

**Consultation on the Significant Water Management Issues
for the Development of Third Cycle River Basin
Management Plans 2021 - 2027**

SYNOPSIS OF RESPONSES

Northern Ireland Environment Agency

DAERA

June 2021

Contents

1. Introduction
2. Consultation
3. Engagement with stakeholders
4. Responses to consultation
5. Next Steps

ANNEX A – Summary of Comments and Departmental Response

ANNEX B – List of Respondents

Further copies of this report can be obtained as follows:

By writing to:-

Integrated Catchment Planning
Water Management Unit
Northern Ireland Environment Agency
17 Antrim Road,
Tonagh,
Lisburn,
BT28 3AL

Contact details:

By Telephone: 028 9262 3068

By email: catchmentplanning@daera-ni.gov.uk

Webpage: <https://www.daera-ni.gov.uk/>

This document can also be accessed through the Department's website at:-
www.daera-ni.gov.uk/consultations under Supporting Documents for the Draft 3rd
cycle River Basin Management Plan 2021-2027

Purpose

This document refers to the Significant Water Management Issues Consultation document which DAERA (The Department) will use to help inform the development of the third cycle River Basin Management Plan for Northern Ireland. NIEA (Northern Ireland Environment Agency) have undertaken this consultation to enable and encourage participation in the river basin management planning process. This document contains a summary of the responses received by the Department on the Significant Water Management Issues as described in the consultation document launched by NIEA on 22 December 2019.

1. Introduction

The Water Framework Directive (WFD) requires an integrated approach to managing water quality on a river basin district basis; with the aim of maintaining and improving overall water quality. The current structure of NI River Basin Management Plans (RBMP) covers a 6 year cycle. The first set of plans were published in 2009 and ran until 2015, when the second cycle, and current plans were published - these can be accessed through the following link (<https://www.daera-ni.gov.uk/topics/water/river-basin-management>). The third cycle plans will be published in 2021/22 and will run until 2027.

In line with the requirements of the WFD and as part of the process of developing the third cycle RBMP (2021-2027), NIEA published a consultation document to gather comments on the Significant Water management Issues. The development of the plans involves three public consultations, the first consultation on the RBMP timetable was published on 22 December 2018, and the second consultation is the Significant Water Management Issues report. The consultation on the Significant Water Management Issues was launched by NIEA on 22 December 2019.

Specific comments were sought on the following questions:-

1. What do you consider to be the most significant issues affecting the water environment?
2. Are you aware of any other issues in addition to the significant issues identified in the report?
3. Do you agree with our assessment of the significant water management issues?
4. Do you think existing measures are adequate for addressing the significant water management issues?
5. Do you have any other suggestions for how to address the significant issues highlighted?
 - i. Agriculture
 - ii. Urban Development
 - iii. Wastewater Pollution
 - iv. Industry
 - v. Abstraction and physical condition of the environment

- vi. Forestry
 - vii. Chemicals
 - viii. Non Native Invasive Species
 - ix. Anaerobic Digestion Plants
 - x. Quarries and mines
 - xi. Plastic/Microplastics Pollution
 - xii. Climate change in NI
6. Do you have any other suggestions for how to address the significant issues highlighted?
7. What other actions do you think could be put in place to reduce the pollution of waters caused by nutrient enrichment?
8. What extra data would you like to see collected? What additional monitoring and evaluation would you like to see?

2. Consultation

NIEA launched the consultation on the Significant Water Management Issues to inform the development of the draft third cycle RBMP on 22 December 2019 and it was open until 22 June 2020.

The public consultation gives the public and stakeholders the chance to give their views on the Significant Water Management Issues. The successful implementation of river basin management planning requires not only the Department as the competent authority to be involved, but also requires the involvement of the public, NGOs, the private sector, various voluntary groups, NI Water, local authorities and other Government Departments and Agencies. This engagement will help NIEA to identify and meet the challenges facing the water environment during the six year planning cycle (from 2021-2027).

An evaluation of all responses received will be undertaken after each consultation by NIEA. This will enable NIEA to utilise the responses in the development of the third cycle RBMP.

3. Engagement with stakeholders

The consultation was launched on 22 December 2019 and details of it were highlighted at meetings of the WFD Strategic Planning and Resources Forum. There was a Catchment Stakeholder Conference held in Greenmount College on 23 October 2019. This provided a forum for anyone interested in local water issues to make comments and raise their concerns and included representatives from agriculture, business, environmental organisations and other water users.

The consultation was also advertised in the main local newspapers and on the Department's website.

4. Responses to the consultation

A total of twenty nine (29) responses were received. Fifteen (15) responded via the citizen space online option and fourteen (14) e-mail responses to the Integrated Catchment Team e-mail address. Of those who provided comments, nine (9) were from non-governmental organisations, two (2) were from local council, fifteen (15) were individuals/members of the public, one (1) from a government owned company and two (2) from arm's length bodies.

The following sections provide a summary of the key issues highlighted by respondents in respect of each of the consultation questions. The Department's response to those comments are set out in the tables in **Annex A**. Due to the volume of comments, the responses have been grouped into the following sections – Research, General issues, Climate change and Green Recovery, EU Exit, Agriculture & Agricultural policy, Urban Development, Septic tanks, Industry, Abstraction & Physical Condition, Fisheries, Forestry, Non-native invasive species, Chemicals and Local issues. Many teams across DAERA have provided input into the Departmental response and also DfI/NIW have provided comment on some comments that were made directly to them. A list of all respondents who provided comment is attached in **Annex B**.

a. What do you consider to be the most significant issues affecting the water environment?

The majority of respondents stated that pollution is the most significant issue affecting the water environment.

- Pollution from Agriculture - continued impact by agriculture, direct and indirect. Excessive slurry spreading, excess chemical fertilisation, AD plants, lack of environmental awareness, pesticide pollution and sediment run-off. Livestock access to rivers was noted as a major concern.
- Pollution from failing Waste Water Treatment Plants including private septic tanks.
- Pollution from Stormwater and misconnections.
- Pollution from landfill sites.
- Pollution from sediment from new road and housing developments.
- Pollution from quarrying and mining.
- Polluting run off from impermeable surfaces carrying silt and pollutants (salt, oil, brake dust, rubber etc.).

Some respondents added the following issues as significant:

- Unsustainable abstraction from rivers.
- Too many blockages in many river courses.
- Lack of sustainable drainage measures.
- Water wastage through an old and leaky supply system.
- Non-native invasive species (NNIS).
- Climate change and extreme events.
- Increasing demand on our water supply.

Many respondents consider Brexit to be a significant concern specifically in relation to future:

- Legislation and maintaining standards.
- Future funding without EU.
- Future drivers for control without 'infracton'.

Many respondents noted the legacy of underfunding for NI Water, in particular to the wastewater infrastructure, and that additional funding is required to address the growing demands placed on drainage systems to meet future pressures including growth and climate change.

b. Are you aware of any other issues in addition to the significant issues identified in the report?

The following issues were raised in addition to the significant issues identified in the report:

- The EU Watch List of Antimicrobials does not include all of the antimicrobials used in Northern Ireland pig, poultry and dairy farms. This omission in NIEA monitoring is a significant risk of failing in detecting antimicrobials and AMR pathogens entering our waterways.
- Abstractions, weirs, barriers, dams and hydropower need to be urgently reviewed
- Sediment in rivers is actually a much bigger problem than previously thought, as phosphorous in rivers is bound up in the sediment. In addition to nutrient enrichment, sediment loss from river bankside, farmland and peat erosion affects raw water supplies leading to elevated colour, turbidity and Dissolved Organic Carbon/Total Organic Carbon leading to appearance, taste and odour issues in water. The treatment of these issues in raw water have energy and financial implications.
- Microplastics should be added to the list of pollutants regularly monitored in inland waters, requiring agreement of an accurate, repeatable, reportable method for microplastic quantification.

c. Do you agree with our assessment of the significant water management issues?

The majority of respondents said no.

Many of the respondents said that the number of sampling points and the frequency of sampling needs to be increased on all waterbodies and that real-time monitoring is required for all waterbodies. The information must be timely, relevant and usable by elected representatives and the citizens in each Council Area.

Some respondents said that NIEA assessments are unreliable and can't be independently validated. They are insufficient, monthly or quarterly, to detect levels of nutrients. Heavy rainfall can skew the results and sampling at one point may not give a reliable reading for elsewhere in the system. The sampling techniques are not robust enough and sampling infrequently and with result unverified.

d. Do you think existing measures are adequate for addressing the significant water management issues?

The majority of respondents said no.

Failure to meet WFD objectives and seeing deterioration. The decline in the 52 water bodies achieving good environmental status (GES) since 2015 is a clear indication that existing measures are not adequate to address the significant water management issues in NI.

General comments from respondents include:

- Need for an Independent Environment Agency
- More thorough application of integrated catchment management.
- Integration of nature-based solutions to help adapt to changed flow regimes from climate change, such as 're-wriggling' rivers, using wetlands and washlands as water storage and tree planting and changes to grazing to slow flows in times of flooding.
- More use should be made of Sustainable Urban Drainage Systems (SUDS) to control the flow and filtering of rainfall and storm water in housing developments as urban areas expand.
- Need for an Environmental Court in NI - heavier penalties
- More thorough and consistent application of the 'polluter pays principle' for water pollution incidents.
- There is a need for greater co-operation and collaboration with partners across government, including government departments, the third sector and educational institutions.
- The current crisis reminds us that our economy and the health of society are dependent on a flourishing natural world and any recovery package must include nature and the environment.

e. Do you have any other suggestions for how to address the significant issues highlighted?

The following bullet points are a summary of some of the key concerns and measures suggested by respondents. Departmental responses have been included in the tables in Annex 1.

i. Agriculture

- Introduce a Nutrient Cap (N&P) for all land managers in a catchment
- Introduce stricter monitoring, controls and penalties
- Target key catchment areas and control rigidly and make it compulsory for a farm to obtain permission to go above a certain stock number.
- Reduce herd size on farms that graze land adjacent to waterways or over bedrock which will be more prone to percolation of water
- Implement a strategic plan to address its nutrient imbalance
- Discourage intensive production – there should be no option of derogation for higher nitrogen loading.
- Farmers should be required to ensure that fencing is installed and maintained to prevent livestock accessing rivers.
- Need much better slurry management with soil testing mandatory prior to spreading
- The closed spreading period has been counterproductive causing high volumes of slurry going out at set times increasing risk of water contamination.
- More emphasis on ensuring farmers have received pesticide training & qualifications, or their sub-contractors have these
- The need for greater provision of advice to help land owners and managers better protect our water bodies
- More severe penalties for polluting waterways e.g. cover costs of clean up and recovery of waterway.
- There is a need for much greater transparency and closer monitoring of the nutrient content of AD digestate.
- There is a need to stop new AD plants.
- PPC Permits and Discharge Consents fail to account for the cumulative impact of farming units operating below the livestock thresholds.
- The soils project across NI and then further targeted at specific catchment pilots has been proven to be successful and roll out of the soil testing, analysis, and training alongside LIDAR mapping across NI is essential.

- In future environmental schemes farmers should be required to undertake soil testing and nutrient management planning as part of a farm environment plan
- The right policy mix – including advice, incentives, regulation and enforcement - is required to address the challenges from the agricultural sector
- It is imperative that any future agri-environmental scheme remains simple and attractive to farmers both financially and practically to ensure that farmers will join

ii. **Urban Development and Wastewater Pollution**

- Monitor Total Nitrogen and Phosphates discharges from all WWTW sites. Remove phosphates from all.
- There is a real need to tackle the issues of contaminated storm water from housing developments
- suggest that new discharge consents are subject to cumulative modelling,
- Encourage the use of drainage infiltration and Sustainable Urban Drainage Systems as a basic standard for the disposal of storm water
- The regulatory management of treated sewage discharges using discharge consents may needs to be reviewed.
- There is no mention of microplastic pollution via storm water run-off. Plastic pollution via storm water run-off is the largest single contributor to plastic pollution in the environment
- Runoff in urban areas is causing detrimental impacts across catchments spreading chemicals, waste products and litter, including plastics and micro-plastics into our water systems
- Planners continue to permit housing development in areas despite there being a lack of infrastructure for sewage treatment - this must be addressed
- Combined sewer systems should be proactively reduced.
- Higher standards in sewage treatments, more investment is badly needed

- Good design of housing should include blue/green and Sustainable Drainage Systems (SuDS) infrastructure within our urban spaces to help effectively manage surface water, and enhance the water environment for the benefit of all

iii. Industry

- A more proactive approach to industrial pollution, with wider use of preventative tools and instruments.
- The most stringent default discharge standards should be applied, particularly in areas of juvenile salmonid populations.
- We would also like to see increased partnerships with industry and companies as part of their corporate social responsibility.
- Discharge Consent based on quantity of discharge and not just the quality of discharge.

iv. Abstraction and physical condition of the environment

- The Department has shown an inability to competently regulate and enforce abstractions, weirs, barriers, dams and hydropower to allow fish passage and maintain Q80 flow in rivers
- An urgent reassessment of the regulations associated with hydro schemes on rivers is required
- Reconnect flood plain with rivers. Remove barriers to migration.
- There is a need to end unsustainable abstraction and 'grandfathered' deemed authorisation abstraction licences that are causing environmental damage, such as to high biodiversity value and protected sites

v. Forestry

- Best forestry practice is essential when planning to clear, fell or replant sites which are situated in or near to salmonid rivers, or if there is a hydrological connection to a salmonid rivers
- The Regulations for Commercial Forestry have failed to prevent emissions from forestry operations entering our waterways.
- We need the planting of deciduous trees to enhance our ecological footprint.

- A more ecological approach to commercial forestry is needed which delivers biodiversity enhancement and considers long-term carbon storage benefits.
- Planting the 'right tree in the right place' can provide important nature-based solutions for water quality and flood risk management, as well as other multi-benefit outcomes for nature, people and climate
- Forest owners have a duty of care to the environment and need to take responsibility for wild conifers that are spreading.
- Plant more local deciduous trees and less imported conifer species.

vi. Chemicals

- The EU Watch List of Antimicrobials does not include all of the antimicrobials used in Northern Ireland pig, poultry and dairy farms. This omission in NIEA monitoring is a significant risk of failing in detecting Antimicrobials and AMR pathogens entering our waterways.
- The agricultural sector across the UK has been dealing with the issue of AMR for some time and has seen a decline in antibiotic usage on farms.
- It is vital that any approach to address the issues of pollution related to both legacy and emerging chemicals.
- Measures currently set out are not ambitious enough. As a priority, we want to see a multi-faceted approach with a focus on action around regulation and compliance, together with a public awareness and education campaign to address the levels of harmful chemicals
- Real-time monitoring of chemicals in all river catchments.

vii. Non Native Invasive Species

- There is a need for increased resourcing for control measures, monitoring and biosecurity compliance to deliver on-ground practical outcomes to address invasive non-native species.
- Change in legislation to make it an offence to have these plants growing on your land.
- Farmers are required to control invasive species under the cross-compliance system. There needs to be more advice and guidance around the identification and control methods permitted to tackle invasive species.

- Must urgently put into place measures and funding to control these. Far too much talk and writing about the problem.
- The DAERA Estate is one of the largest of any of the NI Departments; compliance in your department will lead by example.

viii. Anaerobic Digestion Plants

- The volume of digestate sludge generated by Anaerobic Digestion (AD) Plants and its disposal requires review. They needs to be a cradle to grave approach adopted to assist in the management of nutrients, particularly when applied to agricultural land.
- The growing of "green" energy crops for AD plants is a major change in land use practice, especially with forage maize production having greater nutrient requirements than extensive grazing.
- Given the high pollution risk associated with AD digestate there is a need for much greater transparency and closer monitoring of the nutrient content of digestate.

ix. Quarries and mines

- While there appear to be economic benefits to this extraction, my concern is the adverse environmental impacts being overlooked and not enforced effectively.

x. Plastic/Microplastics Pollution

- Microplastics should be added to the list of pollutants regularly monitored in inland waters, requiring agreement of an accurate, repeatable, reportable method for microplastic quantification.
- To accompany a regulation, monitoring and compliance programme, a large community education campaign should be established on the impacts and behaviour change. There should also be a complimentary programme of works to remove larger plastics and litter from the water environment through working with industry and local councils to ensure robust and integrated

recycling processes are in place locally, making recycling more convenient and comprehensive.

- There is no mention of microplastic pollution via storm water run-off. Plastic pollution via storm water run-off is the largest single contributor to plastic pollution in the environment

xi. Climate change in NI

- To mitigate against climate change / extremes, and protect fisheries there should be rolling programmes of riparian planting and a separate incentivised programme of upland riparian planting across the major catchments.
- The UK government has committed £640 million to a 'nature for climate fund', while the Scottish government has committed £250 million over the next ten years for peatland restoration. A similarly ambitious 'nature for climate fund and green recovery' fund is required in NI.
- An intergovernmental approach on riparian and upland broadleaf planting, to stabilise river banks and minimise flood effects to benefit fisheries, water quality and flooding, is required.
- The current crisis reminds us that our economy and the health of society are dependent on a flourishing natural world and any recovery package that doesn't include nature will be incomplete.

xii. Fisheries

- An urgent need to ensure that salmon habitats are assessed hydrogeomorphologically in addition to current fishery protection and river management measures in place.
- Far insufficient measures to protect fish bearing in mind fish damage and kills, difficulty or on occasion's fish and other forms of wildlife not capable of ascending or descending. There is very limited or virtually no checking to see if these hydros are operating satisfactorily.
- Any livestock access points upstream of spawning beds should be quickly identified and should be the first access points to be addressed.
- Fishery Habitat enhancement is required.

- Over the past few years many of our rivers have been cleaned and fish stocks reintroduced using (natural to this area) species of fish and other aquatic animals which has improved the biodiversity and the physical conditions of our rivers and this progress should continue.
- A lake being stocked with trout should also have a percentage of fish added that would benefit the lake system. The introduction of predator fish/mammals as a means to improve fish quality.

f) Do you have any other suggestions for how to address the significant issues highlighted?

Many respondents suggested the need to scale back our production, produce a more wholesome product, receive a better price and allow primary producers to be price makers rather than price takers. Other stated that higher standards in sewage treatments, more investment is badly needed. Comments included the need for more Green spaces and more planting of trees and large shrubs and also more Sustainable Use Drainage Schemes (SUDS) in local development plans, programme for government & legislation.

g) What other actions do you think could be put in place to reduce the pollution of waters caused by nutrient enrichment?

Many respondents felt that the control of the amount of slurry & fertiliser that is put on the land in Northern Ireland is key and that an attractive grant scheme that pays the landowner to establish buffer strips along watercourses could play a big role in reducing the amount of nutrients that reach the watercourse. Others suggested much better slurry management with soil testing mandatory prior to spreading, with slurry storage should be legislated similar to the oil storage regulations. Operatives should be qualified/ licensed to discharge slurry, both landowners and contractors

Some respondents suggested planting trees and fenced off tree margins along water bodies to help absorb nutrient runoff, whilst preventing livestock encroachment into streams, with actively funded and encouraged provision of suitable drinking stations and also wildlife margins. Some stated that much better use of secondary wetlands/ marsh and reed beds as secondary filtration of Waste Water Treatment plants, with the advantage of improving habitat for plants and birds.

Many respondents noted that combined sewer systems should be proactively reduced and major funding is urgently needed for the development of and replacement of sewage infrastructure.

h) What extra data would you like to see collected? What additional monitoring and evaluation would you like to see?

Some of the additional information that respondents would like to see include:

- Flow rates need monitoring, fish passes need improvement. Unnecessary dams and unapproved blockages need removed.
- Random soil nutrient sampling across all farms to identify areas which would most likely cause nutrient enrichment of water.
- Nutrient balance sheets. This balance sheet should also show and require that farmers must use other forms of nutrient capture and utilisation. E.g. clover must be added to all swards and pastures and crop rotation.
- Additional monitoring and testing of our reservoirs, rivers and waterways to maintain a clean supply for consumption by industry and the public.
- A collation of all the livestock access to watercourse points in Northern Ireland to determine the extent of erosion from livestock trampling, (incorporated into farm visits
- Slurry storage and spreading rates
- Real-time monitoring of all river catchments
- Use of drones for pollution investigations.

5. Next Steps

NIEA has been working with stakeholders and other government Departments and Agencies to develop key suggestions from the SWMI consultation and integrate them into the draft 3rd cycle River Basin Management Plan. These improvements will help to enhance engagement as the final third cycle plan is developed and implemented.

The comments received from the SWMI consultation has helped influence the draft River Basin Management Plan which was launched on 9 April 2021 and is available on to view on our [consultation webpage](#). The consultation on the draft plan will be used to test our proposed approach to dealing with the most significant issues affecting water quality within Northern Ireland. The consultation period will close on

10 October 2021 and the third cycle RBMP will be published in the financial year 2021/22 to cover the 6 year cycle from 2022-2027.

