p>Records are sent to NBDC through the ISI website. Species reports are generated and sent to NED staff on request. CEDaR also request data from NBDC approximately twice a year to add to their system.</p> <p>NED, Regional Operations staff regularly feed information into the National Invasive</p>

				<p>Species Database.</p> <p>M&amp;FD records are submitted through the Marine Recorder, which is a database used for formally gathered marine records. Marine Recorder records are accessible to CEDaR staff and ultimately all records sources come together within the UK NBN Gateway.  <a href="https://data.nbn.org.uk/">https://data.nbn.org.uk/</a></p> <p>Information is provided to NOBANIS on an all island basis, for example, informing the NOBANIS network members when a species alert has been issued in Ireland. Two members of staff in NED are included in the NOBANIS Committee members' e-mail circulating list.</p>
	3.5	Investigate the possibility of including a clause in the terms and conditions of all Government contracts to make it a requirement for contractors to submit datasets where Invasive Alien Species may be involved.	RNRPD	Discussions are taking place to determine if it is possible to include a clause specifically relating to invasive species in all Government contracts. This will be considered at the next quarterly meeting with the construction Centres of Procurement Expertise (CoPEs) in January 2017.
	4.1	Develop and agree protocols for eradication, control and	NIEA (NED)	Through the ISI project, Management guidance has been developed for a range of invasive species including Japanese knotweed, Giant hogweed, Himalayan balsam, Rhododendron, and Cherry laurel.

<p>Objective 4</p> <p>Eradication, control and containment</p>	<p>containment of high risk species.</p>	<p>Action Plans have also been developed for species such as, Water primrose, Giant rhubarb, Chinese mitten crab, Fringed water lily, Hottentot fig, Parrot's feather, Wild boar, Water fern, New Zealand pigmyweed, Non native deer, Non native crayfish, Carpet sea squirt and Wakame.</p> <p>Long term control and containment of invasive species across Northern Ireland involves appropriate management measures and several initiatives have helped to deliver this. Examples include:</p> <ul style="list-style-type: none"> <li>✚ The Mount Stewart Muntjac Control Species Group meets twice a year with the National Trust to discuss the management of Muntjac in the Mount Stewart Estate.</li> <li>✚ NED staff co-ordinate the <i>Spartina</i> Control Group which aims to manage <i>Spartina</i> at sites in Strangford and Carlingford Loughs, the Roe Estuary and Lough Foyle.</li> <li>✚ NED staff are members of the UK Rapid Response Working Group which aims to ensure best practice in the rapid eradication of IAS throughout the UK.</li> <li>✚ NED staff have worked with Planning Service to develop their Standing Advice document which was published in April 2015 and is available to download at the Northern Ireland Planning portal. This was developed for planning officers and applicants seeking planning permission for developments on land containing invasive alien species.</li> <li>✚ NED staff has provided support to Lagan Valley Regional Park in the updating of their management plan for Invasive Species in 2016. NED staff has provided input to training of volunteers to carry out surveys for invasive alien species e.g. the Ring of Gullion Landscape Conservation Plan and the Mourne Mountains Landscape Project.</li> <li>✚ NED have worked with members of the Oxyura Project Advisory Group (OPAG) Ruddy Duck Eradication Programme across the UK for a number of years and</li> </ul>
--	--	---



there are only a few remaining individual specimens left to eradicate in Northern Ireland.

- ✚ NED staff are involved with the UKTAG group which advises on the implementation of the WFD with regard to invasive aquatic species.
- ✚ NED staff have reviewed management plans, for example Translink Invasive Species Management Plan (July 2014), Northern Ireland Water “Methodologies for Outside Contractors Guidance” and provided an invasive species input to the Transport NI Environmental Handbook (2014/15). Staff regularly advises the public to use the toolkit on the ISI website.
- ✚ M&FD has provided guidance on invasive species to marina managers on request.

Staff use Best Practice Management guidance to help minimise and manage the impacts of established invasive species, for example:

- ✚ Loughs Agency encourages staff and contractors to use the ISI Toolkit including best practice management guidance.
- ✚ AFBI contribute to the development of protocols for eradication, control and containment for IAS as directed by DAERA.
- ✚ Transport NI encourages contractors to follow Best Practice Management guidelines and have developed protocols for their staff and contractors.
- ✚ NI Water is developing an internal guidance document for the management of IAS on Northern Ireland water holdings for staff and contractors.