ANNEX A

Summary of Comments on Consultation and Departmental Response

RESEARCH		
Respondent	Respondents Comment	DAERA Comment
AFBI	Legacy P - These soils pose a significant and chronic risk to water quality and is not adequately addressed by the current regulations. The balance of agronomic and environmental targets have yet to be identified for NI farming systems.	Expand evidence to support PoMs for agriculture. Continue to commission projects through DAERA E&I programme, using a steering group approach to provide transparency and join up across policy and operational interests in DAERA.
AFBI	P in manure - The fundamental problem for NI's ability to achieve the Water Framework Directive P targets is that P from animal manures alone exceeds total crop P demand by nearly 20%. The return of manure p to soil would need to be reduced by 48%	Expand evidence to support PoMs for agriculture. Continue to commission projects through DAERA E&I programme, using a steering group approach to provide transparency and join up across policy and operational interests in DAERA.
AFBI	Landbank for P - Balanced manure P applications to agriculture is constrained by the available landbank; as a large proportion (ca. 68%) of the NI agricultural area is classed as a 'Less Favourable Area' with agricultural activity constrained by high soil moisture, frequent rainfall and slope. In addition constraint is critical source area of runoff P loss where repeated manure applications would not be advised.	Expand evidence to support PoMs for agriculture. Continue to commission projects through DAERA E&I programme, using a steering group approach to provide transparency and join up across policy and operational interests in DAERA.
AFBI	Surplus P - 54% of townland areas in NI would remain in surplus (even if manure could logistically be moved around)	Expand evidence to support PoMs for agriculture. Continue to commission projects through DAERA E&I programme, using a steering group approach to provide transparency and join up across policy and operational interests in DAERA.
AFBI	Mitigating P loss to water courses - targeting of measures at high runoff risk areas as a first step to intercepting and breaking the connectivity which brings excess nutrients, and sediment, from land to water. Regarding the implementation of this approach at NI scale, the EAA SSAS and subsequent Colebrooke and Strule Soil Testing and Training Initiative have demonstrated the feasibility of large area mapping of both soil nutrients and modelling field-scale runoff risk using LIDAR digital elevation models. In terms of measures appropriate to break connectivity from high runoff risk areas, in the first instance these areas should be targeted using	Expand evidence to support PoMs for agriculture. Continue to commission projects through DAERA E&I programme, using a steering group approach to provide transparency and join up across policy and operational interests in DAERA.

	options within the current Environmental Farming Scheme (riparian buffers). Future research is needed to identify additional mitigation measures (e.g. field-edge berms, sediment traps) and optimise them specifically for NI land use and landscape characteristics. AFBI has been assessing the effectiveness of SRC willow/soil bio-filtration blocks in reducing the environmental impact of overland flow from agricultural land.	
AFBI	Behavioural change - Real-time monitoring data from local rivers. As a starting point towards implementing the SALMs recommendations in NI the AFBI/UU team recommended a focussed roll-out of 3 mobile water quality monitoring units and several fixed stations at carefully chosen locations, supported by a dedicated catchment outreach and educational programme developed around each site and including supplementary citizen science activities.	Agreed. Expand evidence to support PoMs for agriculture. Continue to commission projects through DAERA E&I programme , using a steering group approach to provide transparency and join up across policy and operational interests in DAERA, including social and behavioural studies
AFBI	Farmyards - Knowledge transfer emphasising the methods and importance of farmyard management from an environmental perspective could help to improve water quality. This would be a low-cost alternative to more expensive strategies such as investing in infrastructure or stricter regulation. Greater KT related to farmyard management may contribute to reduction of nutrient loads reaching the stream without compromising productivity.	Agreed. Expand evidence to support PoMs for agriculture. Continue to commission projects through DAERA E&I programme, using a steering group approach to provide transparency and join up across policy and operational interests in DAERA, including protection of Drinking water sources.
AFBI	Pesticides - Diffuse Pollution. Evidence in the Derg shows that it is not point source but diffuse. Therefore, a further measure to address this issue would be to gather further evidence on MCPA – and other pesticide – pollution and persistence to consider whether a change in regulations on usage locations (e.g. on certain soil types) and reasons for usage (e.g. spraying rushes with MCPA to “be seen to be managing them” to gain subsidy payments) might better protect waterbodies. The immediate stressor within the agricultural landscape is diffuse nutrients and sediment input and their accumulation in-stream. There is a need for a wider and more integrated assessment of chemicals, such as pesticides (MCPA), alongside primary diffuse nutrient and sediment stressors to fully understand the range of potential impact and ecological response in order to design appropriate mitigation measures. Multi-stressor assessments may become increasingly important under scenarios of climate change for the UK in terms of transfer and	Agreed. Expand evidence to support PoMs for agriculture. Continue to commission projects through DAERA E&I programme, using a steering group approach to provide transparency and join up across policy and operational interests in DAERA, including protection of Drinking water sources.

	transformation within the system.	
AFBI	<p>Sediment - agricultural activities have been shown to be the dominant source of sediment loss to surface waters. Arable land, in particular has been identified as at highest risk of sediment loss in a number of studies (Sherriff et al. (2016), Sherriff et al. (2015)) however relatively few studies have examined the seasonal component of land-water transfer. While the EFS offers important sediment mitigation measures to farmers in the form of riverbank stabilisation and buffer strips, consideration should be given to the inclusion of sediment traps (e.g. either through better ditch management or ponds). Inclusion of these sorts of measures will provide farmers with a wider range of options to adopt to the specific challenges and practices on their farms. Rapid assessment and low cost methods for fine sediment need to be developed. Imaging approaches are the focus of an ongoing AFBI/UU DAERA-funded PhD (Rice, in preparation 2020) and further investment in the development of these prototype assessments into a deployable monitoring approach would be worthwhile.</p> <p>We have begun to address through PhD studies undertaken along E&I project 17-4-01 and this will provide an important temporal perspective to examine the impact of farm practices on in-stream sediment accumulations, and how the ecological impact of such accumulation may vary according to season/instream conditions.</p>	<p>Agreed. Expand evidence to support PoMs for agriculture. Continue to commission projects through DAERA E&I programme, using a steering group approach to provide transparency and join up across policy and operational interests in DAERA, including developing and applying methods for assessing impacts of sedimentation in freshwaters.</p>

GENERAL COMMENTS

Respondent	Respondents Comment	DAERA Comment
<p>UAF / Noel Crymble / Joanne Lusby/Mary McGuiggan</p>	<p>Monitoring: The number of sampling points and the frequency of sampling needs to be increased on all waterbodies. If it is not being measured, it is not being managed! Real-time monitoring is required for all waterbodies. Under the Water (Northern Ireland) Order 1999 an annual fee to be levied on each land manager within a catchment to pay for real-time monitoring on each waterbody. The information must be timely, relevant and usable by elected representatives and the citizens in each Council Area. DAERA/NIEA needs to be accountable to the people it serves and not just to the people they choose to serve.</p>	<p>Current monitoring programmes used for assessment against water quality standards are set out in the Water Framework Directive. This includes the spatial distribution and sampling frequencies required. The standards are enshrined in transposing legislation, and any changes need to follow the normal legislative and consultation processes, supported by the underlying scientific advice.</p> <p>An additional suite of monitoring tools, including in- stream sensors, rapid assessment techniques, and localised, short term surveys are used by NIEA WMU to investigate specific problems and as part of catchment projects and research.</p> <p>The use of Real Time Water Quality Monitoring (RTWQM) has been investigated as part of a DAERA E&I project 17/4/07. Such equipment is being used by AFBI as part of catchment based projects, and proposals are being developed to increase the use. This research will enable an informed view of the costs and benefits of such an approach to be fully assessed before such a programme is rolled out across all rivers.</p> <p>DAERA NIEA WMU proposes to undertake a review of all freshwater monitoring programmes to ensure they remain fit for purpose, reflect emerging technologies, and are in line with statutory requirements post EU Exit. Options to source funding for the extension of freshwater monitoring in all its forms will be explored.</p>
<p>Olga Harper/ Noel Crymble /Joanne Lusby/ Mary McGuiggan</p>	<p>The NIEA assessments are unreliable and can't be independently validated. They are insufficient, monthly or quarterly, to detect levels of nutrients. Heavy rainfall can skew the results and sampling at one point may not give a reliable reading for elsewhere in the system. The sampling techniques are not robust enough and sampling infrequently and with result unverified. It is currently a waste of time and must be totally revised to utilise best practice. This requires enhanced monitoring practices. All waterbodies need real-time monitoring with frequency of testing and rigour of testing from multiple points increased.</p>	<p>NIEA WMU do not agree with the statement '<i>The NIEA assessments are unreliable and can't be independently validated</i>'. The sampling procedures, sampling staff and analytical laboratories all adhere to the ISO/IEC 17025:2017 quality standard. Sampling staff and analytical activities are subject to a rigorous process of internal audits, external UK and international proficiency schemes and are independently assessed by the UK's leading quality assurance organisation – UK Accreditation Service (UKAS). The schedule of accredited sampling and testing performed by the laboratories in Lisburn is listed in the UKAS schedule under our code of accreditation 4040 (UKAS 4040). [WMU WADE] The</p>

		use of Real Time Water Quality Monitoring (RTWQM) has been investigated as part of a DAERA E&I project 17/4/07. Such equipment is being used by AFBI as part of catchment based projects, and proposals are being developed to increase the use. This research will enable an informed view of the costs and benefits of such an approach to be fully assessed before such a programme is rolled out across all rivers.
Nikki Ardill	The ineffective methods used by officers to track pollution incidents. Not all fields are accessible from a farm lane and it takes a considerable amount of time to walk across farmland to inspect the area. I appreciate that there are too few staff but the process could be speeded up significantly by the use of drones. Drones can fly over the catchment area with ease, record film footage or images in real time. They can see where for example, muck spreading has occurred or pollutants leaking from an industrial site at the weekend when access is difficult. The drones and their images can be outsourced to professional companies to ensure consistency, quality and VFM. The contract could include rates for outside office hours or call out fees etc., with upper limits on recording time without additional permissions to proceed. These images could be sent to an NIEA officer for oversight and follow up investigation. This would improve response time and prosecutions for DAERA	DAERA currently uses drones on a limited basis primarily in the area of land and habitat survey work. The benefits of drone use when investigating real time pollution incidents is still being assessed and there are several issues that need to be addressed around response times, privacy, safety and drone efficacy along watercourses with tree cover. New regulations for flying and operating drones and model aircraft are coming in 2021 and the Department will need to take these into account when considering the future use of drones when investigating pollution incidents.
NIEL/Olga Harper/ Noel Crymble /Joanne Lusby/ Mary McGuiggan	The Conservation Management Plans for Natura 2000 sites need to be integrated with River Basin Management Plans.	The relevant NED and WMU teams are working closely together to ensure the freshwater N2K CMPs and next cycle RBMPs are working in parallel.
NIEL	Air Quality Impact Assessments take no account of Ammonia deposition at higher altitudes within a catchment. The Netherlands reduced ammonia emissions by 64% between 1990 and 2016 so we know that with the right policies we can successfully tackle this problem. An important part of this is having the necessary data and NIEL would support the recommendations in 'Making ammonia visible' that the baseline data on ammonia is as accurate as possible and that policy and regulatory decisions are based on	The Department has undertaken significant research and is content the background data available on the Air pollution information system is fit for purpose.

	sound and up to date science.	
RSPB	The RSPB Nature After Minerals programme may be useful to apply learning regarding multi-benefit remediation of sites.	The Department for Economy (DfE) is responsible for granting prospecting licences and mining licences for exploration and development of minerals in Northern Ireland. The RSPB report has been noted in relation to the multi-benefit approach to remediation.
Nikki Ardill	<p>Waste & contaminated land - I have been involved in a number of applications for landfill sites over the years. Whilst the technology is evolving to identify contaminants and where they are buried, the reality has been that the systems don't always work. Poor installation and construction or cost cutting exercises have resulted in compromised liners and escaped leachate. We are still dealing with contamination resulting from historic landfill sites around Belfast Lough and around other settlements in NI. This isn't just a problem for water contamination but soil/sediment transportation, land unable to be developed or used for a very long time because of leachate and contamination. The legislation to enable prosecution has been ineffective, leaving the government with a large clear up bill in many cases (Mubuoy Rd). Innovative solutions encouraging land owners to plant reed beds and wet woodland to trap contaminated water before it reaches the watercourses. (https://www.bbc.co.uk/news/uk-northern-ireland-53082804) Inspections at key stages of construction would help to reduce compromised liners. But who will enforce this? NIEA? Local Councils and Building Control? Addressing the lack of permits for longstanding landfill sites pre 1974 will be difficult to control and bring into line with current practices. Does this disseminate from NIEA to local Councils as a statutory duty?</p>	<p>Since the Landfill Regulations came into force in 2003, all new landfills have to submit construction quality assurance (CQA) plans prior to liner construction for approval. Site works are supervised by a qualified engineer and after completion, a CQA verification report is submitted. Modern landfills are extensively monitored and there is no evidence that they are having any significant impact on the environment. A number of landfill sites are already using reed beds as part of their site management processes. For historic landfills, prior to 2003, these were not generally constructed as engineered sites with a liner but were rather based on the 'dilute and disperse' design which was accepted practice at the time. Some of these historic landfills have had an engineered cap installed to minimise rainwater infiltration to reduce the impact on the environment. There is no evidence that any historic landfill is having a significant impact on groundwater. Historic landfills have been used for further development including: community recreational facilities; tree planting and film studios. The impact of illegal landfills is an entirely separate matter. The land owner or the individuals/business that deposited the waste are responsible and NIEA takes appropriate enforcement action based on the evidence available. Neither Central Government nor local councils are responsible for the clean-up of historic landfills or illegal landfills.</p>
Loughs Agency	<p>In relation to waste and contaminated land, the Agency comments that while the application of expected standards to protect fisheries is applied through the various statutory standards to new applications for waste disposal, Loughs Agency remains concerned about the management of illegal and historic sites, particularly where there is a potential to impact on salmonid fisheries. Historical and illegal landfill sites must be closely monitored and managed to ensure that any leachate discharges cannot affect the wider environment. Given the historical use of these sites there is</p>	<p>Since the Landfill Regulations came into force in 2003, all new landfills have to submit construction quality assurance (CQA) plans prior to liner construction for approval. Site works are supervised by a qualified engineer and after completion, a CQA verification report is submitted. Modern landfills are extensively monitored and there is no evidence that they are having any significant impact on the environment. A number of landfill sites are already using reed beds as part of their site management processes. For historic landfills, prior to 2003, these were not generally constructed as engineered sites with a liner but were rather based on the</p>

	<p>a potential for hidden discharges of low concentration, but high impact agents, and as such these sites need a managed and directed through a transparent monitoring programme.</p>	<p>'dilute and disperse' design which was accepted practice at the time. Some of these historic landfills have had an engineered cap installed to minimise rainwater infiltration to reduce the impact on the environment. There is no evidence that any historic landfill is having a significant impact on groundwater. Historic landfills have been used for further development including: community recreational facilities; tree planting and film studios. The impact of illegal landfills is an entirely separate matter. The land owner or the individuals/business that deposited the waste are responsible and NIEA takes appropriate enforcement action based on the evidence available. Neither Central Government nor local councils are responsible for the clean-up of historic landfills or illegal landfills.</p>
UFU	<p>NIEA must continue to tackle the illegal waste issue as this poses a significant threat to the water environment particularly in rural areas.</p>	<p>NIEA has a dedicated Enforcement Branch which actively pursues those responsible for illegal waste activity within NI and where seek to apply the appropriate level of sanction. In the more serious cases NIEA may include criminal conviction through the courts and where appropriate recovery of assets under the Proceeds of crime Act. However, NIEA cannot tackle the issue alone and works with a range of partners to tackle the issue including District Councils, PSNI, HMRC and other UK and ROI Environment Agencies.</p>
UFU	<p>The UFU has concerns about 'fly-tipping' in ditches, water courses etc. and littering. This is a problem throughout Northern Ireland and needs to be tackled and not only leads to deterioration of water quality but can result in flooding if a waterway is blocked. The Union feels that local councils must take more responsibility in the clean-up of fly-tipping incidents. Local farmers are often penalised when someone else has dumped material on their land outside of their control and are left with the cost and responsibility of dealing with the waste and this is unfair. Many farmers with waterways through their land are also seeing a lot of litter in rivers and streams which has moved downstream. There are risks to livestock from litter and more needs to be done to make the public aware of this. Community groups may be willing to help with clean up actions along roadsides etc. and more education is needed to prevent waste and litter ending up in waterways. Food take-away outlets should be made more responsible for the disposal of</p>	<p>The problem of litter is dealt with by district councils under the Litter (NI) Order 1994. As regards illegal waste disposal including fly-tipping both district councils (DC's) and the NIEA have powers to address this issue. DC's and the NIEA work in partnership through a Local and Central Government Waste Working Group on the matter of waste management including illegal waste disposal and fly-tipping. Where possible the NIEA and DC's will seek to place the burden and cost of remediation on those responsible but unfortunately due to the nature of fly-tipping it is often difficult to identify the perpetrator.</p> <p>The current legislation (the Clean Neighbourhoods & Environment Act (NI) 2011 & the Environmental Offences (Fixed Penalties) (Miscellaneous Provisions) Regulations (NI) 2012) enables councils to issue Fixed Penalty Notices (FPNs) of up to £80 for littering offences. For cases dealt with by the courts, a fine of up to £2,500 can be imposed. Data and feedback has been sought from councils to review the effectiveness of the current FPN regime. The findings will be included in the draft Environment Strategy</p>

	<p>packaging. It has been proposed by some that a packaging should be printed with customer's vehicle licence plates of details to encourage the correct disposal or to fine those who continue to pollute local areas.</p>	<p>which will be consulted upon in early 2021, and will consider options for tackling litter offences and ensure all stakeholders can input to the process.</p> <p>DAERA supports education & awareness raising activities through a cross-sectoral partnership – 'Live Here, Love Here' (established by Keep NI Beautiful) – to tackle littering through a media campaign, a small grants scheme and support for clean-ups (e.g. The BIG Spring Clean & Adopt-A-Spot). Eco-Schools, with every NI school registered, also mandates a component on litter with strict standards set for schools being assessed to the international Green Flag Standard. Keep NI Beautiful also operates a forum for Enforcement Officers to share good practice and maximise effectiveness of time spent issuing FPNs and taking prosecutions.</p>
Raymond Mairs - Glen Oak	<p>In many ways fresh water fin fish production might be considered the <i>"canary in the coal mine"</i> due to the fact the production is entirely dependent on water quality in our rivers 24/7/365. This has been evidenced by matters not fully highlighted in the Consultation documents. That is namely, increasing chronic pollution from intensive farming activity and sewerage treatment plants awaiting urgent upgrading. A review of reported pollution incidents in recent years highlights a very worrying escalation of this activity and their impact on aquaculture. Glen Oak had two reported and confirmed "fish kills" as a result of this in 2019. We await any action on these events which caused significant financial loss. The impact on the indigenous stocks was raised by Glen Oak, but not responded to.</p>	<p>In respect of the incident at Kilrea in January, investigation confirmed that there were fish mortalities in 1 of the 12 similar tanks on site. No Fishkill was noted in the river. The NIEA Inspector collected samples of the inlet and outlet from the fish farm. The results of the subsequent analyses, which were reported to the owner on 26 February, indicated that there no pollution in the river at the time of sampling. Given that there was no observable pollution to investigate, tracing to a source was not possible.</p> <p>In relation to the fish mortalities reported in October at Crumlin, from investigation, water pollution signs were noted in the Crumlin River, however, a discrete source of the pollution could not be identified at that time. No Fishkill was noted in the Crumlin River itself. As a result of investigatory work in 2019 and 2020, NIEA has developed a programme of site visits in the catchment designed to assist in identifying the specific source or sources of the pollution and the investigation remains live at the time of writing.</p>
Nikki Ardill	<p>Increased numbers of water sensors, installed and paid for jointly by those business areas using the data. Data sets could be passed onto Universities etc. or published freely to encourage citizen science.</p>	<p>The use of Real Time Water Quality Monitoring (RTWQM) has been investigated as part of a DAERA E&I project 17/4/07. Such equipment is being used by AFBI as part of catchment based projects, and proposals are being developed to increase the use. This research will enable an informed view of the costs and benefits of such an approach to be fully assessed before such a programme is rolled out across all rivers.</p>

		DAERA NIEA WMU agrees that data should be more readily available to a broad range of stakeholders and the people of Northern Ireland. Publication and availability of data by District Council or other administrative boundaries will be taken forward as part of DAERA's Data Strategy and OPENDATA policy. Water Quality assessments are currently available here NIEA Catchment Data Map Viewer
Olga Harper / Noel Crymble / Joanne Lusby /Mary McGuiggan	STOP planning approvals, discharge consents, Waste management Licenses and PPCP approvals until relevant waterbodies are returned to good condition and adjacent Natura 2000 sites are properly protected and returned to Favourable condition. Planning decisions are a key to much of the pollution that occurs in our waterways. Consultation responses by NIEA must reflect and environmental bias in their deliberations. Too much of EIAS are bland -we need a questioning, critical approach to planning. Phosphates and Ammonia must be seen as the enemies of water quality and monitored out where possible.	DAERA are a statutory consultee and as such do not have the power to stop planning approvals.
Noel Crymble	Council Planning Committees give permission to develop SUBJECT to certain conditions. There needs to be direct communication between Water Management and Council Enforcement Officers to ensure that water quality is given the priority it needs and that direct effective action can be taken.	DAERA as a statutory consultee provides advice to the planning authority on all consultations received, including those that are hydrologically linked.
Noel Crymble	If DAERA/NIEA allows Planning Committees to give permission to a development "Subject To" certain water quality conditions and these 'Conditions' are abused or not MET - DAERA/NIEA should insist that the planning development is STOPPED and the previous planning permission is invalidated. This action could give a big improvement in water quality but must come with the full authority and weigh of DAERA/NIEA and not dependent on local authority influence.	As a statutory consultee, DAERA has no power to stop a planning development. Local planning authorities are aware of their duties as set out under Section 1.1 of the Wildlife and Natural Environment Act (NI) 2011 (duty to conserve biodiversity) and section 6.174 of the Strategic Planning Policy Statement2 (duty to apply the precautionary principle). DAERA also anticipate that all responsibilities and duties in relation to The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 will have been completed by the Council prior to any approval being granted.
RSPB	Sustainable Planning Policy for NI – Planning for Sustainable development – Integration with the SPPS and acknowledgement of the impacts that new developments have on water flows throughout systems and ability to implement nature-based solutions in place.	DAERA as part of the consultation process provide guidance and comment to councils on the soundness of policies in the local development plan process. All Council plan strategies and local policy plans must take into account relevant departmental policy and guidance including the SPPS. Any plans which do not may be considered unsound

		at Independent Examination by the PAC and cannot be adopted in that format.
Olga Harper	All monitoring of all possible pollutants of our waterways must be freely available, at least quarterly to our LEAs, their elected representatives and the people they serve.	DAERA NIEA WMU agrees that data should be more readily available to a broad range of stakeholders and the people of Northern Ireland. Publication and availability of data by District Council or other administrative boundaries will be taken forward as part of DAERA's Data Strategy and OPENDATA policy. Water Quality assessments are currently available here NIEA Catchment Data Map Viewer
Noel Crymble / Joanne Lusby	The Assessment is flawed and therefore under reporting significant water management issues due to poor sampling techniques and infrequent sampling. Diffuse pollution can run in currents within a waterbody. Therefore, single point sampling may not detect pollution entering at opposite points within the river. The flow rates and velocity can cause biases especially after heavy rain. Monthly or quarterly sampling is inadequate in detecting nutrients, especially if slurry was applied weeks before the sampling dates. NIEA Monitoring of water quality has produced unreliable assessments which NIEA could not independently validate. Therefore, this assessment cannot be relied upon.	Current monitoring programmes used for assessment against water quality standards are set out in the Water Framework Directive. This includes the spatial distribution and sampling frequencies required. The standards are enshrined in transposing legislation, and are supported by the underlying scientific advice. NIEA WMU do not agree with the statement The NIEA assessments are unreliable and can't be independently validated. The sampling procedures, sampling staff and analytical laboratories all adhere to the ISO/IEC 17025:2017 quality standard. Sampling staff and analytical activities are subject to a rigorous process of internal audits, external UK and international proficiency schemes and are independently assessed by the UK's leading quality assurance organisation – UK Accreditation Service (UKAS). The schedule of accredited sampling and testing performed by the laboratories in Lisburn is listed in the UKAS schedule under our code of accreditation 4040 (UKAS 4040).
UFU	In previous consultations on the Significant Water Management Issues, there were separate consultations for each of the River Basin Districts allowing regional issues to be identified and plans drawn up specific for those areas. DAERA appear to be moving towards a high-level broad-brush strategy which in our view goes against the principals of the Water Framework Directive and the need to look at issues at a local level and catchment scale. In addition, the WFD National Stakeholder Forum which used to meet at least biannually has not met since May 2019 which is disappointing given public participation requirement of the WFD.	During RBP second cycle, NIEA has held its biennial WFD stakeholder conference in 2017 and 2019 with local catchment stakeholder events in the intervening years. The publishing of one RBMP covering all 3 River Basin Districts does not in any way detract from the work on-going at a local level within each RBD. Whilst we continue to ensure effective national measures are in place to address pressures on a whole RBD basis, it has become apparent that the delivery of supporting measures must be prioritised to ensure the implementation of the "right measures in the right place". The role out of the Integrated Ecosystem Model (IEM) and the prioritisation matrix suggested in the 3 rd cycle RBMP will allow for much greater local and catchment scale interventions. There are six dedicated catchment officers, who continually work with