	4.2	Develop and support action programmes in partnership with Republic of Ireland (ROI)	NIEA (NED)	<p>Co-ordinated action on an all island basis will help to reduce the spread of invasive species and ensure consistency of approach to tackling these species. NED staff, in partnership with NPWS, support cross border projects to deliver national and local measures. The following projects demonstrates NED's support and engagement with NPWS:</p> <ul style="list-style-type: none"> <li>✚ QUB <b>Controlling Priority Invasive Non-native Riparian Plants and Restoring Native Biodiversity (CIRB) Project</b> (2011-2014). The project was part funded by the EU's European Regional Development Fund through the INTERREG IVA cross border programme and part financed by the former Department of the Environment and the Department of the Environment, Community and Local Government (Ireland). The overall aim of the project was to control and provide a baseline for future management of bank side invasive species.</li> <li>✚ The HLF/ <b>Sciurius LIFE</b> project on the conservation of Red squirrels and the eradication of Grey squirrels is a 3 year project which commenced in 2016 and includes ROI stakeholders. The Red Squirrel United Project is led by the Wildlife Trust and supports the activities of the Northern Ireland Squirrel Forum which is made up of eight voluntary groups that work to promote Red squirrel conservation within local areas and includes eradication of Greys.</li> <li>✚ The All Island Non Native Marine Group meets regularly to discuss matters of mutual interest relating to surveillance, monitoring and managing marine alien invasive species. Participating organisations include NPWS, M&amp;FD, NBDC and the Marine Institute.</li> <li>✚ The Marine Pathways Project is being undertaken by organisations within the UK and Ireland and will contribute to the delivery of the Non-Indigenous species descriptor of the Marine Strategy Framework Directive (MSFD). The overall aim of the project is to protect marine biodiversity in the UK and Ireland by managing</li> </ul>

				<p>the key pathways to prevent the introduction and spread of marine invasive non native species (NNS).</p> <p>NED represented the Department at the British Irish Council meeting in April 2016 in Dublin to discuss invasive species and other related issues, mainly Regulation (EU) 1143/2014.</p>
<p>Objective 5</p> <p>Management, mitigation and restoration</p>	<p>5.1</p>	<p>Develop and encourage implementation of Invasive Species Action Plans</p>	<p>NIEA (NED)</p>	<p>Action Plans have been completed for high risk species relevant to the island of Ireland through the ISI project. NED staff review the Action Plans as any new information becomes available to ensure they are up to date and follow current best practice.</p> <p><a href="http://invasivespeciesireland.com/toolkit/isaps/potential/">http://invasivespeciesireland.com/toolkit/isaps/potential/</a></p> <p>NED staff have assisted in the implementation of the Action Plans through:</p> <ul style="list-style-type: none"> <li>✚ Including conditions to manage invasive species in all NED funding streams;</li> <li>✚ Implementing Plans through site designated site management agreements with landowners;</li> <li>✚ Providing advice and condition assessment monitoring reports in particular for <i>Spartina</i> in Strangford Lough;</li> <li>✚ Attending public events and providing training to local Government staff;</li> <li>✚ Have developed species alert publications for the Asian clam, Harlequin ladybird, Crayfish plague and the Asian</li> </ul>

hornet; and

- ✚ Publicise the biosecurity message through Facebook and Twitter.

District Councils deal with IAS on their own land according to Action Plans and the Biodiversity officers continue to raise awareness with their stakeholders by encouraging monitoring and recording of invasive species.

NI Water has developed protocols, in partnership with NED staff, for dealing with IAS on their land.

Biosecurity protocols have been developed for use by Rivers Agency staff and contractors when they carry out treatment work where IAS pose a flood risk on their land and monitor the effectiveness of any action taken. Contractors are encouraged to put biosecurity measures in place on work sites.

	<b>5.2</b>	Develop an on-line toolkit of invasive alien species management methods	NIEA (NED)	<p>– An online toolkit for invasive species management methods is available through the ISI website at <a href="http://invasivespeciesireland.com/toolkit/">http://invasivespeciesireland.com/toolkit/</a>. The toolkit has been developed along with a Gmail, Facebook and Twitter account. The ISI website is very popular with members of the public both in Northern Ireland and Republic of Ireland. The Gmail account receives a vast amount of correspondence which is initially dealt with by NED staff and, if relevant, passed on to NPWS staff. To date, the Facebook page has received 1988 likes.</p> <p>NED staff update the ISI online toolkit with new examples and encourage use of the online toolkit.</p>
Objective 6	<b>6.1</b>	Establish a co-ordination mechanism for joined up working across Government	RNRPD	RNRPD staff requested the first progress update from Departmental officials against the actions listed in the Implementation Plan in June 2014. Regular updates were issued to Departmental officials throughout the development and implementation of Regulation (EU) 1143/2014. Departmental officials were consulted on the species proposed by the Commission for listing under Regulation (EU) 1143/2014 and all comments were forwarded to DEFRA and sent to the Commission as part of a UK response.
	<b>6.2</b>	Develop and deliver training for local authorities	NIEA (NED)	– NED staff delivered training on invasive species and the EU IAS Regulation for the former District Councils including Omagh, Fermanagh, Down, Newry & Mourne Council Parks staff along with Slieve Gullion, Belfast Hills Partnership and The Mourne

Governance and co-ordination				<p>Mountains Landscape Projects volunteer groups. Invasive species awareness events were also delivered to CSM Estate Agents, The Probus Club and the Local Biodiversity Officers Forum.</p> <p>TCV NI has been delivering training sessions for stakeholder and members of the public on invasive alien species. They work closely with NIEA and CEDaR to ensure delivery of correct information when delivering their training sessions.</p>
	6.3	Continue commitment to provide a central co-ordination and information resource on invasive alien species	NIEA (NED)	<p>– NED staff maintains a good working relationship and liaise regularly with NPWS staff to discuss issues relating to invasive species.</p> <p>Phase 2 of the ISI project finished in March 2013 and due to financial constraints a further phase of the Project was not progressed.</p>
	6.4	Continue partnership working with GB Programme, the European Network on Invasive Alien Species (NOBANIS) to maximise the effective use of resources to address shared threats	NIEA (NED)	<p>– RNRPD and NED staff works closely with colleagues in the devolved administrations and DAHG officials on issues relating to invasive species to share best practice and ensure a consistent approach is being adopted.</p> <p>M&amp;FD staff attended an All-Ireland working group on marine non-native invasive species in Dublin in 2015 and 2016.</p> <p>Information is provided to NOBANIS on an all island basis, for example, informing the NOBANIS network members when a species alert has been issued in Ireland. Two members of staff in NED are included in the NOBANIS Committee members' e-mail circulating list.</p>

<p>Objective 7</p> <p>Communications, awareness raising and capacity building</p>	7.1	Develop an invasive alien species communications plan to underpin prevention and management actions	NIEA (NED)	– The development of a Communications Plan was not taken forward due suspension of ISI Project and resource constraints.
	7.2	Continue commitment to building effective partnerships through Invasive Species Ireland stakeholder engagement programme including annual forum and website	NIEA (NED)	<p>– The last joint Forum, under Phase 2 the ISI Project, was hosted by NIEA in Belfast in May 2013. Details and presentations from the Forum can be found at: <a href="http://invasivespeciesireland.com/forum/2013">http://invasivespeciesireland.com/forum/2013</a>. 140 delegates attended this event and the feedback received was positive. There has been a steady increase in attendance at the Forum events over the years.</p> <p>It is proposed to hold another joint Forum in Dublin in Spring 2017. This event will be hosted by NPWS.</p>
	7.3	Increase awareness of the importance of the preventative approach in minimising threats from invasive alien	NIEA (NED)	<p>– A report on the '<b>Economic cost of invasive and non-native species in Ireland and Northern Ireland</b>' was produced by John Kelly <i>et al</i> in 2013. A copy of the report can be found at: <a href="http://invasivespeciesireland.com/wp-content/uploads/2010/07/Economic_Impact_Assessment_FINAL_280313.pdf">http://invasivespeciesireland.com/wp-content/uploads/2010/07/Economic_Impact_Assessment_FINAL_280313.pdf</a></p> <p>NED staff increase awareness of invasive species when attending meetings and events,</p>

		species		<p>and through the use of Facebook and Twitter. In 2016, an Asian clam biosecurity protocol leaflet was produced by NED staff for use in the Foyle and wider catchment area. Species alerts have been published for the Asian clam, Harlequin ladybird, Crayfish plague and the Asian hornet. Information on invasive species management was provided for the Transport NI Environmental Handbook.</p> <p>NIEA staff continue to support and promote the <b>Be Plant Wise</b> and <b>Check, Clean, Dry</b> campaigns.</p>
	7.4	Further develop capacity of stakeholders to help increase action on the ground to minimise the risks from invasive alien species.	NIEA (NED)	<p>– NED staff provide support to stakeholders seeking to undertake invasive species control programmes including:</p> <ul style="list-style-type: none"> <li>+ chairing the Spartina Control Group and the Northern Ireland Squirrel Forum/Group (support for eradication of grey squirrels);</li> <li>+ providing secretarial support to the Mount Stewart Muntjac Control Species Group;</li> <li>+ are members of the Lough Erne Invasive Species Group (LEISG), the Oxyura Project Advisory Group (OPAG) (species eradication project UK wide), the Strangford Lough Marine Site Management Scheme Group and the Lough Neagh Reas Wood and Farris Bay SAC Management Plan Stakeholder Group; and</li> <li>+ are corresponding and visiting members of the Northern Ireland Biodiversity Officers Forum.</li> </ul> <p>NED staff provide information materials and attend events</p>
	8.1	Liaise with the Republic of Ireland and GB on legislation	RNRPD	RNRPD and NED staff work closely with the devolved administrations and DAHG to ensure a consistent approach is adopted on any emerging issues on invasive species, for example Regulation (EU) 1143/2014.