		groups of stakeholders on local water quality issues within each RBD.
Nikki Ardill	A contract with a drone services company to fly the catchment area would produce evidence for the NIEA staff to analyse and investigate further. A way of uploading intelligent detailed data onto the website would also be helpful. For example the system used to report non-functioning traffic lights on NI Direct website; but instead would use the map to locate pollution incidents. The Traffic light reporting shows if the incident has been reported before and denotes how many reports had been made for that incident; similar could be applied by showing the catchment area layer on the map and road names layer.	A pollution reporting system already exists for internal use. All pollution incidents are captured on a bespoke incident management system. Due to GDPR we are unable to publish precise locations of previous reported incidents. These are available internally to assist response and investigation.
UFU	Partnership working - The UFU had proposed this type of approach and this was included as part of the NIEA/UFU MOU but has since fallen by the wayside and should be revisited.	This issue will be discussed as part of the ongoing UFU/NIEA MoU meetings. Some examples of projects that are currently underway through Water Catchment Partnership, Soil Testing Initiative, INTERREG projects Source to Tap and Catchment Care and EFS group schemes and the more recent Environment Fund.
UFU	UFU do not condone farmers who deliberately pollute waterways. Statistical reporting of agricultural pollution should reflect the degree and the size of the incident and the risk to waterways e.g. many small pollution spills from agriculture may not cause the same damage as a leak from an industrial facility yet statistically reflect the agriculture sector as being a major problem.	NIEA assesses all water pollution incidents, regardless of the business sector identified as the source of the pollution, using common environmental impact criteria. The environmental impact criteria take account of the impact on water quality, the fishery, the amenity of the receiving waterway and any specific water resources that are present downstream such as drinking water abstractions. The criteria are independent of the pollution source and based only on the observed impact on the waterway. Where an incident does occur, the environmental impact is assessed as being of High, Medium or Low Severity.
NIW	NI Water would further highlight wildfire management as contributing to organics and colour issues within raw water. Wildfires in our drinking water catchments present significant challenges at our water treatment facilities; the removal of carbon arising from runoff following wildfires has implications for chemical usage, human resource and power. In addition to the treatment costs, NI Water incurs additional costs through mobilisation of resource for enhanced water quality sampling and analysis and catchment remedial measures, including isolating streams from raw water intake and deployment of silt traps to	NI Water are a member of the Northern Ireland Wildfire Stakeholder Group and were previously a member of the Interdepartmental Group that reported, with recommendations on the wildfire issue, to the Environment Minister on the wildfires of 2011. NI Water have been a member of the Mourne Wildfire Group and have supported Mourne Heritage Trust, alongside the Department and NIFRS, in the delivery of the Eastern Mourne Wildfire Project. We would encourage NI Water to continue this approach across their estate outside the Mournes. The Department circulates wildfire alerts to stakeholders such as NI Water during periods of high wildfire risk. NIFRS and NIEA deliver a community

	protect our reservoirs. NIW will continue to work closely with the NIFRS to contain the spread of wildfires and minimise run-off to water courses.	outreach and awareness programme (suspended in 2020 due to Covid-19) to engage with landowners and land managers, during periods of wildfire risk both these organisations issue guidance to the public on wildfire prevention through press releases and social media, the Department has provided additional support to Belfast Hills Trust, Ring of Gullion AONB to develop specific messages targeted at schools re the dangers of wildfires.
NIW	Furthermore, joint public awareness campaigns from multiple stakeholders in relation to the environmental dangers associated with fly tipping and wildfires could support water quality objectives.	NIFRS and NIEA deliver a community outreach and awareness programme (suspended in 2020 due to Covid-19) to engage with landowners and land managers, during periods of wildfire risk both these organisations issue guidance to the public on wildfire prevention through press releases and social media, the Department has provided additional support to Belfast Hills Trust, Ring of Gullion AONB to develop specific messages targeted at schools re the dangers of wildfires.
UFU	It is unfair that farmers are often penalised twice for water pollution related issues through area payment penalties and through the Courts. While the UFU recognise that the penalty mechanism was largely determined by the EC, there are now opportunities for DAERA and NIEA to revise the current penalty system to make it fairer and more transparent for local farmers.	All pollution related incidents, regardless of the origin, are investigated and prosecuted under the Water (Northern Ireland) Order 1999. Prosecutions under this legislation are criminal matters. Separately, and uniquely, farmers claiming Basic Payment Scheme (BPS), and other direct payments, are required to meet cross compliance requirements across a number of areas. Any breaches of these cross compliance requirements detected can lead to penalties being applied by the BPS paying authority. These penalties are civil matters and are completely separate to any convictions that may occur under the Water (Northern Ireland) Order 1999.
Nikki Ardill	I am well aware that quarries and mines have the potential to be well regulated particularly when the applicant is seeking an extension. However, practices on some sites are woeful, some as a result of historic, long term, poorly detailed approvals that are unenforceable. Others because of a lack of enforcement of conditions or penalties when conditions have been breached. I have been following the Omagh goldmine saga and the images of bund breaching and other leaking discharges running down slopes and into watercourses is dreadful to observe. While there appear to be economic benefits to this extraction, my concern is the adverse environmental impacts being overlooked and not enforced effectively. Environmentalists have lobbied and taken	The draft Programme for Government aims to ensure that NI's ambition for economic growth and social progress takes into account the impact on the environment and the depletion of our finite natural resources. More specifically, the Strategic Planning Policy Statement for Northern Ireland states that Minerals, including valuable minerals, are an important natural resource and their responsible exploitation is supported by government. The minerals industry makes an essential contribution to the economy and to our quality of life, providing primary minerals for construction, such as sand, gravel and crushed rock, and other uses, and is also a valued provider of jobs and employment, particularly in rural areas. The Sustainable Development Strategy recognises that while it is important that we respect the limits of our

	<p>petitions to DfI but little improvement has resulted. What more will be done to ensure our water quality is not adversely affected by poor practices in the name of building the NI economy?</p>	<p>natural resources and ensure a high level of protection and improvement of the quality of our environment, 'sustainable development' does not prevent us from using and capitalising on such resources. It states that an enduring successful economy will effectively use natural resources and contribute towards the protection of the environment. While mineral developments can deliver significant economic benefits, there are also a number of negative aspects arising from this form of development. The effects of specific proposals can have significant adverse impacts on the environment and on the amenity and well-being of people living in proximity to operational sites. It is the responsibility of the planning system, and associated environmental authorisations, to address these negative aspects and where appropriate to support sustainable development but also to challenge development that is not deemed sustainable. NIEA play a key role in this process and the Agency's primary purpose is to protect and enhance Northern Ireland's environment. This is the context within which NIEA will review planning applications, and associated environmental authorisations, for new mineral developments.</p>
<p>Nikki Ardill</p>	<p>I live close to the coast and regularly contact WMU and the pollution hotline about incidents that I observe. As I work full time, most of the incidents I report are at the weekend or in the evening when there is minimal staff cover to respond. The reporting system while initially simple to contact, can be a nightmare to get to speak to the correct person in NORTHERN IRELAND. I regularly end up speaking to folk in North Wales. So communications when reporting, needs improvement and then follow up is another issue; my experience in the past 5 years has been patchy at best.</p>	<p>Currently NIEA investigates around 1800 water pollution reports each year. Approximately 50% of the investigations carried out are precipitated by calls that are made to NIEA via the Incident Hotline with 20% of incidents discovered by NIEA staff whilst carrying out their normal duties and the remainder of the investigations follow emails to the NIEA Emergency Pollution Email address or calls received via general phone numbers. Reports made outside normal hours are received initially by the NIEA's 'out of hours' service provider i.e. the Environment Agency (England) Incident Communication Service (ICS) which is based in Sheffield, England. Water pollution investigations carried out in response to calls made to the Incident Hotline outside of normal hours account for around 15% of the total i.e. around 275 investigations each year. Calls made to ICS are recorded by them and the details passed to the NIEA Duty Officer as soon as possible. The NIEA Duty Officer will then contact the person making the call to confirm the incident details and the potential environmental impact based on the information provided. Instances where the reporting and communication processes are confirmed to have gone wrong are very rare. NIEA takes reports of problems or delays extremely seriously and will carry out an investigation</p>

		where issues are reported.
RSPB	Improved and integrated water resource management to increase resilience for extreme events such as flooding, drought, wildfires and malicious fires. Coordinated and coherent water resources planning will also help to embed an outcome-focussed approach to water resources management.	The Department notes your comment.
UAF/NIEL	Much greater use of natural capital and land management techniques (soft engineering) on an ongoing basis to, amongst other things, improve water quality and reduce the impact of flooding.	The Department is encouraging pilots for Natural Based Solutions through the upcoming Peace plus programme.
RSPB	Integration of nature-based solutions to help adapt to changed flow regimes from climate change, such as 're-wriggling' rivers, using wetlands and washlands as water storage and tree planting and changes to grazing to slow flows in times of flooding.	The Department is encouraging pilots for Natural Based Solutions through the upcoming Peace plus programme.
RSPB	Strategic long-term investment in nature-based solutions is required to drive positive outcomes for water quality, biodiversity, climate change action, health and wellbeing, and the economy.	The Department encouraging pilots for Natural Based Solutions through the upcoming Peace plus programme.
UAF/NIEL	More thorough application of integrated catchment management.	The 3rd cycle RBMP identifies the need to have the right measure in the right place - the development and roll-out of the Integrated Ecosystem Model (IEM) and the measures identified in the Conservation Management Plans will contribute to a more targeted catchment management approach.
UFU	The UFU recognises that paths across farmland in Northern Ireland allow the public to benefit from the countryside. Many local landowners and farmers have signed up to allow walkers to enjoy the NI landscape. However, livestock worrying, litter, fly-tipping, disease risks, safety issues and particularly liability are all issues that farmers have concerns around when access to farmland is proposed. These problems have come further to light during the lockdown period as the public have accessed private land illegally across NI and caused many issues and problems for local landowners. Even in areas with agreed access on pathways, a small proportion of users cause significant problems for landowners. Once access is agreed it is extremely difficult to regulate people therefore it is vital that proper planning is put in place. Access to the considerable area of publicly owned land in rural areas should	DAERA note your comment and will continue to engage with stakeholders.

	<p>be fully exploited before pursuing access onto private land including these suggested buffer strips. Much of this public land is underused. The UFU is supportive of agreed and organised access to private farmland if local landowners are in full agreement and landowners are indemnified against litigation. Disappointingly the genuine concerns of local farmers are not been recognised on this issue in this consultation document and landowners/farmers are not even listed in the final bullet point in paragraph 50 amongst the organisations that need to work together on this issue. A key failure of the greenways programme has been the complete lack of engagement with landowners and farmers particularly at the early stages. If DAERA are seriously considering this aspect, then it is imperative that they engage with farmers and landowners before any further work is progressed on this issue.</p>	
RSPB / NIEL	<p>It is imperative that the NI Executive delivers on the New Decade New Approach commitment to introduce an independent environmental protection agency to deliver more effective regulation and enforcement.</p>	<p>The Minister has committed to considering the implications of the ‘New Decade, New Approach’ proposal for the establishment of an independent environmental protection agency to form part of a future Programme for Government but an independent environmental protection agency cannot be created overnight – consideration needs to be given to appropriate options and these will all require robust economic appraisal to determine the best option for Northern Ireland. It is no small task to scope all of the potential impacts, including significant legislative, financial and human resource issues, which would be necessary before decisions can be made.</p> <p>The Assembly has given its consent to extend the provisions of the UK Environment Bill giving effect to an Office for Environmental Protection (OEP) to Northern Ireland and DAERA issued a discussion document on 10 December 2020 to gauge stakeholder views on how we should deal with environmental plans, principles and governance in the future. The consultation closed on 26 February 2021 and analysis is ongoing.</p> <p>The OEP will be independent from Government and able to scrutinise and advise on environmental policy, investigate complaints and take enforcement action against public authorities.</p>
NIEL	<p>Need for an Environmental Court in NI - heavier penalties</p>	<p>It is NIEA’s policy to initiate enforcement action for all incidents classified as being of a high or medium severity where the polluter can be</p>

		identified. The level of fines levied in the courts is a matter for the Judiciary. There are current sentencing guidelines which are available to Magistrates to provide for a consistent approach to sentencing. Since April 2017 until March 2020 NIEA have presented 44 cases of water pollution to the PPS for court action. Of these, 43 resulted in successful prosecutions, a 97.7 % success rate and totalling fines of £217,600
UAF/NIEL	More thorough and consistent application of the 'polluter pays principle' for water pollution incidents.	Reports of water pollution across Northern Ireland are investigated by the Northern Ireland Environment Agency (NIEA) using powers assigned to the Department under the Water (Northern Ireland) Order 1999. All cases of pollution are robustly investigated and where the polluter can be identified NIEA will pursue formal Enforcement Action in line with the enforcement policy for significant breaches in legislation. NIEA takes a graduated risk based approach to the enforcement of pollution, from providing proactive advice and working with those responsible to resolve issues, to formal enforcement including warning letters, cost recovery and the preparation of enforcement files for the Public Prosecution Service. It is NIEA's policy to initiate enforcement action for all incidents classified as being of a high or medium severity where the polluter can be identified. The level of fines levied in the courts is a matter for the Judiciary. There are current sentencing guidelines which are available to Magistrates to provide for a consistent approach to sentencing.
NIEL	NIEL believes there is a need for greater co-operation and collaboration with partners across government, including government departments, the third sector and educational institutions.	DAERA agree with this comment and CAFRE delivers a wide range of environmental education to young farmers delivered through 3rd level education. One of the proposed measures in this draft RMBP is to investigate the feasibility of an Education Officer.
Loughs Agency	The question of how we use water better raises the issues of water re-use, water recycling, rainwater harvesting and minimising water use. Domestically this should be widely promoted as it also reduces the volume of water entering wastewater treatment facilities and sewer networks. The Agency suggests that strong incentives, including financial incentives should be a key component in industrial audit and integrated pollution management.	DAERA NIEA would encourage the wise use of water, the re-use of effluent and water conservation. Where water can be re-directed from the combined or foul sewers to waterways or recharge should be acted upon. DFI are leading in Belfast with projects actively diverting clean water from sewage treatment plants to help extend the life of these assets.
Noel Crymble / Joanne Lusby	Stakeholder engagement must include all citizens and not just land managers, water users, public bodies and Departments. NGOs in receipt of funding from DAERA cannot be considered as	All WFD stakeholder events are publically advertised and open to all.

	independent.	
RSPB	Single Biographic Unit - environmental issues do not stop at the border and there is a clear need to establish a common framework or legislative basis for cooperation across the border.	DAERA NIEA liaise with relevant cross border bodies on water management issues.
RSPB	Government should continue to develop and fully fund local river management plans that are informed by local communities and clearly map out the actions to achieve good water quality targets as demonstrated by the RIPPLE (Rivers Involving People, Places and Leading by Example) project.	The Department notes your comment.
RSPB	Ongoing investment is required in Sustainable Catchment Management Programmes; involving Northern Ireland Water (NI Water) and NGOs working together to address land management issues that negatively affect both wildlife and water quality.	The Department notes your comment.
RSPB	If Good Ecological Status (GES) of our rivers is to be realised, green infrastructure and sustainable urban drainage systems (SuDS) must be adopted and promoted across government and must be delivered as part of all new development.	The Department for Infrastructure has developed a drainage policy (DEM 167/18: Highway Drainage Design for Sustainability) which states that designers should consider incorporating SuDS into all new DfI developments including road schemes, Park & Ride sites and new surface car parks. Department for Infrastructure appreciates the environmental benefits of utilising SuDS and has incorporated elements of SuDS within the drainage design on various projects, including Strategic Roads Improvement schemes and Park & Ride sites, to attenuate and effectively treat road run-off in a manner which aligns with the principles of sustainable design as outlined in the related national road design standards (DMRB – GG103).
RSPB	Continued support is needed for the creation of Rivers Trusts and to support existing NGO's to coordinate and utilise local knowledge and skills to deliver improvements to our freshwater environment	NIEA initially supported the establishment of Rivers Trust in NI. NIEA have funded the CEO of the River Trust in NI to continue with the development of the Trusts. Ongoing funding streams such as the Water Quality Improvement Strand of Environment Fund is supporting Trusts that apply for the funding.
RSPB	We would like to see the promotion of managed realignment and intertidal habitat creation included in the programme of measures to improve water quality. Creating more space for rivers and coastal environments provides opportunities for carbon sequestration through utilising 'blue carbon' in wetland habitat restoration, such as saltmarsh, mudflat and wet grassland and coastal seagrass meadows enabling the UK to reach net zero by	The Department notes your comment.

	2050.	
Mrs Nikki Ardill	It is important to have regional strategic spatial planning that provides more detail of the capacities of loughs and bays for new planning applications. Is Coastal Zone planning considered part of this consultation exercise? This will highlight the specifications required for new installations and identify areas are capacity for simple refusals to be issued. This will reduce the amount of work the planning team is required to assess.	All decisions on planning applications, made by planning authorities, must be taken in accordance with any appropriate marine policy document, unless relevant considerations indicate otherwise. In addition, advice will be sought by planning authorities from statutory consultees.
Loughs Agency	In relation to plastic pollution, this appears to be becoming a more significant issue than previously thought. Impacts on fisheries are not clearly understood, and the subject needs both quantitative and qualitative research into spatial abundance and specific effects on fisheries.	The Department is currently funding a multi-year Tackling Plastic project that is targeted at different sectors e.g. schools, businesses, government and the wider public with education programmes, toolkits and social media messaging with a view to changing behaviours on plastics to both reduce plastic use where possible and to ensure when plastic is used it is disposed of responsibly. DAERA sponsored PhD student in QUB working on the “The distribution, abundance and impacts of plastic pollution in Northern Ireland’s freshwater ecosystems”.
Loughs Agency	The indication that the Mill Bay area of Carlingford Lough has already exceeded its ecological carrying capacity, in terms of the indicative threshold for chlorophyll, is a significant concern for Loughs Agency. A joint review of adjacent land use management, upstream of the Bay may be a useful starting point to evaluate this issue in more detail.	Currently AFBI on behalf of DAERA EMFG have been applying the current version of the SMILE Ecosystem Models to assess the impact of new shellfish license applications in Mill Bay. The model is based on the predicted drawdown of Chlorophyll a. The EMFF Project SIMAtlantic is developing “Cross-border management guidance for Carlingford Lough, at the borders between Ireland and the UK” which should assist in the management of aquaculture at a bay scale. The current INTERREG Va Project SWELL is further developing ecosystem models for the catchment of whole Lough including Mill Bay which allow the impact of land use practises and WWTW to be integrated with the coastal models The SWELL Project Swell Project
S Donnelly	Reduce the need for MOT car washes, every four year old car needs washed underneath, this increases water demand, causes run off, is not needed. Look to rain water harvesting in all new builds.	The Department encourages the use of car washing facilities that re-use and filter water. https://www.netregs.org.uk/environmental-topics/transport/vehicle-cleaning-including-wheel-washing/ NIEA encourages rainwater harvesting.
Christine	Sustainable drainage measures alongside roads, car parking,	The Department for Infrastructure has developed a drainage policy (DEM

Doherty/A Sides/ Nikki Ardill	industrial areas, truck stops etc. Much more use of SUDs needed. SuDs is required to 'cool-off' nutrient runoff	167/18: Highway Drainage Design for Sustainability) which states that designers should consider incorporating SuDS into all new DfI developments including road schemes, Park & Ride sites and new surface car parks. Department for Infrastructure appreciates the environmental benefits of utilising SuDS and has incorporated elements of SuDS within the drainage design on various projects, including Strategic Roads Improvement schemes and Park & Ride sites, to attenuate and effectively treat road run-off in a manner which aligns with the principles of sustainable design as outlined in the related national road design standards (DMRB – GG103).
Nikki Ardill	More use should made of SUDS to control the flow and filtering of rainfall and storm water in housing developments as urban areas expand. Why not rainwater gardens in public open space?	The Department for Infrastructure has developed a drainage policy (DEM 167/18: Highway Drainage Design for Sustainability) which states that designers should consider incorporating SuDS into all new DfI developments including road schemes, Park & Ride sites and new surface car parks. Department for Infrastructure appreciates the environmental benefits of utilising SuDS and has incorporated elements of SuDS within the drainage design on various projects, including Strategic Roads Improvement schemes and Park & Ride sites, to attenuate and effectively treat road run-off in a manner which aligns with the principles of sustainable design as outlined in the related national road design standards (DMRB – GG103).
Mary McGuiggan	No further Planning Approvals, Discharge Consents, Waste Management Licences or Pollution Prevention & Control Permit approvals until a waterbody has returned to Good Status and Natura 2000 sites are in a Favourable Management Condition.	DAERA NIEA is a statutory consultee and it is the local planning authority who grants planning approvals. Local planning authorities are aware of their duties as set out under Section 1.1 of the Wildlife and Natural Environment Act (NI) 20111 (duty to conserve biodiversity) and section 6.174 of the Strategic Planning Policy Statement ² (duty to apply the precautionary principle). DAERA also anticipate that all responsibilities and duties in relation to The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 will have been completed by the Council prior to any approval being granted.
Christine Doherty/Mary McGuiggan/Mrs Nikki Ardill	During the planning application process the cumulative effect needs to be considered / modelled. Consider including in Local Development Plans.	SPPS states that ' Planning authorities should ensure that the potential effects on Natural Heritage and Landscape, including cumulative effect of development are considered'. Therefore planning applications should be subject to consideration of cumulative effects. SPPS will remain even once the LDPs are adopted. In order to be consistent with SPPS councils should within their LDPs refer to cumulative effects. If they do not it may

		be deemed through the Independent Examination that the plan is not sound and may not be adopted in that format. As consultees DAERA's position would be that the LDP should include reference to cumulative effects.
A Sides	Rainwater harvesting required.	NIEA encourages rainwater harvesting.
A Sides	The area covered under 'additional issues' seems from your data to be poorly understood, and as such again this falls back to the capacity of your department, if you cannot test you cannot find the areas of concern that need addressing, poor data sets lead to poor decisions, based on poor data.	Current monitoring programmes used for assessment against water quality standards are as set out in the legislation. An additional suite of monitoring tools, including in- stream sensors, rapid assessment techniques, and localised, short term surveys are used by NIEA WMU to investigate specific problems and as part of catchment projects and research. NIEA constantly review the freshwater monitoring programmes to ensure they remain fit for purpose, reflect emerging technologies, and are in line with statutory requirements. Options to source funding for the extension of freshwater monitoring in all its forms will be explored.
Jean Dunlop	Where water quality is tested and doesn't reach high standard ensure resources swiftly diverted to correct problems. This requires adequate financial, technical and human resources but would save funding in e.g. health service.	The 3rd cycle RBMP proposes a prioritisation matrix to prioritise waterbodies based on a scoring system ensuring that the highest priority areas are investigated further. With only 38% of waterbodies currently at 'good or better' a prioritisation process is necessary.
Christine Doherty	Work with local authority biodiversity officers, linked to Local Biodiversity Action Plans & Green Infrastructure Plans to raise awareness, understanding & action to address these issues.	NIEA agree that partnership working is key to delivery of improved water quality in Northern Ireland and are keen to maintain existing and develop new partnerships to help deliver actions to address water quality issues.
UFU	While in more recent years, NIEA have started to recognise the benefits of partnership working, the UFU believe that NIEA must take a more serious approach to adopting these types of arrangements on a wider scale across NI. DAERA and NIEA need to realise that this is a cost-effective method of achieving targets on water quality by working with others and engaging business, landowners and the public to protect and enhance waterways. While the UFU recognises that NIEA has developed a number of initiatives to encourage partnership working, the Union does not believe that this has gone far enough particularly with working with the agriculture sector. The UFU believe that too much emphasis is put on the regulatory approach when dealing with water quality issues and that a more sustainable option would be to work with farmers and other sectors and partners to ensure better compliance. There are excellent examples of partnership	NIEA agree that partnership working is key to delivery of improved water quality in Northern Ireland and are keen to maintain existing and develop new partnership to help deliver actions.