<p><b>Objective 8</b></p> <p>Improving the legislative framework</p>	<p><b>8.2</b></p>	<p>Contribute to the development of EU policy and initiatives</p>	<p>RNRPD</p>	<p>RNRPD and NED staff are working with DEFRA and other devolved administrations to develop domestic legislation to implement the requirements of Regulation (EU) 1143/2014. This includes weekly teleconferences, hosted by DEFRA, to agree policy issues and working with officials in DAHG to ensure a consistent approach is adopted to invasive species on an all island basis.</p>
<p><b>Objective 9</b></p> <p>Research and development</p>	<p><b>9.1</b></p>	<p>Identify research priorities and needs</p>	<p>NIEA (NED) –</p>	<p>This area of work has not been progressed due to the suspension of the ISI Project and resource constraints. The Department places more emphasis on implementing the findings of research or collaborating with partner organisations to tackle a specific problem.</p>

## Annex B

### Glossary of terms used in the Report

<b>AFBI</b>	Agri-Food and Biosciences Institute
<b>ArcGIS</b>	<b>ArcGIS</b> is a <a href="#">geographic information system</a> (GIS) for working with maps and geographic information. It is used for: creating and using maps; compiling geographic data; analyzing mapped information; sharing and discovering geographic information; using maps and geographic information in a range of applications; and managing geographic information in a database.
<b>ASSI</b>	<b>Area of Special Scientific Interest</b> as notified under The Environment (Northern Ireland) Order 2002
<b>BASC</b>	British Association for Shooting and Conservation
<b>CEDaR</b>	Centre for Environmental Data and Recording
<b>DAERA</b>	Department of Agriculture, Environment and Rural Affairs
<b>DAHG</b>	Department of Arts, Heritage and the Gaeltacht
<b>DEFRA</b>	Department of Environment, Food and Rural Affairs
<b>Dfi</b>	Department for Infrastructure

<b>EPA</b>	Environmental Protection Agency
<b>EU</b>	European Union
<b>FHI</b>	Fish Health Inspectorate
<b>GBNNSS</b>	GB non-native species secretariat
<b>HLF</b>	Heritage Lottery Fund
<b>ISI</b>	Invasive Species Ireland project
<b>M&amp;FD</b>	Marine and Fisheries Division
<b>NBDC</b>	National Biodiversity Data Centre
<b>NED</b>	Natural Environment Division
<b>NIEA</b>	Northern Ireland Environment Agency
<b>NOBANIS</b>	European Network on Invasive Species (formerly North European and Baltic Network on Invasive Alien Species)
<b>NPWS</b>	National Parks and Wildlife Service
<b>QUB</b>	Queens University Belfast

<b>RED</b>	Resource Efficiency Division
<b>RNRPD</b>	Regulatory and Natural Resources Policy Division
<b>SAC</b>	<b>Special Area of Conservation</b> established under the provisions of the EC Habitats Directive, (92/43/EEC) on the conservation of natural habitats and species of European importance.
<b>SPA</b>	<b>Special Protection Area</b> established under the provisions of the EC Wild Birds Directive (2009/147/EC formerly 79/409/EEC) to select sites for those bird species included in Annex 1 of the Directive and also regularly occurring migratory species.
<b>TCV NI</b>	The Conservation Volunteers, Northern Ireland
<b>TRACES</b>	TRAdE Control and Expert System
<b>Union list</b>	The list of invasive alien species of Union concern adopted by the European Commission in accordance with Articles 4(1) and 10(4) of Regulation (EU) 1143/2014
<b>UK NBN Gateway</b>	The National Biodiversity Network's Gateway is a collaborative partnership created to exchange biodiversity information.
<b>UKTAG</b>	UK Technical Advisory Group is a partnership of the UK

	environment and conservation agencies which was set up by the UK-wide WFD policy group consisting of UK government administrations.
<b>WADE</b>	Water Assessment, Data and Evidence Group