	<p>projects working on the ground in NI e.g. Ballinderry Trust and the Water Catchment Partnership. These have proven to be effective in tackling water quality issues and have delivered results.</p>	
<p>Maurice Parkinson</p>	<p>Why do we still have mountains of rubbish being washed off roads into our rivers? Why do road service personnel permit this to happen?</p>	<p>DAERA acknowledge your comment and agree that the issue of litter in our watercourses is of serious concern and a difficult task to tackle. Local action is taken by Catchment Officers in conjunction with local community Groups, Kayak clubs & local Councils. However, it is also noted that behavioural change to stop littering is required from everyone living in Northern Ireland.</p>

EU EXIT

Respondent	Respondents Comment	DAERAs Comment
Olga Harper / Noel Crymble / Joanne Lusby /Mary McGuiggan	There should be NO weakening of EU water standards -indeed they need to be enhanced- As pointed out above there is cross- border flow of our waterways with three out of our four major rivers being shared with EU.	The EU water directives such as WFD set the standards for water quality and these have been transposed in NI. The Water (Amendment) (Northern Ireland) (EU Exit) Regulations 2019 ensures that these directives and their associated standards will continue to operate here post EU Exit.
NIEL	EU Exit - Ensure alternative funding for NIW/eNGOs/Interreg	The improvement of water quality in transitional waters and freshwater quality in cross-border river basins is a key theme and objective in the current INTERREG VA programme and three projects (SWELL, Source to Tap and Catchment Care) were successful in leveraging substantial funding in the current programme to support delivery of Water Framework Directive requirements. Both UK and Ireland have committed to funding a new cross border PEACE PLUS programme from 2021-2027 which will succeed INTERREG VA. There is ongoing collaboration between government and delivery partners in Northern Ireland and Ireland, including NIW, Irish Water and non-governmental organisations, to ensure the new programme will incorporate objectives for addressing water protection and management issues. Other frameworks for future funding of priority measures for the water environment are also being considered, taking account of a range of interrelated issues and priorities for the water and natural environment. The current focus for potential opportunities under PEACE PLUS is on developing landscape scale, nature based solutions and other initiatives to support environmental protection, sustainable economic growth and climate action, together with joint working opportunities to support the economy, health and well-being in rural communities.
UAF	EU Exit - Ensure the targets of the WFD are maintained in new legislation following EX Exit.	The WFD is transposed in NI via the 2017 Regulations and The Water (Amendment) (Northern Ireland) (EU Exit) Regulations 2019 ensures that the WFD (as transposed) will continue to operate here post EU Exit.
Olga Harper	While DAERA should be even handed, my impression is that the agricultural tail ' bests' the organisation with NIEA being definitely the 'waif and stray' dog. With independence from EU merely months away, we need to feel that the legislative rigour of the NIEA operation serves the all of the people with environmental concerns foremost in all that they do.	The legislative base from which the NIEA currently operates will be maintained post EU Exit.

RSPB	To ensure water quality standards improve in the absence of requirements driven by Europe, a strong NI specific legislative baseline is required as part of a future environmental and agricultural policy framework embedding the 'polluter pays' principle in legislation.	The Department and the Agency will continue to apply the NI legislation which is directly linked to all the main EU water directives. The polluter pays principle is currently applied to pollution incidents. The UK government has given a commitment to maintaining high standards of environmental protection.
RSPB	To ensure water quality standards improve in the absence of requirements driven by Europe, a strong NI specific legislative baseline is required as part of a future environmental and agricultural policy framework embedding the 'polluter pays' principle in legislation.	The Department and the Agency will continue to apply the NI legislation which is directly linked to all the main EU water directives. The polluter pays principle is currently applied to pollution incidents. The UK government has given a commitment to maintaining high standards of environmental protection.
RSPB	'Building back better' through a green recovery can provide an economic stimulus, while delivering practical solutions to tackle water quality issues, and contribute to NI's climate and biodiversity ambitions.	<p>The Northern Ireland Executive has prioritised the development of a cross-cutting multi-decade Green Growth Strategy, to reduce emissions and tackle our climate and environment challenges. This work is being led by DAERA, on behalf of the Executive and will be the pathway to meeting our New Decade New Approach commitments, Programme for Government targets and Northern Ireland's contribution to the UK Net-Zero by 2050 target.</p> <p>By working in partnership across Government Departments, Local Government and with stakeholders from across the business and voluntary sectors, Green Growth will tackle climate change head-on, through collaborative actions which will address both the immediate and longer term climate impacts, in a fair and just way. This will enable Northern Ireland to transform to a low carbon economy whilst protecting our natural assets.</p>
RSPB	"Challenges that exist in reconciling agricultural and environmental policy, particularly in areas such as agricultural greenhouse gas emissions, the effect of run-off of nitrogen and phosphorus on water quality and the impact of ammonia emissions on designated sites and priority species". The RBMPs should be used to imbed nature-based solutions which should be a fundamental component of the NI Environment Strategy. It is important to consider a place-based approach and identification of the right solution for the right place to develop and implement nature-	The issues that need to be addressed to protect the environment are wide-ranging and complex, requiring a cross-cutting approach with a range of stakeholders, including: other NI Departments and public sector bodies; the private sector; the community and voluntary sector; and the general public, working together with DAERA. DAERA published a public discussion document, launched on 18 September 2019 designed to give stakeholders the opportunity to express their opinions freely on a wide range of environmental issues facing Northern Ireland. The new strategy will form the basis for a coherent and effective set of interventions that can deliver real improvements in the quality of the environment and thereby create opportunities to develop our economy, improve the health and well-being of our citizens and play our part in protecting the global environment. The RBPM aims to deliver the right measure in the right place and

	based solutions at landscape scale.	will encourage nature based solutions.
RSPB	Brexit presents a unique opportunity to radically shift financial support for farming and land management through 'public money' for 'public goods' payments.	DAERA is developing a new agricultural policy and encourages all stakeholders to engage in the process
UFU	Funding should be set aside for innovative pilot projects to improve water quality and environmental issues. In addition, NIEA must stop the risk adverse approach to new innovative solutions that are proposed by local farmers and others. There needs to be more proactive working arrangements put in place to encourage farmers and others to come up with innovative solutions and in addition to funding, support should also be given to help with the planning and implementation of such projects. The current processes appear to stifle innovation and investment on farms and a different approach is needed.	DAERA have been in discussions with the UFU and have included this as a proposed measure in the draft RBMP - "Support the development of innovative technologies for manure/ slurry processing".
Loughs Agency	Regarding diffuse pollution from agriculture, in attempting to manage and control diffuse pollution from agriculture, particularly when issues such as ammonia compliance and the evident increasing trend in SRP levels are becoming both topical and evident, this may suggest that a full evaluation of the Going For Growth Strategy, as well as the regulatory instruments under the Water Order and Waste and Contaminated Land Order may benefit from both detailed re-evaluation and possible change.	The Department is publishing an Action plan on Ammonia which will have targets in relation to agriculture with the aim to reduce emissions. https://www.daera-ni.gov.uk/articles/ammonia-emissions-northern-ireland
Maurice Parkinson - Antrim and District Angling Association	Clearly the issue is the 'going for growth' approach which seems to be produce all you can but do not worry about the consequences re climate and the environment and in this case water and aquatic wildlife damage.	The Northern Ireland Executive has prioritised the development of a cross-cutting multi-decade Green Growth Strategy, to reduce emissions and tackle our climate and environment challenges. This work is being led by DAERA, on behalf of the Executive and will be the pathway to meeting our New Decade New Approach commitments, Programme for Government targets and Northern Ireland's contribution to the UK Net-Zero by 2050 target. By working in partnership across Government Departments, Local Government and with stakeholders from across the business and voluntary sectors, Green Growth will tackle climate change head-on, through collaborative actions which will address both the

		immediate and longer term climate impacts, in a fair and just way. This will enable Northern Ireland to transform to a low carbon economy whilst protecting our natural assets.
Mervyn Parr - VSAHG	Scale back our production, produce a more wholesome product, receive a better price and allow primary producers to be price makers rather than price takers.	The Department notes your comment.

Climate Change and Green recovery

Respondent	Respondents Comment	DAERAs Comment
Loughs Agency	In addition, to mitigate against climate change / extremes, and protect fisheries there should be rolling programmes of riparian planting and a separate incentivised programme of upland riparian planting across the major catchments. To aid mitigation of acidity, Loughs Agency believes that drainage ditches should be lined with, and eventually capped with limestone.	<p>The Department acknowledges the contribution of riparian woodland beside watercourses in mitigating against warming related to climate change. Forest Service forest plans feature planting and colonisation of riparian areas, which is monitored and to enable reporting against the DfI Long Term Water Strategy. DAERA has undertaken a project on Opportunity mapping for woodland creation to reduce flood risk and published the results (www.daera-ni.gov.uk/articles/opportunity-mapping-woodland-creation-reduce-flood-risk).</p> <p>Forest Service plans to open a new stand-alone Small Woodland Grant Scheme (minimum size 0.2 hectare) by December 2020. The Scheme will support the establishment of native woodland in areas previously not wooded, with the aim of helping landowners to enhance their holdings and support their land management objectives by introducing small areas of woodland. This has potential to help mitigate accidental diffuse pollution as a result of agricultural land management practices.</p>
Loughs Agency	Climate change could lead to these flood events occurring on a more regular basis, and while Loughs Agency welcomed the partnership approach in the delivery of remedial works, given the manifestation of climate extremes as the pattern of climate change changes, Loughs Agency would suggest an intergovernmental approach on riparian and upland broadleaf planting, to stabilise river banks and minimise flood effects to benefit fisheries, water quality and flooding.	<p>Reports on the benefits of catchment afforestation to assisting flood risk management were commissioned by Forest Service and carried out by Forest Research with assistance from DfI Rivers.</p> <p>Reference to the documents can be found at: https://www.daera-ni.gov.uk/publications/opportunity-mapping-woodland-creation-reduce-flood-risk-northern-ireland https://www.daera-ni.gov.uk/articles/quantifying-hydrological-effect-woodland-creation-camowen-and-drumragh-catchments-omagh-northern-ireland</p>
Loughs Agency	Loughs Agency would in addition suggest that an interdepartmental approach be taken to look at the mitigation of upper extremes of temperature, and the potential effects on juvenile fish in the ecosystems where these effects can occur. The Agency would also highlight that changes in river morphology through culverting, diversion, straightening, bankside development etc. are having cumulative impacts on loss of habitat, reduced flood storage capacity, and	The UK Climate Change Committee is currently completing the review of the UK Climate Change Risk Assessment (CCRA3). The risk assessment looks at the risk and opportunities associated with climate change over the associated five year period. Risks assessed as part of the assessment include water quantity. Subsequently the Northern Ireland Climate Change Adaptation Programme (NICCAP) looks at how the Northern Ireland Government will address the risks outlined in the CCRA. The next NICCAP is due to be developed to cover the period 2025-2030.

	thus overall available water quantity.	
RSPB	The UK government has committed £640million to a 'nature for climate fund', while the Scottish government has committed £250million over the next ten years for peatland restoration. A similarly ambitious 'nature for climate fund and green recovery' fund is required in NI.	The Department notes your comment.
RSPB	Investment in nature is an investment in a resilient economy - climate change, species loss and biodiversity decline, and a global pandemic all highlight how we are part of nature and that we have an important role in not just recognising the health, nature and climate crises but actively working to prevent, slow and repair the damage we are doing. The current crisis reminds us that our economy and the health of society are dependent on a flourishing natural world and any recovery package that doesn't include nature will be incomplete.	The Green Growth Strategy will be developed using a Co-design approach and the draft Strategy will be published for public consultation.
RSPB	Take action now and invest in shovel-ready projects - we have identified a pipeline of "shovel-ready" habitat restoration projects that could bring millions of pounds of investment into largely rural communities while creating thousands of jobs, providing more sustainable and resilient livelihoods for local farming communities, increasing our progress towards meeting the UK Government's plan to restore nature in a generation.	Green Growth has had initial meetings with RSPB and other organisations to understand their proposals, where these may align with Green Growth objectives and to scope the potential for Green Growth Agreements going forward.
RSPB	Provide equal access to nature's benefits - nature needs to be available to anyone. Legislation must scale up environmental protections and introduce targets for nature's recovery.	The Department notes your comment.
RSPB	Be confident that the public is with you - in <u>research</u> we recently conducted 77% of people agreed the UK Government should invest in nature as part of its economic recovery plans.	The Department notes your comment.

RSPB	The current crisis reminds us that our economy and the health of society are dependent on a flourishing natural world and any recovery package that doesn't include nature will be incomplete.	The Department notes your comment.
RSPB	Connectivity is a key attribute required for healthy, functioning ecosystems. The prioritisation of projects or proposals mapped through a nature recovery network could be used to enhance connectivity, both directly (e.g. fish passage projects which improve physical connectivity, and enhancements to lateral connectivity by reconnecting rivers with their floodplains) as well as by considering the quality of connected habitats.	The Department notes your comment.
NIW	The Long Term Water Strategy outlines the adoption of a holistic drainage approach, that where practicable and economically viable surface water should be managed above ground at source using soft SuDS or natural watercourses rather than hard engineered drainage solutions. DfI under the LWWP and supported by NI Water, is leading the development of an Integrated Drainage Investment Planning (IDIP) Guide for Northern Ireland. This will provide the basis for a collaborative approach to drainage and wastewater planning to identify integrated interventions that can provide multiple benefits to society and the environment over the long term, while striving for best value to the economy and our customers. It should be recognised that the responsibility for developing integrated drainage investment plans is shared between all stakeholders, with collaborative engagement being essential.	The Department notes your comment.
UFU	Farming is on the frontline of climate change impacts, being particularly vulnerable to extreme weather events. In recent years farmers have had to deal with severe weather events including snow, flooding, and drought with all of these having potential to impact	The Department notes your comment. Some options of EFS will partially mitigate climate change impacts e.g. riparian zone tree planting helps to stabilise banks and provides shading of water for cooler areas.

	on the water environment. Further research and advice will be needed to advise farmers on how to adapt to changing weather patterns whilst protecting waterways.	
Brendan Kerr	The significance of climate change rainfall patterns and fishery assessments all need to continue and be assessed for risks to salmon populations.	The Department notes your comment.

AGRICULTURE		
Respondent	Respondents Comment	DAERA Comment
UAF/NIEL/Olga Harper/Noel Crymble / Joanne Lusby/Mary McGuiggan	Nutrient CAP - There should be a "Nutrient Cap (N&P)" for all land managers in a catchment. The Nutrient Cap must be based on a level which will return the water body to "Good" status rather than current or historic baseline levels. No more entitlements to pollute with NMPs! Phosphate quotas were extremely effective in the Netherlands. Nutrient Cap - Examination of Netherlands current practice should inform our best practice with phosphate quotas rigorously enforced and hefty fines for pollutants.	This type of system would be very resource intensive with potential difficulties and practicalities for enforcement. The current NAP 2019-2022 includes a number of new additional measures focussed on limiting phosphorus inputs which is the main issue in our waterbodies. The main focus is education and compliance with these new NAP measures.
Olga Harper / Noel Crymble / Joanne Lusby/Mary McGuiggan	There is currently the bland assumption that 50% of nutrients will feed the growing crops. What about autumn and February when slurry is applied with NO growing crops. The introduction of NMPs has assisted increased levels of fertiliser being applied with farmers working towards their 'entitlement' rather than their conservation levels of application. This needs monitoring and reduction in levels to avoid leaching into waterways. An annual fee must be levied on land managers within a catchment to pay for real- time monitoring with quantity not quality of discharge. This is permissible under Water (NI) order 1999 legislation. There should be no more ' license to pollute' but rather ' pay heavily when you do pollute'. NMPS out- phosphate quotas in, as in the Netherlands.	Research shows there is crop growth response to nutrients applied in February. The use of soil indexing for phosphorus and SNS for nitrogen allocates different limits to the amount of nutrient allowed to be applied, dependent on current soil fertility levels with the aim of only applying what is required for the crop and reduce excess levels which can be lost to the environment.
Olga Harper / Noel Crymble / Joanne Lusby/Mary McGuiggan	Nutrient Management Plans take no account of diffuse pollution to the water environment as they do not account for the different rates of diffuse pollution and in particular Phosphates, from different species of animals and from organic or chemical fertiliser. NMPs do not account for historic low levels of fertiliser application being replaced by an "entitlement" to use up to a maximum required by a growing crop. Therefore, the introduction of NMPs has facilitated increased levels of fertiliser application rather than preventing them and their associated levels of diffuse pollution entering our waterways.	Under NAP 2019-2022, fertilisation plans are required by all farms using high Phosphorus (P) manures, pig FYM manures and anaerobic digestate; all grassland farms using chemical P fertiliser and all derogated farms. As part of the fertilisation plan for phosphorus, a soil analysis is required which indicates the Soil P index (from analysis) and is taken into account in recommending the crop requirement. The use of soil indexing for phosphorus and SNS for nitrogen allocates different limits to the amount of nutrient allowed to be applied, dependent on current soil fertility levels with the aim of only applying what is required for the crop and reduce excess levels which can be lost to the environment. We continue to provide training and advice, and online nutrient management planning

		tools online for farmers. It is important to recognise that some farmers find nutrient management plans challenging.
Maurice Parkinson - Antrim and District Angling Association	<p>Farming is carbon greedy/hugely negative and there requires a major change to climate friendly practice compared to the current climate damaging impact of the industry's activities. Far stricter monitoring, controls and penalties. There seems to be a never ending dumping of slurry and spraying of weeds and application of fertilisers to land without the use of well-established and easy measures to stop this type of abuse.</p> <p>At this date, only 5% of farmers are using soil analysis and nutrient balance sheets to manage nutrification of their land. This is disgraceful.</p>	<p>The purpose of fertilisation plans is to achieve balanced fertilisation and nutrients are only applied to crop requirement. We continue to provide training and advice, and online nutrient management planning tools online for farmers. It is important to recognise that some farmers find nutrient management plans challenging. DAERA have part funded several soil sampling and analysis pilot schemes aimed at informing farmers about the importance of healthy soils; and the benefits they provide for farm efficiency and sustainability through Nutrient Management Planning. As well as the mandatory measures regarding fertilisation plans and soil testing under NAP, DAERA continues to promote nutrient management planning to farmers.</p>
Maurice Parkinson - Antrim and District Angling Association	<p>The disappearance of wildlife and micro-organisms from soil which is being damaged by poor farming practice. This also leads to the destruction of insect life which many anglers comment upon.</p> <p>There is adequate research to show the decline in insect life and the ADAA would like to see this aspect explored urgently. The lack of worms on intensively farmed land is deeply worrying.</p>	<p>There are range of measures within the NAP to protect soil, such as only applying fertiliser when conditions are appropriate etc., and also soil protection measures within the GAEC framework and cross compliance. It is recognised more intensive farming practices can have a negative impact on biodiversity. DAERA have part funded several soil sampling and analysis pilot schemes aimed at informing farmers about the importance of healthy soils; and the benefits they provide for farm efficiency and sustainability through Nutrient Management Planning.</p>
Mervyn Parr - VSAHG	<p>Can we keep on importing more feed for Agri food and expect our land to handle all the waste without nutrients being leached or leaked into our watercourses? Target key catchment areas and control rigidly and make it compulsory for a farm to obtain permission to go above a certain stock number with monitoring.</p>	<p>After 2011, owing to the increases in chemical fertiliser P and feedstuffs P, the P balance increased and the P efficiency is now 43% in 2019, which is still considerably better than it was just 12 years ago. However, there is still scope for improvement in P efficiency and for reductions in the agricultural P surplus or balance. There is a voluntary agreement with the local feed industry in Northern Ireland to lower Phosphorus (P) in livestock diets; particularly dairy and pig diets. The target for the Northern Ireland Grain Trade Association (NIGTA) was to achieve an average P level in dairy compound feed of 0.58 %. Analysis of samples by the Department indicates that the average P level in dairy compound feed is now 0.51 %. With the implementation of additional controls on chemical P, the next stage will be further discussions with agri feed producers to further lower P content of livestock feed.</p> <p>The NAP 2019-2022 has a livestock manure nitrogen limit of 170 kg N/ha/yr. This is in effect, a limit on livestock numbers. Subject to a range</p>

		of specific criteria, certain farms can operate under a derogation which allows a livestock manure nitrogen limit of 250 kg N/ha/yr.
S Donnelly - Private	The reduction in herd size on farms that graze land adjacent to waterways or over bedrock which will be more prone to percolation of water.	<p>The NAP 2019-2022 has a livestock manure nitrogen limit of 170 kg N/ha/yr. This is in effect, a limit on livestock numbers. Subject to a range of specific criteria, certain farms can operate under a derogation which allows a livestock manure nitrogen limit of 250 kg N/ha/yr.</p> <p>Support is available for farmers to restrict cattle access to water through the Environmental Farming Scheme (EFS). There are currently some 4,900 EFS Agreements in place after three tranches, covering approximately 49,000 hectares of land. After three tranches, 76% of EFS Wider Level agreements include at least one water quality measure, and some 186km of Riparian Margins and 2,912km of Watercourse Stabilisation with Fencing have been implemented through EFS.</p>
NIW	NI Water support the identification of ammonia from point source and diffuse agricultural pollution as a significant water management issue; this is experienced in a number of our drinking water catchments. High ammonia levels in raw water can significantly disrupt the operation of water treatment facilities, impacting our operational efficiency and potentially putting at risk the security of water supply. Ammonia is associated with algae blooms, which presents further water treatment issues.	The NAP contains a wide range of controls to prevent the nutrients nitrogen and phosphorus polluting waterways. High ammonia levels that have been reported by NIW in some circumstances are likely to come from specific pollution incidents. NIEA WMU is actively investigating high ammonia incidents in Drinking Water Catchments to find the source of the problem.
AFBI	It would seem logical that NI should implement a strategic plan to address its 'nutrient imbalance' through the use of emerging industrial and/or farm scale technologies and a targeted nutrient management approach. This should also harness the benefits of a circular bio-economy for agriculture systems while embracing methodologies and processes which guarantee stringent biosecurity assurances. There is a need to identify technologies that provide the most beneficial scale and efficiency of waste management while contributing to the circular bio-economy in totality (recycling P, N with NH3 recovery and emissions mitigation, potassium and micronutrients as well as carbon).	DAERA agree with this thought process and research is being progressed in these areas. The RePhokus project has identified the extent of the phosphorus imbalance and put forward proposals on how this can be addressed.
Olga Harper	It seems that, under your stewardship, our citizens are being let down. I know that DAERA successfully lobbied for Derogations from the Regulations to allow higher levels of slurry to be applied-	Farms operating under the Nutrients Action Programme (NAP) derogation must adopt specific nutrient management, land spreading restrictions and record-keeping measures, in addition to complying with

	<p>this to meet the needs of our swelling intensive agriculture industry. Over 100 of our waterways have deteriorating levels of Phosphates. It seems the agriculture tail is wagging the environmental dog. It's time NIEA and DAERA were divorced! We need TREES to be planted, as was done by one farmer recently, to create a barrier to leaching of slurry into our rivers.</p>	<p>the NAP measures. Derogation requirements include preparation of annual fertilisation plans and accounts, regular soil analysis and a farm phosphorus balance limit. The purpose is to ensure that operating at the higher grazing livestock manure limit of the derogation does not adversely impact on water quality.</p> <p>The conditions of the derogation are set by the European Commission and specified in the legal decision. The Northern Ireland derogation has been granted by the European Commission since 2008 and must be renewed every 4 years. The application process for renewal is lengthy and involves detailed scrutiny by the European Commission and the EU Nitrates Committee. In order for the derogation to be approved, it must be demonstrated that it will not adversely impact on water quality. Given that the Northern Ireland derogation has been approved on four occasions, the European Commission and the EU Nitrates Committee consider that it should not cause a deterioration in water quality.</p> <p>Data since 2012 indicates that deterioration in water quality in Northern Ireland is mainly due to increases in concentrations of soluble reactive phosphorus in rivers. This is likely to be related to an increase of phosphorus inputs to NI agriculture in terms of livestock feeds and chemical phosphorus fertiliser use. Overall livestock numbers have also increased from 2012 to 2018.</p> <p>However, on derogated farms phosphorus inputs are constrained as they must operate within a farm phosphorus balance limit. In addition, water quality monitoring of a derogated sub-catchment compared with a non-derogated sub-catchment of the Upper Bann has indicated little difference in the measured median concentrations of soluble reactive phosphorus in out-flowing drainage water between these two sub-catchments. This implies that the derogation is not exacerbating water quality problems.</p> <p>The Environmental Farming Scheme (EFS) provides support for farmers to restrict cattle access to water, and create riparian margins which can be planted with trees. There are currently some 4,900 EFS Agreements in place after three tranches, covering approximately 49,000 hectares of land. After three tranches, 76% of EFS Wider Level agreements include at least one water quality measure, and some 186km of Riparian Margins</p>
--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

		and 2,912km of Watercourse Stabilisation with Fencing have been implemented through EFS.
Noel Crymble / Joanne Lusby/Mary McGuiggan	Over 100 waterbodies have deteriorations in Phosphate levels from 2015 to 2018 during the same period when DAERA/NIEA successfully lobbied for Derogations from the Regulations to allow higher levels of slurry to be applied.	<p>Farms operating under the Nutrients Action Programme (NAP) derogation must adopt specific nutrient management, land spreading restrictions and record-keeping measures, in addition to complying with the NAP measures. Derogation requirements include preparation of annual fertilisation plans and accounts, regular soil analysis and a farm phosphorus balance limit. The purpose is to ensure that operating at the higher grazing livestock manure limit of the derogation does not adversely impact on water quality.</p> <p>The conditions of the derogation are set by the European Commission and specified in the legal decision. The Northern Ireland derogation has been granted by the European Commission since 2008 and must be renewed every 4 years. The application process for renewal is lengthy and involves detailed scrutiny by the European Commission and the EU Nitrates Committee. In order for the derogation to be approved, it must be demonstrated that it will not adversely impact on water quality. Given that the Northern Ireland derogation has been approved on four occasions, the European Commission and the EU Nitrates Committee consider that it should not cause a deterioration in water quality.</p> <p>Data since 2012 indicates that deterioration in water quality in Northern Ireland is mainly due to increases in concentrations of soluble reactive phosphorus in rivers. This is likely to be related to an increase of phosphorus inputs to NI agriculture in terms of livestock feeds and chemical phosphorus fertiliser use. Overall livestock numbers have also increased from 2012 to 2018.</p> <p>However, on derogated farms phosphorus inputs are constrained as they must operate within a farm phosphorus balance limit. In addition, water quality monitoring of a derogated sub-catchment compared with a non-derogated sub-catchment of the Upper Bann has indicated little difference in the measured median concentrations of soluble reactive phosphorus in out-flowing drainage water between these two sub-catchments. This implies that the derogation is not exacerbating water quality problems.</p>

Mervyn Parr - VSAHG	Discourage intensive production/no option of derogation for higher nitrogen loading.	<p>The derogation allows grassland cattle farms that meet certain criteria to farm above 170 kg Nitrogen (N) per ha per year up to a limit of 250 kg N per ha per year from grazing livestock manure. It is vital to some of our most productive dairy farms with higher stocking rates. In 2020, some 420 farms are operating under an approved derogation in NI.</p> <p>The derogation enables farmers to maximise grass based production and use of manures produced on farm. Producing more milk from grass is a more sustainable system given our water quality problems due to excess phosphorus. This is because dairy farms which rely more on concentrate feed to drive milk production typically operate at a higher phosphorus surplus than those maximising production from grass.</p> <p>Encouraging greater use of grassland grazing systems is also an important measure in minimising ammonia emissions as indoor total confinement systems are estimated to produce over 50% more ammonia than grazing systems with the same number of dairy cows.</p> <p>The conditions of the derogation are set by the EU Commission and specified in the legal decision granting the NI derogation.</p>
UAF/NIEL	Farmers should be required to ensure that fencing is installed and maintained to prevent livestock accessing rivers.	Support is available for farmers to restrict cattle access to water through the Environmental Farming Scheme (EFS). There are currently some 4,900 EFS Agreements in place after three tranches, covering approximately 49,000 hectares of land. After three tranches, 76% of EFS Wider Level agreements include at least one water quality measure, and some 186km of Riparian Margins and 2,912km of Watercourse Stabilisation with Fencing have been implemented through EFS. Fencing of watercourses across NI should be first addressed from a voluntary and educational perspective as to its benefits to water quality.
UAF/NIEL	We believe there is justification to include buffer strips as eligible under Single Farm Payment (SFP).	Provision already exists in the Basic Payment Scheme (BPS) for farmers to claim BPS for riparian buffer strips, if Single Farm Payment was claimed and paid on the land in 2008.
Jim Gregg - Six Mile Water Trust	Need to plant trees, trees and more trees fenced off tree margins along water bodies to help absorb nutrient runoff, whilst preventing livestock encroachment into streams, provide suitable drinking stations.	Support for all of these actions/options are available through the Environmental Farming Scheme (EFS). In some areas an environmental planner or group facilitator provides the farmer with advice on which measures are best suited for the farm.
Jim Gregg - Six	Need actively funded and encouraged Wildlife margins.	Support for creation of riparian margins and other margins on arable land

Mile Water Trust		to support wildlife are offered through the Environmental Farming Scheme (EFS).
Maurice Parkinson - Antrim and District Angling Association	Need protected buffer strips along/around all waterways. Why do we still allow river and lake banks to be destroyed by landowners and developers. Why do we not insist that river banks are not built upon, sprayed with weed killer and plastered with slurry.	Buffer zones to prevent application of slurry and chemical fertilisers near different types of watercourses are in place through the NAP, to reduce the risk of nutrient run-off. Support is available for farmers to protect watercourses through the Environmental Farming Scheme (EFS). There are currently some 4,900 EFS Agreements in place after three tranches, covering approximately 49,000 hectares of land. After three tranches, 76% of EFS Wider Level agreements include at least one water quality measure, and some 186km of Riparian Margins and 2,912km of Watercourse Stabilisation with Fencing have been implemented through EFS. DAERA continues to promote the benefits of riparian margins and encourage uptake.
Christine Doherty - Derry City Strabane District Council	Need fencing requirements when there is evidence from farm inspections that there is a risk of sediment entering the water course from animal activity at the river edge.	Support is available for farmers to restrict cattle access to water through the Environmental Farming Scheme (EFS). There are currently some 4,900 EFS Agreements in place after three tranches, covering approximately 49,000 hectares of land. After three tranches, 76% of EFS Wider Level agreements include at least one water quality measure, and some 186km of Riparian Margins and 2,912km of Watercourse Stabilisation with Fencing have been implemented through EFS. Fencing of watercourses across NI should be first addressed from a voluntary and educational perspective as to its benefits to water quality.
Keith McClintock	One of the most significant issues would appear to be livestock access to watercourses (mainly cattle) which causes a lot of silting on the bed of the watercourse and in addition to this bank erosion. There also seems to be a lack of buffer strips to protect watercourses from bank erosion and land run-off from slurry, fertilizer etc.	Support is available for farmers to restrict cattle access to water through the Environmental Farming Scheme (EFS). There are currently some 4,900 EFS Agreements in place after three tranches, covering approximately 49,000 hectares of land. After three tranches, 76% of EFS Wider Level agreements include at least one water quality measure, and some 186km of Riparian Margins and 2,912km of Watercourse Stabilisation with Fencing have been implemented through EFS. Fencing of watercourses across NI should be first addressed from a voluntary and educational perspective as to its benefits to water quality. Buffer zones to prevent application of slurry and chemical fertilisers near different types of watercourses are in place through the NAP, to reduce the risk of nutrient run-off.
Keith McClintock	Grants to allow the farmer to put in preventative measures, i.e.	Support is available for farmers for all of these actions/options through

	buffer strips, controlled water access for livestock, watercourse bank stabilization planting schemes. The grant has to be enough to allow the landowner to take up the scheme with no cost to them - it would be vital that any grants issued would be checked to ensure the payment is used for its intended purpose.	the Environmental Farming Scheme (EFS). There are currently some 4,900 EFS Agreements in place after three tranches, covering approximately 49,000 hectares of land. After three tranches, 76% of EFS Wider Level agreements include at least one water quality measure, and some 186km of Riparian Margins and 2,912km of Watercourse Stabilisation with Fencing have been implemented through EFS.
A Sides - Individual	Buffer strips around fields and along water courses.	As part of the NAP 2019-2022, there are different buffer zone distances in place for various watercourses, dependent on the type of fertiliser and time of application.
Jim Gregg - Six Mile Water Trust	Need much better slurry management with soil testing mandatory prior to spreading.	Through the NAP, Nitrogen application limits are in place NI wide. Soil testing is mandatory before the application of chemical phosphorus fertiliser and all farms using AD and high phosphorus manures; as phosphorus is the main issue in our waters.
Jim Gregg - Six Mile Water Trust	Operatives should be qualified/ licensed to discharge slurry, both landowners and contractors. The condition of waterlogged and frozen fields and pending rain currently is a waste of time as few pay any attention to it. Surly DAERA, could add a map of NI indicating suitable weather conditions for spraying area by area depending on weather forecast daily. This could allow slurry to be sprayed even through the closed period.	<p>A licensing/training scheme for contractors spreading slurry is being considered.</p> <p>The Met Office is the UK's National Weather Service and provides forecasts for up to five days, at both a regional and local level. This information is available to the public through the internet (www.metoffice.gov.uk/), local press and media, and is recommended in the NAP guidance to be used to assess forecast weather conditions.</p> <p>Slurry is not allowed to be spread during the closed period as the EU Nitrates Directive stipulates 'periods when the land application of certain types of fertilizer is prohibited' as a measure to be included in the Action Programme. During the closed period there is little to no grass growth, so nutrients are not taken up by the crop and are at risk of being washed into waterways following rainfall. The closed period is based on local scientific research.</p>
Christine Doherty - Derry City Strabane District Council	More emphasis on ensuring farmers have received pesticide training & qualifications, or their sub-contractors have these.	<p>The Plant Protection Products (Sustainable Use) Regulations 2012 bring into operation a number of provisions aimed at achieving the sustainable use of pesticides, by reducing risks and impacts on human health and the environment.</p> <p>By law, everyone who uses pesticides (plant protection products (PPPs) professionally must be in possession of an accredited certificate of competence, also known as a spraying certificate or a pesticide licence.</p>

		<p>The Sustainable Use Regulations also include a requirement for the regular inspection and testing of pesticide application equipment i.e. sprayers and spray equipment.</p> <p>DAERA has raised awareness of these requirements through a series of articles in the press and the DAERA 'Helping You Comply' bulletin and also promotes best practice in the use of pesticides through its role in the Water Catchment Partnership Initiative.</p> <p>More information for farmers on the Sustainable Use Regulations and the current Code of Practice for Using Plant Protection Products is available on the DAERA website.</p> <p>CAFRE provide training for farmers combined with assessment and certification for a range of Pesticide qualifications through City & Guilds.</p>
Christine Doherty - Derry City Strabane District Council	Weather warning apps, to assist farmers to plan agricultural operations to minimise pollution incidents	<p>The Met Office is the UK's National Weather Service and provides forecasts for up to five days, at both a regional and local level. This information is available to the public through the internet (www.metoffice.gov.uk/), local press and media, and is recommended in the NAP guidance to be used to assess forecast weather conditions. The NAP Regulations prohibit the spreading of fertilisers when weather and ground conditions are unsuitable.</p>
Maurice Parkinson - Antrim and District Angling Association	Need proper training and certification of farmers and operatives for slurry spreading, fertiliser spreading and spraying of herbicides.	<p>A licensing/training scheme for contractors spreading slurry is being considered.</p> <p>The Plant Protection Products (Sustainable Use) Regulations 2012 bring into operation a number of provisions aimed at achieving the sustainable use of pesticides, by reducing risks and impacts on human health and the environment.</p> <p>By law, everyone who uses pesticides (plant protection products (PPPs) professionally must be in possession of an accredited certificate of competence, also known as a spraying certificate or a pesticide licence. The Sustainable Use Regulations also include a requirement for the regular inspection and testing of pesticide application equipment i.e. sprayers and spray equipment.</p> <p>DAERA has raised awareness of these requirements through a series of articles in the press and the DAERA 'Helping You Comply' bulletin and</p>

		<p>also promotes best practice in the use of pesticides through its role in the Water Catchment Partnership Initiative.</p> <p>More information for farmers on the Sustainable Use Regulations and the current Code of Practice for Using Plant Protection Products is available on the DAERA website.</p> <p>CAFRE provide training for farmers combined with assessment and certification for a range of Pesticide qualifications through City & Guilds.</p>
Maurice Parkinson - Antrim and District Angling Association	Urgently upgrading of conditions for the building of slurry tanks etc.	All slurry tanks must be built to comply with the relevant British Standards, BS5502 and BS8007, under the NAP regulations. Any new slurry tanks must be notified to NIEA and certified by a Chartered engineer before being brought into use.
Pat hughes -Ex treasurer Seymour hill A.C	Slurry spreading must be controlled to a higher standard. The 3 metre full is defied and spreading during inclement weather is widespread. Stricter monitoring of slurry storage facilities to ensure sufficient capacity during periods of spreading restrictions.	<p>Land application restrictions during inclement weather conditions for all fertilisers, chemical and organic and including dirty water, are fully addressed in the NAP Regulations. Appropriate risk assessments are detailed in the NAP Guidance.</p> <p>Under the NAP regulations, all farmers are required to have at least 22 weeks slurry/manure storage for their livestock enterprises. Pig and poultry enterprises require a minimum of 26 weeks. Having enough tank capacity gives the ability to store organic manure until the closed period has ended and provides flexibility in the timing of spreading if conditions are unfavourable in early spring.</p> <p>All reports of slurry spreading in contravention of the NAP regulations are investigated by NIEA. This also includes a check on storage facilities and capacity if notified during the closed period.</p>
Jim Gregg - Six Mile Water Trust	Slurry storage should be legislated similar to the oil storage regulations.	Regulations are in place regarding the design, location, construction and maintenance of silage, slurry and agricultural fuel oil stores, to prevent water pollution are enforced by Northern Ireland Environment Agency (NIEA) through. Farmers must notify NIEA of any silage, slurry or agricultural fuel oil store constructed, or substantially enlarged since 2003. Please see following link for more information https://www.daera-ni.gov.uk/articles/silage-slurry-and-agricultural-fuel-oil-ssafo-storage

		<p><u>Under the NAP Regulations:</u></p> <p>All farmers are required to have at least 22 weeks slurry/manure storage for their livestock enterprises. Pig and poultry enterprises require a minimum of 26 weeks. Having enough tank capacity gives the ability to store organic manure until the closed period has ended and provides flexibility in the timing of spreading if conditions are unfavourable in early spring.</p> <p>All slurry storage must be managed and maintained to prevent any pollution.</p> <p>All slurry tanks must be built to comply with the relevant British Standards, BS5502 and BS8007. Any new slurry tanks must be notified to NIEA and certified by a Chartered engineer before being brought into use.</p>
Loughs Agency	The management of tank to tank transfer of slurry has previously been highlighted by the Agency.	Tank to tank transfers that result in water pollution are investigated under the Water Order. There is no other legal mechanism available.
Maurice Parkinson - Antrim and District Angling Association	Far stricter monitoring, controls and penalties. There seems to be a never ending dumping of slurry and spraying of weeds and application of fertilisers to land without the use of well-established and easy measures to stop this type of abuse. Proper training and certification of farmers and operatives for slurry spreading, fertiliser spreading and spraying of herbicides.	<p>Nutrient Action Programme Regulations 2019 have significant regulations in relation to spreading. Enforcement can require significant investigation if the action is not witnessed by staff at the time. All cases highlighted to the agency are fully investigated. Penalties are mainly through Cross compliance but DAERA have no say on penalty levels for any cases that go to court.</p> <p>The College of Agriculture, Food and Rural Enterprise (CAFRE) within DAERA continue to provide a wide range of support for farmers in Northern Ireland to assist in complying with the Nutrient Action Programme (NAP) by way of press articles, workshops and other outreach and training events, as well as outline tools for record keeping and fertiliser application and manure production calculations.</p> <p>The Plant Protection Products (Sustainable Use) Regulations 2012 bring into operation a number of provisions aimed at achieving the sustainable use of pesticides, by reducing risks and impacts on human health and the environment.</p> <p>By law, everyone who uses pesticides (plant protection products (PPPs) professionally must be in possession of an accredited certificate of</p>

		<p>competence, also known as a spraying certificate or a pesticide licence.</p> <p>The Sustainable Use Regulations also include a requirement for the regular inspection and testing of pesticide application equipment i.e. sprayers and spray equipment.</p> <p>DAERA has raised awareness of these requirements through a series of articles in the press and the DAERA 'Helping You Comply' bulletin and also promotes best practice in the use of pesticides through its role in the Water Catchment Partnership Initiative.</p> <p>More information for farmers on the Sustainable Use Regulations and the current Code of Practice for Using Plant Protection Products (published March 2011) is available on the DAERA website.</p> <p>CAFRE provide training for farmers combined with assessment and certification for a range of Pesticide qualifications through City & Guilds.</p>
NIW	<p>Additional training and support for land managers and the agricultural community, particularly in relation to slurry management, could have benefits for slurry management best practice and reduce slurry dumping.</p>	<p>To help farmers understand the requirements of the NAP and to continue to promote best working practice, DAERA has produced and are continuing to produce updated guidance information for the 2019 NAP Regulations.</p> <p>The College of Agriculture, Food and Rural Enterprise (CAFRE) within DAERA continue to provide a wide range of support for farmers in Northern Ireland to assist in complying with the action programme by way of press articles, workshops and other outreach and training events, as well as outline tools for record keeping and fertiliser application and manure production calculations.</p> <p>Training related to the NAP that took place in 2018-2019 included: • An update for CAFRE Development Advisers on Nitrates Derogation, fertilisation account and derogation application forms. • CAFRE Development Advisers continued to deliver nitrates and nutrient management to almost 3000 farmers in Business Development Groups. • Through the Family Farm Key Skills (FFKS) initiative and working in conjunction with Ai Services, CAFRE provided Nutrient Management Planning & Understanding your Soil Analysis training to farm business within the Upper Bann and Strule & Colebrook Catchments targeted under the European Area Aid Soil Sampling and Analysis Scheme.</p>

S Donnelly - Private	Ban the use of animal waste and chemical fertilisers on farms.	Slurry is a valuable source of organic fertiliser for grass and crop growth. It provides essential nutrients and valuable organic matter that will improve the condition of soil and support crop growth and performance. In grass-based grazing livestock systems, spreading of slurry is a recycling of organic nutrients. Chemical fertilisers are often required to top up the nutrient demands of the crops which cannot be obtained solely from slurry. The NAP contains a range of measures to control the application of manures and chemical fertilisers to land. It applies to all farms in Northern Ireland and the measures promote best practice and efficient use of nutrients on farms.
A Sides - Individual	Constructed wetlands to treat runoff from farm yards / sheds.	Constructed wetlands have been demonstrated to be effective for treating farm yard dirty water, parlour washings and run-off. One is in operation at CAFRE Greenmount campus and is used for farmer information and demonstration purposes. Given the land area required and cost involved, constructed wetlands will only be practical and suitable on a limited number of farms. CAFRE provides advice to farmers on minimising dirty water and run-off from farm yards.
A Sides - Individual	Shift from slurry to farmyard manure.	The large majority of livestock housing in NI operates on slurry based systems. Given that arable crops are approximately 5% of NI agricultural area, there is not enough straw produced to enable widespread use of farmyard manure based housing systems. The use of Low Emission Slurry Spreading Equipment (LESSE) can lead to increased nitrogen availability, increased yields, improved accuracy of application, reduced odour, reduced phosphorus run-off and potential savings on chemical nitrogen fertiliser. The NAP 2019-2022 requires the use of LESSE by certain large farms, slurry contractors and for spreading of anaerobic digestate.
Loughs Agency	The fixed date slurry spreading season based in regulation may be less effective as a result of climate variations, and the apparent increase in the extremes of climate in Northern Ireland.	Recent research paper from AFBI on closed period concluded the current evidence base supports the closed period as the most effective strategy for minimising the risks associated with slurry spreading from 15th October to the 31st January.
Mervyn Parr - VSAHG	The closed spreading period has been counterproductive causing high volumes of slurry going out at set times increasing risk of water contamination.	Recent research paper from AFBI on closed period concluded the current evidence base supports the closed period as the most effective strategy for minimising the risks associated with slurry spreading from 15th October to the 31st January.

Jim Gregg - Six Mile Water Trust	With changing climate the closed season is more of a hindrance as large amounts are discharged early-season causing nutrient overload.	Recent research paper from AFBI on closed period concluded the current evidence base supports the closed period as the most effective strategy for minimising the risks associated with slurry spreading from 15th October to the 31st January.
Keith McClintock	The closed season for slurry spreading I don't think is a good idea for Northern Ireland as it leaves the farmer with no choice but to spread the slurry on the land as soon as the close season is over - as the tanks are probably full - I have witnessed slurry going on the land on the first day after the closed season, when it has been raining heavily etc. The farmer should put it out during the most favourable time throughout the year.	Recent research paper from AFBI on closed period concluded the current evidence base supports the closed period as the most effective strategy for minimising the risks associated with slurry spreading from 15th October to the 31st January.
Loughs Agency	Loughs Agency would also highlight the recent research that indicates that sediment in rivers is actually a much bigger problem than previously thought, as phosphorous in rivers is bound up in the sediment.	<p>It is recognised that sediment is recognised as a major stressor on river ecology. Significant funding has been made available through the Environmental Farming Scheme for water protection measures which prevent livestock accessing watercourses and therefore help to reduce sedimentation.</p> <p>Support is available for farmers to restrict cattle access to water through the Environmental Farming Scheme (EFS). There are currently some 4,900 EFS Agreements in place after three tranches, covering approximately 49,000 hectares of land. After three tranches, 76% of EFS Wider Level agreements include at least one water quality measure, and some 186km of Riparian Margins and 2,912km of Watercourse Stabilisation with Fencing have been implemented through EFS. Fencing of watercourses across NI should be first addressed from a voluntary and educational perspective as to its benefits to water quality.</p>
NIW	NI Water also welcomes the inclusion of sediment entering watercourses from agriculture as a water management issue. River bankside, farmland and peat erosion and sediment loss affects raw water supplies leading to elevated colour, turbidity and Dissolved Organic Carbon/Total Organic Carbon leading to appearance, taste and odour issues in water. The treatment of these issues in raw water have energy and financial implications for NI Water. The consequential increase in disinfection bi-product to treat such waters can result in trihalomethanes (THM) formation in the treated water network, which poses a risk to public health.	<p>It is recognised that sediment is recognised as a major stressor on river ecology. Significant funding has been made available through the Environmental Farming Scheme for water protection measures which prevent livestock accessing watercourses and therefore help to reduce sedimentation.</p> <p>Support is available for farmers to restrict cattle access to water through the Environmental Farming Scheme (EFS). There are currently some 4,900 EFS Agreements in place after three tranches, covering approximately 49,000 hectares of land. After three tranches, 76% of EFS Wider Level agreements include at least one water quality measure, and</p>

		some 186km of Riparian Margins and 2,912km of Watercourse Stabilisation with Fencing have been implemented through EFS. Fencing of watercourses across NI should be first addressed from a voluntary and educational perspective as to its benefits to water quality.
NIW	NI Water would highlight that inappropriate agricultural practices lead to pesticides, including MCPA (2-methyl-4-chlorophenoxyacetic acid, a grassland weed control herbicide), ammonia and diffuse pollution entering Northern Ireland's waterways. MCPA poses a significant challenge to raw water quality protection and is detected in over half of our drinking water catchments. It is estimated that 40% of this pollution may come from the yard, when users are preparing and disposing of the chemical.	The Water Catchment Partnership is a joint approach which aims to address the MCPA problem in drinking water supplies.
UAF/NIEL	The need for greater provision of advice to help land owners and managers better protect our water bodies and for more effective inspection and enforcement of legislation has already been referred to.	DAERA continue to provide of training & advice to farmers via NAP 2019-22 publications, regular press articles, FAS Newsletter, DAERA & CAFRE websites, webinars, BDG's (now incorporating Environmental BDG's)
UFU	The UFU believe that there is considerable scope for a more partnership working to dealing with diffuse pollution from farms. There are good examples of this working in practice across GB and in the Republic of Ireland with the Scottish Environmental Protection Agency (SEPA) previously taking the lead in this way of working. In 2018, DAERA and NIEA operated a pilot scheme where DAERA staff conducted Farm Environmental Audits, the UFU actively supported this approach. This was a positive proactive approach allowing farmers to volunteer for a farm audit dealing with environmental issues in farmyards. This was focused on priority catchments and raised awareness of problems in farmyards that need to be addressed with those farmers that didn't participate. This type of work must be progressed with further roll out to more farmers. The new CAFRE Environment Advisers could also be utilised in this respect. Now that the UK has left Europe there are opportunities to progress this further without the fear of EC audits. This would also allow inspections to be focused on those who are less willing to engage and higher risk areas.	Following the success of the pilot catchment work in Upper Bann, Strule and Colebrooke Catchments there would appear to be scope to role this approach out to further priority catchments using a multi-agency (DAERA, CAFRE, NIEA, AFBI, UFU, NI Water) approach similar to that used in other parts of the UK & ROI. The pilot involved soil sampling, NMP training & risk mapping.

Andrew Graham -	Government needs to get tough on polluters. I think the threat of a short custodial sentence will make people responsible for pollution take it seriously. It seems that a fine is seen as part of the running expenses of the business.	<p>All pollution related incidents, regardless of the origin, are investigated and prosecuted under the Water (Northern Ireland) Order 1999. Prosecutions under this legislation are criminal matters. Separately, and uniquely, farmers claiming Basic Payment Scheme (BPS), and other direct payments, are required to meet cross compliance requirements across a number of areas. Any breaches of these cross compliance requirements detected can lead to penalties being applied by the BPS paying authority. These penalties are civil matters and are completely separate to any convictions that may occur under the Water (Northern Ireland) Order 1999.</p> <p>The level of penalty imposed upon criminal conviction is a matter for the courts to decide. The maximum penalties available to the court for conviction under Article 4 of the Waste & Contaminated Land (NI) Order 1997 are considered adequate and include:</p> <ul style="list-style-type: none"> - Upon summary conviction to a fine not exceeding £50,000 and/or a term of imprisonment not exceeding 2 years - Upon conviction on indictment to a fine and/or a term of imprisonment not exceeding 5 years. <p>It is an offence under Article 4 of the 1997 Order to:</p> <p>(a) deposit controlled waste, or knowingly cause or knowingly permit controlled waste to be deposited in or on any land unless a waste management licence authorising the deposit is in force and the deposit is in accordance with the licence;</p> <p>(b) treat, keep or dispose of controlled waste, or knowingly cause or knowingly permit controlled waste to be treated, kept or disposed of—</p> <p>(i) in or on any land, or</p> <p>(ii) by means of any mobile plant, except under and in accordance with a waste management licence;</p> <p>(c) treat, keep or dispose of controlled waste in a manner likely to cause pollution of the environment or harm to human health.</p>
Patrick Greer - West Belfast Historical Society	More monitoring of our water ways and heftier fines for those caught polluting them. Heavier fines for those caught polluting as this should act as a deterrent for others, either by agricultural or industrial polluters.	All pollution related incidents, regardless of the origin, are investigated and prosecuted under the Water (Northern Ireland) Order 1999. Prosecutions under this legislation are criminal matters. Separately, and uniquely, farmers claiming Basic Payment Scheme (BPS), and other direct payments, are required to meet cross compliance requirements across a

		number of areas. Any breaches of these cross compliance requirements detected can lead to penalties being applied by the BPS paying authority. These penalties are civil matters and are completely separate to any convictions that may occur under the Water (Northern Ireland) Order 1999.
Ruairí McHugh - Derry City and Strabane District Council	More severe penalties for polluting waterways e.g. cover costs of clean up and recovery of waterway. No, time after time we see waterways polluted through deliberate acts or incompetence by Farmers who then receive minimal penalties. Stronger penalties through legislation required.	All pollution related incidents, regardless of the origin, are investigated and prosecuted under the Water (Northern Ireland) Order 1999. Prosecutions under this legislation are criminal matters. Separately, and uniquely, farmers claiming Basic Payment Scheme (BPS), and other direct payments, are required to meet cross compliance requirements across a number of areas. Any breaches of these cross compliance requirements detected can lead to penalties being applied by the BPS paying authority. These penalties are civil matters and are completely separate to any convictions that may occur under the Water (Northern Ireland) Order 1999.
RSPB	A range of organisations will need to play active roles to deliver healthier and more resilient rivers, aquifers and wetlands. Our rivers are over-abstracted because of inadequate demand management and off-line storage: for example, design standards to reduce demand have been repeatedly pushed back, and water-hungry sectors such as agriculture have failed to invest enough in storage reservoirs.	Having a range of organisations play activate roles in delivering healthy and more resilient rivers, aquifers and wetlands is very much the focus of DAERA NIEA. We will continue to encourage active participation. NI farmers in the main do not need to consider winter water storage as our weather patterns supply adequate rainfall, only a handful use irrigation, and that, sparingly.
Olga Harper	Discharge from AD Plants which is twice the quantity of the original burn-off. It is now spread on the land and I've seen dead chicken carcasses as part of that spreading. Diseased animals spread disease in our lands where traditional drains and burns lead straight to the Roe. Again, I have noted the Curley Burn being contaminated by discharge which can only have come from the AD plant at Drenagh- a foul smell and a clouding of the water which was clearly contaminated by the smell of death, and that burn yards away and going straight into the Roe, our important salmon river.	If the digestate is from manure/slurry feedstock or meets the requirements of the Anaerobic Digestate Quality Protocol then it will not be deemed as a waste and will therefore not need to comply with Waste legislation. https://www.daera-ni.gov.uk/articles/end-waste-regulations If, however, the resultant digestate doesn't meet these parameters it will be deemed a waste and relevant waste legislation will need to be followed including waste duty of care requirements, registration to carry waste and any receiving facilities must be authorised to accept this waste. NIEA monitor compliance with waste legislation through inspections including road checks and site audits, taking appropriate enforcement action were needed. All pollution should be reported immediately to the Pollution Hotline 0800 807060
Loughs Agency	In relation to Anaerobic Digestion (AD) Plants, Loughs Agency	DAERA, through the upcoming Peace Plus Programme is supporting the

	<p>supports the broad concept of renewable energy, however the rate of growth of this sector is of concern. There appears to be a variety of operating conditions that allow these plants to be regulated at the lower end of the scale. In cross border catchments, where feedstock is moved across the border, the difference in regulatory approach is causing some confusion. The volume of digestate sludge generated by these plants and its disposal requires review. Loughs Agency believes that a cradle to grave approach should be adopted to assist in the management of nutrients, particularly when applied to agricultural land.</p>	<p>development of an operational strategy for dealing with nutrients (soil, organic manures and chemical fertilisers, digestate, sewage sludge) and trans boundary movements in cross border catchments to include elements such as flow of nutrients, tracking systems, innovative solutions for optimum use of nutrients for sustainable utilisation of all nutrient.</p> <p>Peace Plus Consultation</p>
NIEL	<p>There is also a need to greater integration of policy across government departments. For example, if the Department for Economy, which is responsible for energy policy, were to support and assist greater use of anaerobic digestion on farms this could also help reduce water pollution by reducing the amount of manure that is available to be spread on land, while also reducing the carbon footprint of a farm and potentially generating both energy and income for the farm in question.</p>	<p>The Department notes your comment.</p>
Olga Harper / Noel Crymble / Joanne Lusby/Mary McGuiggan	<p>The growing of "green" energy crops for AD plants is a major change in land use practice, especially with forage maize production having greater nutrient requirements than extensive grazing. This increase in nutrient application and its associated diffuse pollution is not accounted for in the revised NAP Regulations. The requirement of LESSE for AD plants may actually increase diffuse pollution reaching our waterways.</p>	<p>The Department notes your comment.</p>
Olga Harper / Noel Crymble / Joanne Lusby/Mary McGuiggan	<p>I have concerns that grass crops, traditionally grown to feed animals, are now being used as 'green energy' for AD plants (again backed often by big business). The increase in nutrient requirement associated with this practice and its associated increase in pollution levels is not taken a/c of in the revised NAP regulations so more pollution of our waterways seems inevitable.</p>	<p>The Department notes your comment.</p>
RSPB	<p>Given the high pollution risk associated with AD digestate there is a need for much greater transparency and closer monitoring of the nutrient content of digestate. This will enable NIEA to more accurately assess loading limits and ensure AD plant operators are more accountable for the responsible disposal of digestate.</p>	<p>DAERA, through the upcoming Peace Plus Programme is supporting the development of an operational strategy for dealing with nutrients (soil, organic manures and chemical fertilisers, digestate, sewage sludge) and trans boundary movements in cross border catchments to include elements such as flow of nutrients, tracking systems, innovative solutions</p>

		for optimum use of nutrients for sustainable utilisation of all nutrients Peace Plus Consultation
RSPB	Until the current nutrient management challenges are brought under control, consideration should be given to halting new AD plants for disposing of farm waste.	The application to land of digestate is controlled by the Nutrient Management Plan for the site. It is important to note that AD plants using farm / agricultural feedstocks are not adding to nutrient management challenges / surpluses. With additional processing of digestate, such as separation, AD plants can help to reduce nutrient loadings on agricultural land. AD plants using non-agricultural / farm feedstock do add to nutrient loadings / surpluses when the resulting digestate is spread on agricultural land.
Mervyn Parr	Target key catchment areas and control rigidly and make it compulsory for a farm to obtain permission to go above a certain stock number with monitoring.	As part of the NAP regulations farms are required to have nitrogen loading of no more than 170 kg N per ha per year. If above this limit, farmers must: <ul style="list-style-type: none"> • apply for a NAP Derogation to operate above the limit (which contains additional controls); or • reduce loading by taking more eligible land, exporting livestock manure and/or reducing livestock numbers.
Olga Harper	While planting trees along waterway banks to soak up emissions may help but they will not eliminate the risk of pollution through increased intensive farming methods and AD plants. The end product of Ad plants is not pathogen-free.	The NAP regulations promote better management of animal manures, chemical nitrogen fertilisers and other nitrogen-containing materials spread onto the land; and include measures such as varying buffer zones for spreading fertiliser close to different waterways; and only applying in the correct weather conditions. Digestate from AD is not normally pasteurised however the process normally includes a reduction in the bio loading within the waste.
Maurice Parkinson - Antrim and District Angling Association	Slurry and digestate management is appalling. How many times does one observe seagulls and other birds visiting fields when slurry or digestate had recently been spread? The material at its source is not being managed to make it suitable for applying to land without plant and wildlife damage.	The NAP regulations promote better management of animal manures, chemical nitrogen fertilisers and other nitrogen-containing materials spread onto the land; and include measures such as varying buffer zones for spreading fertiliser close to different waterways; and only applying in the correct weather conditions.
Nikki Ardil	While AD's resolve the issue of diversion from landfill, they have their own issues to overcome, e.g. waste transfer licences to transport the resultant hopefully inert product. How do you ensure compliance with the regulations?	If the digestate is from manure/slurry feedstock or meets the requirements of the Anaerobic Digestate Quality Protocol then it will not be deemed as a waste and will therefore not need to comply with Waste legislation. If, however, the resultant digestate doesn't meet these parameters it will be deemed a waste and relevant waste legislation will

		need to be followed including waste duty of care requirements, registration to carry waste and any receiving facilities must be authorised to accept this waste. NIEA monitor compliance with waste legislation through inspections including road checks and site audits, taking appropriate enforcement action were needed.
Olga Harper	Since much of the pollution comes from the discharges from intensive agriculture and AD plants, NIEA must ensure by their responses that NO further planning permissions	DAERA is a planning statutory consultee and will also carry out a HRA should it receive a Waste Management Licence application for any AD facility. As a statutory consultee, DAERA has no power to stop a planning development. Local planning authorities are aware of their duties as set out under Section 1.1 of the Wildlife and Natural Environment Act (NI) 2011 (duty to conserve biodiversity) and section 6.174 of the Strategic Planning Policy Statement ² (duty to apply the precautionary principle). DAERA also anticipate that all responsibilities and duties in relation to The Conservation (Natural Habitats, etc.) Regulations (Northern Ireland) 1995 will have been completed by the Council prior to any approval being granted.
Olga Harper / Noel Crymble /Joanne Lusby/Mary McGuiggan	PPC Permits and Discharge Consents fail to account for the cumulative impact of farming units operating below the livestock thresholds. DAERA has facilitated this loophole by successfully lobbying for another Derogation from the Regulations to allow "project splitting" of pig breeding and pig rearing units on separate sites to circumvent the legislative thresholds designed to protect our waterways.	Any proposed intensive pig units with a capacity above the threshold (i.e. 2000 pigs over 30kgs and/or 750 sows) require a 'PPC permit' under the Pollution Prevention and Control (Industrial Emissions) Regulations (NI) 2013. PPC regulatory controls cover the regulated installation as laid down in the legislation and associated sustainable use of manures and slurry. It does not extend regulatory control to consider combination of multiple units (existing or new units) not regulated under PPC. However, the Department is a statutory consultee in the planning process providing environmental advice to planning authorities if requested. These multiple units may well require planning permission at which stage the Department would be consulted and advice would be given to planning officers to inform their decision making.
Noel Crymble/ Joanne Lusby/Mary McGuiggan	NIEA have consistently stated in Planning Statutory Consultee Responses, for Pig and Poultry Units, that there would be no adverse impact on the environment yet the environmental statistics demonstrate deterioration in water quality due to Phosphates and in air quality due to Ammonia as more of these intensive units came into production	NIEA is a statutory consultee to the planning authorities and, as such, we provide them with advice on the environmental impact of proposed developments, it is for the planning authority to determine the absence of adverse impacts. The protocol used to provide advice is detailed in the standing advice and is available on the Departments website. However, DAERA is developing a comprehensive strategy to address the ammonia challenge including a review of the extant protocol. The draft strategy will also propose a series of farm measures to reduce

		ammonia and conservation actions to improve the condition of habitats. We intend to publish these proposals for consultation soon. Until the public consultation is complete and as instructed by the minister DAERA will continue providing advice based on the extant protocol.
Noel Crymble /Joanne Lusby/Mary McGuiggan	Air Quality Impact Assessments take no account of Ammonia deposition at higher altitudes within a catchment.	An additional 28 ammonia monitoring sites have been established to investigate patterns in ammonia concentrations in the air across the province and to more rigorously ground-truth modelled ammonia concentration estimates and provide independent verification of the ammonia concentration modelling approach. There is also a high-frequency, continuous ammonia monitoring site at AFBI Hillsborough as a case study to determine cause and effect between farm activities and ammonia concentrations in the air. Where there is potential for incombination impacts from air pollution these are required to be considered by the competent authority before any permission is authorised
Jim Gregg - Six Mile Water Trust/ Andrew Graham/S Donnelly	Much more emphasis needs to be put on the business, farm, industry, or commercial business, to submit an annual report as to their compliance. With spot checks to ensure compliance and were found to be misleading of failure to supply, a significant on the spot fixed penalty, being escalated if not paid. Do not waste time and money going to court. That would be the client's choice if he/she wished to contest.	DAERA is currently working on a Regulatory Transformation Programme.
S Donnelly -	The department does not have enough staff to carry out the necessary checks and patrolling, I will guess most prosecutions or enforcement actions only arise following an incident, when data shows a spike. Agriculture is too highly subsidised to produce, which encourages the maximum allowances to be the prime approach, maximum herd number, maximum spreading rate, conversely the minimum of positive environmental management. If you wish to reach the targets set out, you need to have a massive increase in records, monitoring, enforcement and investigative capacity. I also feel that the target itself should be amended to "at least" and not "up to".	NIEA endeavour to undertake the maximum number of checks possible with the staff compliment available in the most efficient manner they can and follow up pollution incidents where it is found.
S Donnelly -	Massively increase the enforcement team and conduct more patrols, and be less reactive, form a proactive unit.	NIEA inspections are both reactive and proactive – the planned inspection programme is a more proactive approach and water quality inspectors investigate pollution. CAFRE advisors are also available for

		advice.
Keith McClintock	Any visits (as far as possible) should be carried out with very little or no notice.	NIEA on the spot checks for cross compliance include planned inspections where the farmer is notified of the inspection so that all paperwork is available and water pollution source checks where the farmer is not notified of the visit but may be contacted by phone if not present when the inspection is being carried out.
Noel Crymble / Joanne Lusby	The Sustainable Agriculture Land Management Strategy is based on the discredited theory of "Sustainable Intensification". Therefore, its recommendations cannot be relied upon. Many of the proposed measures are cosmetic as they only provide temporary relief, i.e slow the rate of diffuse pollution rather than eliminating the risk. Any measure which facilitates an increase in animal numbers, facilitates an increase in emissions. Planting trees or creating wetland "soak-a-ways" to soak up emissions, does not remove excess nutrients as they will eventually reach our waterbodies due to the water cycle.	Within the SALMS report other recommendations exist to promote sustainable agriculture such as: On farm nutrient reprocessing solutions; A Soil Nutrient Health scheme to establish a baseline on soil nutrient levels to assist in developing catchment based solutions and advise on application of nutrients only on areas where required to meet crop need.
UFU	The Sustainable Agricultural Land Management Strategy has also outlined a series of recommendations to improve productivity on farms while addressing water quality issues including a catchment approach. The soils project across NI and then further targeted at specific catchment pilots has been proven to be successful and roll out of the soil testing, analysis, and training alongside LIDAR mapping across NI is essential. LIDAR is a key part of this project to detect the flow pathways and identifying high risk areas so that a more targeted approach can be taken.	We agree that NI wide roll out of a soil nutrient health scheme is essential to create a baseline starting point to be able to measure and manage our soils in the future. An outline business case is being developed and if approved the NI roll out could start in during the 21/22 financial year.
RSPB	In future environmental schemes farmers should be required to undertake soil testing and nutrient management planning as part of a farm environment plan.	Consideration is being given to the requirement for soil testing and development of a farm nutrient management plan under future agri support schemes.
UFU	Catchment research projects through AFBI and partners must be continued to help address water quality issues. The monitoring of waterways must also be improved to give more accurate real time measurements to help further identify and focus on problem areas. This was recommended in the SALMS and should be progressed.	We continue to work with AFBI through our Evidence and Innovation research workstream to fill the knowledge gaps in terms of water quality monitoring.
UFU	The UFU notes in the general section that there is a commitment to investigate measures for sustainable agriculture and mutually	The Department continues to engage with the Expert Working Group who delivered the SALMS strategy report and utilise CAFRE to work

	beneficial outcomes. It is disappointing that the Sustainable Agricultural Land Management Strategy is not included under this heading as much of the focus of this strategy is on mutually beneficial outcomes. The consultation document also discusses buffer strips and improved access to the countryside.	closely with farmers to promote sustainable agriculture.
RSPB	DAERA should lead the development of a land strategy for NI ^[1] . Such a strategy would have direct relevance to water quality and would ensure this issue is being addressed in a holistic manner. The UK Committee on Climate Change Report (2019) ^[2] supports this proposal; the report identifies the need for ' <i>a strategic regional land management policy to determine the most appropriate use of land</i> '.	The Department has, on behalf of the Executive, prioritised the development of a cross-cutting multi-decade Green Growth Strategy, to reduce emissions and tackle our climate and environment challenges and this will be the pathway to meeting our New Decade New Approach commitments, Programme for Government targets and Northern Ireland's contribution to the UK Net-Zero by 2050 target through sustainable management.
RSPB	The right policy mix – including advice, incentives, regulation and enforcement - is required to address the challenges from the agricultural sector 1) Incentives - Reforming future payments to focus on 'public money' for 'public goods' - A greater focus on soil health is needed to benefit both productivity and the environment; water running off farmland carrying soil and agrochemicals is a major threat to production and has significant impacts upon the freshwater environment. 2) Regulation - Given the higher prevalence of pollution incidents from agriculture compared to any other sector in NI more effective regulation is required. - the full suite of EU based environmental regulations and standards must be secured into NI law and the current regulatory framework needs to be updated to fill any potential gaps (e.g. those arising from the potential removal of cross compliance) and to support new priorities (e.g. climate change and soil health). 3) Effective enforcement - better balance between information, advice, enforcement and incentives - tougher sentences for polluters, including a requirement for polluters to pay for the rehabilitation of the damage caused.	The Department notes your comment. A future agri-environment scheme will aim to incentivise farmers to deliver a range of environmental outcomes, including improvements in air and water quality, biodiversity and reductions in carbon emissions.
RSPB	New agricultural legislation across the UK and in NI, must facilitate this transition towards genuinely sustainable agricultural policies. Advice is critical to help farmers and land managers manage change and successfully implement basic rules and environmental incentives. We support for the Knowledge Advisory Service and	The Department notes your comment.

	The Water Catchment Partnership. The farm advisory service should be expanded to enable all farmers and landowners to receive advice on fulfilling their environmental obligations, particularly in relation to protection of biodiversity and water quality.	
NIW	In considering measures to control diffuse agricultural pollution NI Water would note for consideration the need for closer alignment and more cooperation between relevant government departments and NGOs in the detection, tracing and dealing with agricultural pollution events in a timely and meaningful manner so that response can be successful and targeted. The use of real-time monitoring / telemetry and enhanced timely sampling within pollution areas would be significantly beneficial in the targeting of ammonia and pesticide issues and facilitate effective targeted education and engagement.	The use of Real Time Water Quality Monitoring (RTWQM) has been investigated as part of a DAERA E&I project 17/4/07. Such equipment is being used by AFBI as part of catchment based projects, and proposals are being developed to increase the use. This research will enable an informed view of the costs and benefits of such an approach to be fully assessed before such a programme is rolled out across all rivers.
NIW	In considering future agricultural policy, benefits could be achieved through an increased environmental focus, rather than production-based focus which encourages farmers to drain peatland, remove hedgerows and create improved grassland. Incentives that encourage land managers to leave or install trees, hedgerows, fencing to prevent livestock accessing watercourses, riparian strips and retention of peat areas will notably contribute to better water quality and carbon storage.	The vision for any future Agri-Environment Scheme would be to achieve much higher environmental benefits across the whole of the farming landscape but in balance with production. Any scheme will consider maintenance of the good work already done while incentivising future environmental interventions on the whole farm.
Brendan Kerr -	In addition commitments to the forestry buffer strips, upland water management sediment movement can impact critical salmon habitat. Incentives to avoid the negative consequences of economic pressure to drain uplands and speed up water transmission to sea should be encouraged.	The Department notes your comment.
UFU	It is imperative that any future agri-environmental scheme remains simple and attractive to farmers both financially and practically to ensure that farmers will join, take up the various measures and continue to maintain, protect, and enhance the water environment. It is vital that measures to protect waterways form a key part of future schemes.	Simplicity is one of the key principle for the development of the Agri-Environment Schemes. The development of alternative ecosystem services across the whole farm, should be financially attractive to ensure incentivisation. Through education, training and behavioural change we will make the scheme practical to the landowner. The water environment will be one of the key environmental areas that the scheme will focus on in the initial stages.
UAF	There is also a need to greater integration of policy across	The Department notes your comment.

	government departments. We await the inquiry into renewables including the Subsidy for Anaerobic Digestion which has been a disaster for water Quality in Northern Ireland.	
S Donnelly - Private	Encourage more organic status within NI Agricultural systems.	Support is available for conversion and maintenance to certified organic farming standards through the Environmental Farming Scheme (EFS). Work is on-going to co-design a future agri-environment scheme. The scheme will help farmers to deliver a range of environmental outcomes. A range of options is currently under consideration.
Mrs Nikki Ardill - NICSHR but was site manager at Crawfordsburn Country Park	The CMS goes some way to compensate farmers for saving or not removing those environmental features that provide habitat but until the SFP subsidies include animal husbandry or connect the links between crops and habitat for pollinators, farmers will continue to protect their access to subsidies. So for example, in Fermanagh I argued on a regular basis with those leading the LPIS scheme that the willow hedges and wet woodlands were important for a number of reasons including soil erosion, pollution sinks, cover for animals in inclement conditions, habitat etc....but still I witnessed the unauthorised removal of this “ineligible” vegetation by the hectare as each new set of maps were reviewed. There was a limit of removal of vegetation, about an acre before permission was meant to be sought, but this was rarely applied for or enforced as far as we observed. (After spending 3.5 years working on the joint LPIS project to capture virgin data on ineligibles and editing maps in the Regional Dard Offices, it was very clear to me that farmers still are business lead by the way subsidies are provided and the environment takes a back seat.	Work is on-going to co-design a future agri-environment scheme. The scheme will help farmers to deliver a range of environmental outcomes, and will seek to recognise the value of the natural assets present in our farming landscapes.
UFU	The UFU accepts that farmers have an environmental responsibility but there must be a balance between improving the environment and keeping farm families on the land. Farmers across NI have in recent decades have made significant gains in improving water quality. Across NI, the long-term trends show stable or decreasing trends in nitrates and phosphates in surface waters (1. The proposed Nitrates Action Programme (NAP) 2019-2022: Stakeholder Engagement Paper. February 2019.) Whilst the consultation document highlights areas of concern, it fails to recognise the progress that has been made over the years by the	Thank you for your comment, whilst DAERA note the positive steps from the agricultural sector over the years the lack of progress towards achieving water quality improvements as required under the Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017 suggest that additional measures are required across all sectors.

	<p>agricultural sector. For example, the level of sales of nitrogen and phosphate-based fertilisers in 2009 were at their lowest since 1975 and 1938 respectively. Overall, compliance with Nitrates Action Programme measures, identified by NIEA at on farm cross compliance inspections, has been generally good during the previous NAP. It also should be noted that: 1) From 1995 to 2017 P fertiliser use has declined by 9.9 kg Pha-1 2) P efficiency has increased from 26% in 1995 to 42% in 2017 3) From 1995 to 2017 the P balance has declined by 7 kg/ha</p>	
RSPB	<p>TARGETS - it is imperative that statutory targets drive and deliver equally ambitious action for improving the water environment and reinforce a no-regression principle. We propose that targets could be developed for: Connectivity - a large proportion of river ecosystems are partly or wholly disconnected from their floodplains resulting in a loss of biodiversity and ecosystem resilience. The restoration of functional floodplains would support wider habitat and species recovery ambitions; for example, on salmonid fish, as well as nature-based solutions to flood and drought management. Water and soil quality – this could include indicators of nitrates and phosphate levels and should be underpinned by the ‘polluter pays’ principle and deliver outcomes such as qualifying watercourses for bathing water status. Water efficiency - A changing climate and population growth are placing increasing demands on our water supplies. More action is needed to encourage all consumers to use water more efficiently. A target around water efficiency and usage would help drive more efficient usage. Any targets introduced must be accompanied by regulation and enforcement.</p>	<p>The Department thank you for your comment.</p> <p>The Department is currently working through the upcoming Peace Plus Programme to encourage pilots for Natural Based Solutions.</p> <p>Whilst we have indicators for water quality, we agree that NI wide roll out of a soil nutrient health scheme is essential to create a baseline starting point to be able to measure and manage our soils in the future. An outline business case is being developed and if approved the NI roll out could start in during the 21/22 financial year.</p>

URBAN DEVELOPMENT

Respondent	Respondents Comment	DAERA Comment	DfI/NIW Comment
<p>UAF / Olga Harper / Noel Crymble / Joanne Lusby/Mary McGuiggan (The Gathering)</p>	<p>Monitor Total Nitrogen and Phosphates discharges from all WWTW sites. Remove phosphates from all. All WWTW sites to be monitored for total Phosphate and Nitrogen discharges, and fines levied as above. WWTS are themselves a pollutant of our waterways which NIEA doesn't monitor. We need regular monitoring of TOTAL Nitrogen and TOTAL phosphates levels; these chemicals are currently entering our waterways unchecked as I have seen evidence of.</p>	<p>Under the Water Order 1999 as amended discharges from WWTW are regulated. Site specific consent standards are applied based on the quality of the receiving water. Tighter standards are placed to protect Sensitive Areas. An operator self-monitoring programme is in place to assess compliance with the standards set in the consents. NIEA also carry out an extensive site inspection programme.</p>	<p>TN and TP limits are imposed on WWTWs discharging to sensitive areas and are monitored by NI Water (under Operator Self-Monitoring) and compliance is assessed against annual average limits for qualifying works. 19 works with TP limit and 9 works with TN limits. Other sites with numeric standards may have ammonia (and operational nitrate and nitrite) analyses carried out.</p>
<p>NIEL</p>	<p>NI Water is the largest electricity consumer in NI and so it would be very important to set a target date by which NI Water should become net zero carbon and to measure the progress of NI Water's efforts to meet the target NI Water's 2021-2046 strategy to become net zero carbon in its operations.</p>	<p>NIEA will continue to support NI Water in their endeavours to meet the net zero carbon target. NIEA will continue to engage in the research and focus groups lead by Water UK on these issues.</p>	<p>Net zero carbon requires that capital carbon + operational carbon – carbon stored on land = zero. The UK water sector has initially focussed on operational carbon emissions primarily through moving away from fossil fuels. The UK water sector are targeting net zero operational carbon emissions by 2030. Water UK is setting up groups to look at capital carbon in the products and services used to build our infrastructure and the carbon stored on land with the ambition of reaching net zero carbon before 2050.</p>
<p>Loughs Agency</p>	<p>Encourage the use of drainage infiltration and Sustainable Urban Drainage Systems as a basic standard for the disposal of storm water.</p>	<p>NIEA are co-chairs of the Storm Water Management Group consisting of lead Government Departments and Agencies to deliver on Sustainable Drainage and Wastewater Treatment. The SMG key role is to encourage the use of SuDS and to develop an approval body for the design and construction of SuDS The Living With Water</p>	<p>Our Strategy 2021 - 2046 sets out our approach to gradually transform the sewerage network by disconnecting surface areas from existing combined sewers (storm water separation) and promoting the use of Sustainable Drainage Systems (SuDS) so that this reduces the risk of flooding and helps enhance the natural environment</p>

		Programme and the recent DfI consultation document on Strategic Drainage will put in place operating principles to allow NI Water/ Roads/ Rivers Agency all to work together to deliver sustainable drainage which will improve water quality.	
Loughs Agency	There is a real need to tackle the issues of contaminated storm water from housing developments, which includes misconnections from domestic appliances and toilet extensions, as well as a variety of other pollutants arising from a range of domestic activities. This is a difficult and resource intensive issue that needs a long term plan to address the issue.	NIEA work in collaboration with DfI and NIW through the Miconnection Working Group. NIEA work closely with NI Water to find solutions for misconnections. However this work is constrained by NI Water's limited funding.	A Misconnections Working Group has been established, chaired by DfI with NIEA and NI Water as members. A process has been developed whereby a Misconnections List is held by NIEA and shared with NI Water. As NIEA identify locations they are added to the list. NI Water has funding allocated to complete investigations to identify sources of the misconnections by undertaking dye testing and CCTV work. The type of misconnection is recorded - foul or washing machines. NI Water only repair misconnections when present on public property and not within private property.
Loughs Agency	The regulatory management of treated sewage discharges using discharge consents may need to be reviewed to reflect the current arrangements. This review should look at the concept of descriptive consents, the environmental value of percentile compliance and the wording of consents that allows derogation of an offence if responded to within certain time frames, regardless of the level of environmental impact, and the level of fines that can be imposed.	NIEA have commenced a significant Water Regulation Reform. The project will cover all of the regulatory functions carried out by NIEA in relation to Drinking Water, Wastewater and Groundwater Protection. Protection of public health and the aquatic environment are the key drivers for the reform. Specifically, the reform will radically change how NIEA regulates wastewater discharges. It includes the development of new consenting and compliance assessment methodologies to deliver UK Alignment as we exit the EU, improved protection of raw water quality for drinking water, protection of	NIEA have commenced the development of a project to reform Water Regulation the project will cover all of the regulatory functions carried out by NIEA in relation to Drinking Water, Wastewater and Groundwater Protection. Protection of public health and the aquatic environment are the key drivers for the reform. Specifically, the reform will radically change how NIEA regulates wastewater discharges. It includes the development of new consenting and compliance assessment methodologies to deliver UK Alignment as we exit the EU, improved protection of raw water quality for drinking water, protection of sensitive waters (Natura 2000 sites, Shellfish Waters and Bathing Waters) and the wider delivery of WFD objectives. The

		sensitive waters (Natura 2000 sites, Shellfish Waters and Bathing Waters) and the wider delivery of WFD objectives.	Water Regulation Reform will introduce a new compliance regime for all wastewater discharges.
Loughs Agency	Loughs Agency would encourage an ongoing embargo on development where the sewage infrastructure is near or at capacity. The Agency would also suggest that new discharge consents are subject to cumulative modelling, to ensure no fisheries impact in low water conditions and a general review of the effectiveness of descriptive consents as an enforcement tool.	Development constraint is a significant issues in Northern Ireland, and will be captured in the Water Reform Project ensuring adequate consenting methodologies and compliances assessment techniques are in place to protect and improve the aquatic environment.	NI Water welcomes the support of Loughs Agency on an embargo on development when capacity constraints have been identified. The regulatory approach to setting discharge consents will be addressed as per AE1/20/630360
Olga Harper	I'm particularly concerned about the Waste Water treatment Works at Bolea , where I have seen discharge cloud the water at exit point. NIEA's environmental statement acknowledges that the upper Curley is the spawning ground for Atlantic salmon but states that the location is above the treatment works. Surely if the water is contaminated at Bolea, then its effect on the safe spawning of salmon fry cannot be ruled out; they have to make their way past the WWTW to make their way to the sea. The discharge at Limavady WWTW discharges directly into the Roe. Fishermen talk about the high incidence of deformed and diseased salmon as being a relatively new development.	NIEA will investigate the concerns of pollution from the Bolea WwTW.	The Water Order Consent for Bolea WwTW is descriptive. The works has been deemed compliant by NIEA from 2015 to 2019, following completion of an upgrade. There have been no reported pollution incidents for Bolea from 2013 to date.

URBAN DEVELOPMENT (continued)

Respondent	Respondents Comment	DAERA Comment
Loughs Agency	The Agency would also suggest that new discharge consents are subject to cumulative modelling, to ensure no fisheries impact in low water conditions and a general review of the effectiveness of descriptive consents as an enforcement tool.	The Water Regulation Reform project will develop new consenting methodologies, including source apportionment and evidence based modelling. Compliance assessment Methodologies will also be reviewed to ensure adequate protection for the environment is in place.
Loughs Agency	Discharges of contaminated storm water from housing estates appears to be an ever increasing problem and significant challenge for water quality management.	NIEA work in collaboration with DfI and NIW through the Misconnection Working Group. NIEA work closely with NI Water to find solutions for misconnections. However this work is constrained by NI Water's limited funding.
Stephen Flynn	There is no mention of microplastic pollution via storm water run-off. Plastic pollution via storm water run-off is the largest single contributor to plastic pollution in the environment	The Department is currently funding a multi-year Tackling Plastic project that is targeted at different sectors e.g. schools, businesses, government and the wider public with education programmes, toolkits and social media messaging with a view to changing behaviours on plastics to both reduce plastic use where possible and to ensure when plastic is used it is disposed of responsibly.
Olga Harper	Planning permissions for housing should require septic tanks. No more increased use of WWTs.	Private Sewage treatment will be captured in the Water Reform Project ensuring adequate consenting methodologies are in place. Sustainable drainage and wastewater treatment is critical for Northern Ireland, the Water Reform project will consider the regulation of sewage treatment from single dwelling to large WWTW to ensure the current regulatory regimes are adequate to protect and improve the aquatic environment.
RSPB	Runoff in urban areas is causing detrimental impacts across catchments spreading chemicals, waste products and litter, including plastics and micro-plastics into our water systems.	The Department is currently funding a multi-year Tackling Plastic project that is targeted at different sectors e.g. schools, businesses, government and the wider public with education programmes, toolkits and social media messaging with a view to changing behaviours on plastics to both reduce plastic use where possible and to ensure when plastic is used it is disposed of responsibly.
RSPB	The use of green infrastructure and SuDS should be mandatory in any greenfield or brownfield developments. The combination of blue and green infrastructure such as wetlands, green roofs and walls, reedbeds, street tree planting and woodlands, and rain gardens delivers the multi-functionality needed to drive action for the climate and nature crises in urban areas. Despite the well-recognised	NIEA are co-chairs of the Storm Water Management Group consisting of lead Government Departments and Agencies to deliver on Sustainable Drainage and Wastewater Treatment. The SMG key role is to encourage the use of SuDS and to develop an approval body for the design and construction of SuDS The Living With Water Programme and the recent DfI consultation document on Strategic Drainage will put in place operating principles to allow NI Water/ Roads/ Rivers Agency all to work together to deliver sustainable drainage which will improve

	benefits of green and blue infrastructure, it is still not applied extensively in urban environments. Some key perceived barriers and potential solutions are listed.	water quality.
RSPB	Inadequate sewerage systems remain one the largest pressures on the water environment as evidenced in the consultation report. Thousands of misconnections, direct discharges from private wastewater treatment systems and combined sewer overflows (CSOs) are placing our environment at risk through direct flows of pollution including raw sewerage, phosphates, nitrates, pharmaceuticals, litter and plastics emptying directly into watercourses.	The Department is currently funding a multi-year Tackling Plastic project that is targeted at different sectors e.g. schools, businesses, government and the wider public with education programmes, toolkits and social media messaging with a view to changing behaviours on plastics to both reduce plastic use where possible and to ensure when plastic is used it is disposed of responsibly.
RSPB	There is a need to join up the various planning processes in developing a holistic strategic and collaborative approach for the water environment. For example, the RBMP process does not connect with the Asset Management Plan and Price Review processes resulting in a limited ability to cross-reference and align with business planning by NIW.	NIEA are significant stakeholders in the development of the NIW Business Plan. The evidence used to prioritise capital investment is the same evidence used to develop the POM for Urban Development. The processes are interlinked and a significant governance structure is in place to ensure a strategic and collaborative approach is in place to achieve good environmental outcomes. There are clear linkages in the Capital Investment programme for NI Water across the Long term Water Strategy, River Basin Management Plans and the Flood Risk Management Plans. NI Water have engaged heavily in the process for Local Development Plans to ensure the wastewater infrastructure is accounted for in the aspirational plans of Local Councils.
UFU	Planners continue to permit housing development in areas despite there being a lack of infrastructure for sewage treatment - this must be addressed, and planners must fully consider the capacity of the local sewage works before granting planning permission. Planners and NI Water must work together to ensure that there are adequate wastewater treatment works for the growing population demands. A specific incident of this nature in the Neagh Bann River Basin District at Ballinacor works several years ago resulted in the discharge of raw sewage to the Closet River which flooded and spilled over onto farmland. This resulted in losses for the farmers concerned as this land could not be used for grazing due to the level of contamination and took several years and countless	Development constraint is a significant issues in Northern Ireland, and will be captured in the Water Reform Project ensuring adequate consenting methodologies and compliances assessment techniques are in place to protect and improve the aquatic environment.

	meetings and correspondence to deal with this issue. This practice is totally unacceptable and should be stopped and until such times, protocols must be developed to tackle the clean-up operation when such discharges occur.	
UFU	Where there are failures to comply with water quality standards, NI Water should be adequately penalised for polluting the water environment as would happen with other industries.	Enforcement of non-compliance with water order consents is linked to the Price Control Periods. The level of Capital investment required to improve is significant and is dependant solely on government funding. NI Water have operated within constrained funding and the legacy of the underfunding is clear with severely constrained assets and the contribution of wastewater infrastructure on the aquatic environment. This is clearly evidenced in the NI Water PC 21 Business Plan and the significant capital investment requirement for Wastewater for the period of 2021 to 2027. It is envisaged that several price control periods are required with adequate funding levels deal with all of the sites presenting environmental risk and constrained development. Enforcement action against pollution incidents is applied at the same rigor as other industries and is taken where necessary. The Water Regulation Reform will develop new compliance assessment methodologies in addition to those tools already in place to provide further controls on point source discharges by Wastewater infrastructure.
UFU	The UFU are also opposed to the use of combined systems carrying both foul and storm water which NIEA permit to discharge raw sewage under emergency conditions. This is unacceptable given that farmers and industry would be fined for releasing pollutants into watercourses in similar situations. Investment should be made in treatment works and storage systems to ensure that emergency overflows are not necessary, discharge consents for emergency situations should be revoked and NI Water fined if such a situation occurs as with other industries.	Under storm conditions a water collection system may not have the capacity to accommodate all the flow received into it, particularly under heavy rainfall. Some of the contents of the collection system may therefore overflow to a waterway. Such overflows are a common feature of traditional collection systems where the sewer network has to accommodate both rainfall from urban areas and foul sewage. This type of system is known as a combined sewer system and is very common in the UK and is relied on in the area you refer to. With this type of system, in the event of heavy rain, or mechanical failure, discharges from combined sewer overflows (CSO), or emergency overflows (EO), to the river can occur. Emergency discharges to the river prevents untreated sewage from discharging from manholes, or “backing up” into domestic properties. NIEA applies the rigors of its enforcement policy where NIW has been found to operate overflows outside of these terms. The Water Regulation Reform includes the development of new compliance methodologies, one will be putting in place the flow compliance assessment which will fully regulate the spills from wastewater networks.
	Combined sewer systems should be proactively reduced. The threat of custodial sentencing for persons who pollute	Enforcement of non-compliance with water order consents is linked to the Price Control Periods. The level of Capital investment required to improve is significant

	<p>the watercourse, deliberately or 'accidentally'. I think the threat of a short custodial sentence will make people responsible for pollution take it seriously. It seems that a fine is seen as part of the running expenses of the business.</p>	<p>and is dependant solely on government funding. NI Water have operated within constrained funding and the legacy of the underfunding is clear with severely constrained assets and the contribution of wastewater infrastructure on the aquatic environment. This is clearly evidenced in the NI Water PC 21 Business Plan and the significant capital investment requirement for Wastewater for the period of 2021 to 2027. It is envisaged that several price control periods are required with adequate funding levels deal with all of the sites presenting environmental risk and constrained development. Enforcement action against pollution incidents is applied at the same rigor as other industries and is taken where necessary. The Water Regulation Reform will develop new compliance assessment methodologies in addition to those tools already in place to provide further controls on point source discharges by Wastewater infrastructure.</p>
UFU	<p>Town sewers should be maintained to ensure that there is no sediment build up which could further impact on the ability to hold water and sewage. The UFU is concerned that continued development may lead to increased flooding incidents due to an increase in the number of hard surfaces resulting in increased flowrates in urban areas and a lack of infrastructure to cope with heavy rainfall incidents. Agricultural land could also be affected further downstream as the flow of water is increased resulting in flooding of land destroying crops etc.</p>	<p>NIEA are co-chairs of the Storm Water Management Group consisting of lead Government Departments and Agencies to deliver on Sustainable Drainage and Wastewater Treatment. The SMG key role is to encourage the use of SuDS and to develop an approval body for the design and construction of SuDS The Living With Water Programme and the recent Dfl consultation document on Strategic Drainage will put in place operating principles to allow NI Water/ Roads/ Rivers Agency all to work together to deliver sustainable drainage which will improve water quality.</p>
Consumer Council	<p>A growing population will place increasing strain on our water environment. Good design of housing should include blue/green and Sustainable Drainage Systems (SuDS) infrastructure within our urban spaces to help effectively manage surface water, and enhance the water environment for the benefit of all. Modern homes should also be constructed considering energy and water efficiency. Local building control standards could be developed to encourage or mandate design standards to increase energy and water efficiency in buildings.</p>	<p>NIEA are co-chairs of the Storm Water Management Group consisting of lead Government Departments and Agencies to deliver on Sustainable Drainage and Wastewater Treatment. The SMG key role is to encourage the use of SuDS and to develop an approval body for the design and construction of SuDS The Living With Water Programme and the recent Dfl consultation document on Strategic Drainage will put in place operating principles to allow NI Water/ Roads/ Rivers Agency all to work together to deliver sustainable drainage which will improve water quality.</p>
Consumer Council	<p>Effective ongoing engagement with consumers can help shape behaviours. This will prove beneficial in campaigns such as NI Water's '3Ps' to protect the sewer network, using water wisely, and reducing plastic use. We would encourage</p>	<p>The Department is currently funding a multi-year Tackling Plastic project that is targeted at different sectors e.g. schools, businesses, government and the wider public with education programmes, toolkits and social media messaging with a view to changing behaviours on plastics to both reduce plastic use where</p>

	the Department to work with water stakeholders in the consideration of the development of trials and pilot studies to test different methods of consumer engagement and their efficacy at changing consumer behaviour.	possible and to ensure when plastic is used it is disposed of responsibly.
Jim Gregg	Much better use of secondary wetlands/ marsh and reed beds as secondary filtration of Waste Water Treatment plants, with the advantage of improving habitat for plants and birds.	NIEA will continue to support NI Water in the development of new innovative sustainable technologies where appropriate.
A Sides	Separate systems for conveying / storing rainwater - optimise sustainable drainage schemes both new developments and retrofitted.	NIEA are co-chairs of the Storm Water Management Group consisting of lead Government Departments and Agencies to deliver on Sustainable Drainage and Wastewater Treatment. The SMG key role is to encourage the use of SuDS and to develop an approval body for the design and construction of SuDS The Living With Water Programme and the recent DfI consultation document on Strategic Drainage will put in place operating principles to allow NI Water/ Roads/ Rivers Agency all to work together to deliver sustainable drainage which will improve water quality.
Pat Hughes	Higher standards in sewage treatments, more investment is badly needed	NIEA have commenced a significant Water Regulation Reform. The project will cover all of the regulatory functions carried out by NIEA in relation to Drinking Water, Wastewater and Groundwater Protection. Protection of public health and the aquatic environment are the key drivers for the reform. Specifically, the reform will radically change how NIEA regulates wastewater discharges. It includes the development of new consenting and compliance assessment methodologies to deliver UK Alignment as we exit the EU, improved protection of raw water quality for drinking water, protection of sensitive waters (Natura 2000 sites, Shellfish Waters and Bathing Waters) and the wider delivery of WFD objectives.
Stephen Flynn	Policy and legislation changes is required for the adoption of 'Soft SuDS' and Stormwater discharges. Charge a fee for discharging surface water run-off and a reward for Stormwater storage to create a circular economy.	NIEA are co-chairs of the Storm Water Management Group consisting of lead Government Departments and Agencies to deliver on Sustainable Drainage and Wastewater Treatment. The SMG key role is to encourage the use of SuDS and to develop an approval body for the design and construction of SuDS The Living With Water Programme and the recent DfI consultation document on Strategic Drainage will put in place operating principles to allow NI Water/ Roads/ Rivers Agency all to work together to deliver sustainable drainage which will improve water quality.
RSPB	In Partnership with NI Water, RSPB has been involved in a large-scale peatland restoration project on the Garron	The Department notes your comment.

	Plateau in North Antrim, the largest single area of blanket bog in NI. We need action to deliver restoration at scale.	
RSPB	We would encourage this cycle of river basin planning to align with the NI Water approach to catchment scale management and support public finances being directed towards the Sustainable Catchment and Management Planning (SCaMP) model within Pricing Controls 2021, due to be consulted on by the Utility Regulator.	The Department notes your comment.
NIW	NI Water supports the inclusion of urban development as a significant water management issue and recognises the adverse water quality impacts that can arise from unsatisfactory continuous and intermittent sewage discharges. NI Water's strategic priorities focus on sustainably growing all forms of capital (natural capital, social capital, intellectual capital, human capital, manufactured capital and financial capital) to deliver a healthy and thriving population, a growing economy and a flourishing natural environment. Key to the delivery of Economy and Nature priorities is a robust and resilient drainage and wastewater system.	The Department notes your comment.
NIW	NI Water welcomes the acknowledgment that there is a legacy of underfunding for NI Water, this particularly applies to wastewater infrastructure, and that additional funding is required. The NI Water Price Control 2021 (PC21) Business Plan, which was submitted to the Utility Regulator in January 2020 clearly sets out that improved drainage and wastewater systems must be provided through significantly increased and then sustained levels of capital investment, and that this investment is absolutely critical for continued economic growth and social, environmental and climate resilience.	The Department notes your comment.
NIW	NI Water welcome the consultation's recognition that storm water is a significant pressure on sewerage infrastructure, both in relation to out of sewer flooding and in the discharge of combined storm overflows to the environment. NI Water has been advancing, with partners and stakeholders, new	The Department notes your comment.

	and innovative approaches to address the growing demands placed on our drainage systems, and recognizes that we must continue to do so to meet future pressures including growth and climate change.	
NIW	In identifying measures to control pollution for urban development NI Water welcomes the consultation's inclusion of: 1) Working together to tackle misconnections. 2) The Living with Water Programme (LWWP) Belfast Strategic Drainage Infrastructure Plan (SDIP). The LWWP is continuing to progress detailed appraisals to identify wastewater and drainage risks and develop an integrated drainage infrastructure plan for implementation between 2021 and 2032. The benefits of an integrated drainage approach is that those with responsibilities for the water environment can work together to develop shared solutions that will address a number of different water management issues including growth, resilience, water quality and flood risk at a lower overall cost and disruption to the public when compared to developing solutions in isolation. Belfast's wastewater infrastructure is struggling under a legacy of underinvestment. The stresses on our infrastructure have been building, they will require a significant level of investment over an extended period, if it is to meet the needs of the city and its environment for today, and for the future.	The Department notes your comment.
NIW	A continued appropriate level of funding is also required over the longer term to ensure that wastewater resilience is maintained and to mitigate against any re-visit of legacy issues that would again weaken our wastewater infrastructure's ability to respond to growth and climate change.	The Department notes your comment.
NIW	Sustainable Drainage – Stormwater Management Group (SMG) Sustainable Drainage Systems (SuDS) and inclusion of blue / green infrastructure within our urban spaces is important to help effectively manage surface water, and enhance ecosystem services for the benefit all living,	The Department notes your comment.

	<p>working and visiting our urban spaces. The Interreg V funded CatchmentCARE Project is now expanding this concept by working with Irish and Northern Irish Water in implementing further schemes to remove stream discharges by irrigation to established willow plantations. Again, these are being focused at smaller sites where traditional CAPEX investment is disproportionately expensive and where such sustainable solutions are practical.</p>	
NIW	<p>NI Water supports a catchment based approach to consenting, we continue to work in collaboration with stakeholders and have a number of catchment scale projects and partnerships including Living with Water Programme (LWWP), the Shellfish and Bathing Waters Remediation (SaBRE) Project and Shared Waters Enhancement and Loughs Legacy (SWELL). These large scale models will inform evidenced based water order consents so driving targeted capital investment solutions for wastewater discharges. Through the source apportionment approach, NI Water can define its responsibilities in relation to Water Framework Directive (WFD) compliance. This includes working in partnership with other stakeholders such as DAERA and NIEA, to appraise investment needs for catchment based solutions and consenting. This will inform the best environmental outcome from investment delivered by NI Water. NI Water also supports that these approaches and models are used to support the work of NIEA and DAERA for example the assessment of carrying capacity for some of our loughs.</p>	<p>The Department notes your comment.</p>
	<p>There is a brief mention of “Sustainable Wastewater Treatment Technologies” and NIEA has been working with NIW on the development of these schemes to ensure the treatment meets the WFD requirements”. However more could be done in this area. In 2007, DAERA funded an AFBI research and development project examining whether willow plantations could be used to bio/phyto-filter waste waters from farm yards. The results have shown no</p>	<p>NIEA will continue to support NI Water in the development of new innovative sustainable technologies where appropriate.</p>

	<p>indication of negative impacts with a high remediation of water and a substantial uptake in nutrients[i]. The knowledge, experience and interest which this project succeeded in developing gave rise to the successful bid for funding under the EU-Interreg IV programme and brought about the ANSWER project (€2.1m) with the main partners of AFBI, NI Water, Donegal and Monaghan County Councils. The ANSWER Project succeeded in the planting of over 100 acres of SRC willows for the dual purposes of waste water management and the simultaneous production of bio-resources for bioenergy. Although at the time bioenergy was, and still is, the prime use of this bio-resource, it is clear that there are other higher value uses of this agricultural resource which are currently being developed.</p>	
UFU	<p>UFU welcome the investment to date in the sewerage infrastructure however, investment in sewage treatment works must continue to ensure water quality targets under the Water Framework Directive are met. NI Water should install treatment works in areas where there is currently no treatment taking place; it is unacceptable that raw sewage is being discharged into watercourses/sea.</p>	<p>The Department notes your comment. The investment into sewage infrastructure is controlled via the Price Control 2021 process.</p>
Consumer Council	<p>The RBMPs should ensure that community involvement is built into their development. As a member of the Regional Community Resilience Group. The Consumer Council has participated and witnessed first-hand the benefits that are delivered through direct community involvement and participation in water management schemes.</p>	<p>The Department notes your comment.</p>
Consumer Council	<p>Consumers support investment in sustainable solutions. The proposed measures being put forward by NI Water through its PC21 business plan (subject to the Utility Regulator's determination process) and the LWWP should be progressed as a priority. Investment in these measures will be required for a sustained period. In tackling the significant water management issues within the river basin districts, investment in improvements need to be balanced with</p>	<p>The Department notes your comment.</p>

	affordability and consumers' willingness to pay.	
Maurice Parkinson	Major funding shortage for the development of and replacement of sewage infrastructure.	The Department notes your comment.
Nikki Ardill	As smart technology evolves utility locators or phone apps etc. may be a more effective way to educate the domestic scene.	The Department notes your comment.
Nikki Ardill	ConnectRight campaign? I've never heard of this before who is their target audience? Plumbers? Apprentices? Home owners?	<p>The Connect right Group is made up of representatives from a number of industry stakeholders including the Waste Water Companies, Environment Agencies and stakeholders throughout the UK. The campaign aims to reduce water pollution by:</p> <ul style="list-style-type: none"> • raising awareness and understanding of/about misconnections, sewers and drains and the environmental problems that they cause • helping property owners and professionals to check drainage connections and take action • ensuring new drainage is connected right • helping to develop and support effective practice, policy and regulation • sharing information and evidence about the problem and supporting research and development of long term solutions <p>http://www.connectright.org.uk/</p>
Nikki Ardill	Major redevelopment works in urban areas have to deal with a myriad of utilities. The evolution of smart technologies to tag pipes and cables should reduce the damage to existing infrastructure. NICS staff could improve their skills by better training using utility locators so they can be proactive in identifying damage to existing services and speed up repairs.	The Department notes your comment.
UFU	The UFU believes that more work could be done on educating all sectors and especially the public on using water more efficiently at all times not just in times of water shortage. Further incentives should be provided to encourage rainwater harvesting and other methods to conserve water. NI Water must also be seen to be working more efficiently to reduce leakage in their own network and therefore set an example in efficient use of water in Northern Ireland. The UFU would be supportive of working	The Department notes your comment.

	collaboratively on such messaging.	
--	------------------------------------	--

SEPTIC TANKS

Respondent	Respondents Comment	DAERA Comment
UFU	Rural diffuse pollution must not solely be attributed to farmers as research shows that septic tanks have a significant impact on water quality in rural areas. Past research on tributaries of the River Blackwater has clearly indicated that septic tanks are a significant problem at particular times of the day/year. Inefficient septic tanks can and are polluting rivers/stream/sheughs running through farmland which livestock are drinking from.	NIEA continue to gather more data and information on the location and performance of septic tanks and other potential sources of pollution. We are working on improving our evidence base and spatial representation of data to help us better understand the areas across Northern Ireland where there is potential for a detrimental impact from the combined effects of septic tanks. We are developing a catchment based approach to consenting, as part of the Water Reform Programme, which will enable consideration of a range of environmental pressures and the contribution made by individual discharges, such that the capacity of the receiving environment can be better understood and standards set accordingly.
UFU	The UFU have a number of examples where members have raised complaints with NIEA regarding domestic septic tanks from neighbouring dwellings not working and discharging onto land and into waterways. The UFU has found that NIEA generally fail to investigate or respond to these concerns and appear to have a lack of interest in discussing compliance with the offending householders. This is an issue of concern for farmers who are regularly inspected and gives rise to double standards. NIEA must adequately address farmers' concerns around septic tanks and actively work with landowners and septic tank owners to resolve pollution and land contamination issues.	NIEA recognise that we could be more proactive in communicating with the public and stakeholders on this issue. NIEA is planning to review the content of its web page and update its guidance in this respect, including signposting to resources provided by organisations such as British Water and Netregs. We will consider the initiation of a Working Group, to include representatives of the tank manufacturing industry, agents, solicitors and farming bodies to develop a joint Communications strategy on this issue.
UFU	The UFU believes that NIEA should run an awareness raising campaign to make homeowners aware of their responsibilities, the service available from NI Water to empty septic tanks and how to maintain a septic tank. There is a genuine complete lack of awareness and this needs to be tackled. NIEA should start this task immediately and allocate appropriate resources to an education/awareness campaign. Given that the majority of farmers are likely to have a septic tank, the UFU has offered on a number of occasions to work	Given our resources we are obliged to prioritise the incidents we are able to respond to and unfortunately NIEA has limited capacity to investigate incidents where septic tanks are not working effectively, if no pollution is being caused. We do seek to ensure compliance with consent conditions where one is place and ensure septic tanks are properly regulated when we become aware of those without a consent. Our current scope to pursue enforcement actions against offenders is limited.

	with NIEA on such a campaign along with other stakeholders however, there has been a clear lack of engagement or will on the part of NIEA over the years to progress this.	
UFU	Further research should be carried out on the availability of suitable effective septic tanks. There are concerns that the septic tanks currently installed in new houses are failing to adequately treat wastewater. The UFU would suggest that once a suitable effective septic tank is made available that Government should financially assist domestic households in upgrading their tanks	NIEA Water Regulation supports this idea and recognises that more could be done to ensure homeowners with septic tanks are aware of their obligations and the impacts of their actions in failing to maintain their tanks etc. NIEA is planning to review the content of its web page and update its guidance in this respect, including signposting to resources provided by organisations such as British Water and NetRegs. We will consider the initiation of a Working Group, to include representatives of the tank manufacturing industry, agents, solicitors and farming bodies to develop a joint Communications strategy on this issue.
UFU	NI Water needs to review their policy on de-sludging rural septic tanks where access is difficult. Currently if there is not lane or road access to a septic tank, NI Water will not provide a de-sludging service which is unacceptable.	It is a condition of the consent that the tank should be maintained to ensure compliance and that access should be available for sampling etc. This should therefore be considered at the planning stage to avoid septic tanks being installed in locations where future desludging is not going to be possible.
UFU	The Ulster Farmers' Union policy on water charging is that meters should be introduced to all households to ensure more efficient use of drinking water. Farmers already pay for water and understand the requirement for efficient usage to avoid hefty bills. Users will only use water wisely in the knowledge that they will pay more for it if they use more. It will be virtually impossible to manage water resources effectively if we have no means of measuring its use, and the efficiency of the system. This would also help provide additional funds for NI Water to invest in the water and sewage network.	The Department notes your comment, however this is a matter for the Northern Ireland Executive.
S Donnelly	Encourage new homes to be built with non-release septic tanks, double skinned to reduce accidental leaks, introduce a replacement grant for old septic tanks. Ban housing in areas with poor WWTWs/capacity.	NIEA are working closely with NI Water and colleagues in DFI to address issues around private waste water infrastructure in areas where the mains sewer network or treatment facilities are at capacity. NIEA will seek to highlight and signpost sources of good practice information and advice via our website.

Nikki Ardill	As far as I am aware using the conveyancing process for ensuring correct consents are in place for domestic discharges at the point of sale of properties is driving up compliance. So that is good for checking some septic tanks but falls short for those tanks a long time in place. Is it possible that manufacturers could include labelling to recommend a source for advice like your ConnectRight campaign or notices to suppliers of the tanks at point of sale?	NIEA regularly update the Law Society Conveyancing group on relevant issues with regard to Septic tank regulation. We recognise that there are a significant number of septic tanks which are unregulated, and we seek to bring these under control when we become aware of them. NIEA seek to highlight and promote sources of good practice information and advice via our website and we plan to review and update the current pages.
--------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

INDUSTRY		
Respondent	Respondent's Comment	DAERA Comment
Loughs Agency	Loughs Agency and its stakeholders would like to see a more proactive approach to industrial pollution, with wider use of preventative tools and instruments. Pollution, once occurred can sometimes cause irreversible or long term damage and as such a pollution prevention approach is in the best interest of the wider environment.	NIEA seeks to work proactively with the businesses it regulates to ensure ongoing compliance with consent conditions and awareness of the potential impacts on the receiving environment when things do go wrong.
Loughs Agency	In relation to fisheries, the impact of water quality on fisheries is a corner stone of population stability. Given the decline in Atlantic salmon and the indications of high levels of estuarine and freshwater mortality Loughs Agency suggest that the most stringent default discharge standards are applied, particularly in areas of juvenile salmonid populations. In relation to the fisheries aspects of the consultation, many of the controls and much of the science is shared by, or includes input from Loughs Agency, often in partnership. While there is a legislative divergence, Loughs Agency and DAERA fisheries follow the same underlying principles for stock rehabilitation and management.	NIEA undertake a Habitats Regulation Assessment for all applications which are within, or discharging to, sensitive or designated locations including those identified as habitats for specific fish species e.g. salmon. We consider the current advice and good practice, including published evidence in setting standards designed to be protective of the water quality and the habitats which depend upon in. As part of our determination process, we routinely undertake a consultation with Loughs Agency for relevant applications and we welcome any guidance or input they may wish to offer on appropriate standards at specific locations.
RSPB	We would also like to see increased partnerships with industry and companies as part of their corporate social responsibility. For example, WWF and The Coca-Cola Company have worked together in the UK since 2012 to help secure a thriving future for our precious rivers. In partnership across the UK, together they have returned over 1.2 billion litres of water back to the environment and have directly supported 135 farmers to introduce more soil-sensitive practices, resulting in over 4,000 acres of land being farmed more sustainably.	NIEA work very closely with Industry and have signed a number of Prosperity Agreements with organisations to promote and encourage 'Going beyond Compliance'. Coca Cola HBC Northern Ireland signed their 2nd Prosperity Agreement with NIEA in January 2020 and worked with NIEA's Water Management Unit in preparation for their recent European Water Stewardship audit. NIEA recently held a meeting with RSPB to discuss a similar agreement as well as a number of other large organisations, all with a view of taking a much more strategic approach to environmental change.
Olga Harper / Noel Crymble / Joanne Lusby/Mary McGuiggan	PPC Permits and Discharge Consents fail to account for the cumulative impact of farming units operating below the livestock thresholds. DAERA has facilitated this loophole by successfully lobbying for another Derogation from the Regulations to allow "project splitting" of pig breeding and	Any proposed intensive pig units with a capacity above the threshold (i.e. 2000 pigs over 30kgs and/or 750 sows) require a 'PPC permit' under the Pollution Prevention and Control (Industrial Emissions) Regulations (NI) 2013. PPC regulatory controls cover the regulated installation as laid down in the legislation and associated sustainable use of manures and slurry. It does not extend regulatory control to consider combination of

	pig rearing units on separate sites to circumvent the legislative thresholds designed to protect our waterways.	multiple units (existing or new units) not regulated under PPC. However, the Department is a statutory consultee in the planning process providing environmental advice to planning authorities if requested. These multiple units may well require planning permission at which stage the Department would be consulted and advice would be given to planning officers to inform their decision making.
UAF / Noel Crymble / Joanne Lusby/Mary McGuiggan (The Gathering)	Discharge Consent based on quantity of discharge and not just the quality of discharge.	NIEA sets discharge standards for industrial consents based on both the volume and the quality of the discharge. Discharge standards are determined using a mass balance modelling approach to ensure the volume and composition of the discharge does not adversely impact the water quality in the receiving water.

ABSTRACTION & PHYSICAL CONDITION

Respondent	Respondents Comment	DAERAs Comment
UAF	NIEA's and DAERA Inland Fisheries have shown a deliberate inability to competently regulate and enforce abstractions, weirs, barriers, dams and hydropower to allow fish passage and maintain Q80 flow in rivers. Examples would be Lough Neagh, Crumlin River, Ballinderry River, Clady River, Lagan River, Erne System and Hydros.	DAERA Inland Fisheries has statutory responsibilities under the Fisheries Act (Northern Ireland) 1966 and NIEA have statutory responsibilities under the Abstraction and Impoundment Licensing Regulation which it takes seriously. Any identified breaches are investigated and appropriate enforcement action taken. NIEA are working in conjunction with DAERA Inland fisheries to seek sustainable solutions to make a determination for those activities operating under a deemed AIL authorisation. All stakeholders have a role to positively contribute towards effective solutions to pressures upon our aquatic ecology and habitats. DAERA Inland Fisheries and NIEA collaborates closely with a broad range of statutory and non-statutory stakeholders to meet these obligations.
Loughs Agency	In relation to abstraction and the physical condition of the water environment, the management licencing and regulation of water being abstracted from salmonid rivers has been contentious since the implementation of the regulations. Loughs Agency would suggest that a review of all current operations and a detailed agreed template for future operations is necessary. The need for screening and protection of both anadromous and catadromous fish and their complex lifecycles have led to significant difficulties. The concerns raised by the European Commission in relation to European eels, the ongoing issues of Atlantic salmon and sea trout smolts and the need for screening that can protect both, as well as other species remains difficult. Dewatered stretches and the maintenance of compensation flows appear on paper to be manageable, however with climate change comes extremes of drought and flood which need to be factored into the overall ecological requirements.	NIEA have commenced a significant Water Regulation Reform. The project will cover all of the regulatory functions carried out by NIEA in relation to Drinking Water, Wastewater and Groundwater Protection. Protection of public health and the aquatic environment are the key drivers for the reform. Specifically, the reform will radically change how NIEA regulates freshwater abstractions. It includes a continuation of the review of Drinking Water Abstractions to ensure sustainable abstraction. The reform also includes the finalisation of decision making operational policy for contentious abstractions to ensure adequate provisions are in place to protect the environment.
Raymond Mairs - Glen Oak	"All proposed actions by the Department and/or Agencies should be undertaken solely and only on the basis of what has already been agreed. That is the	DAERA recognise the implications of the Fish Farm Policy on the Aquaculture Industry and intend to establish a working group with the industry to take forward measures to ensure sustainable abstraction in line with the AIL regulations and WFD requirements.

	<p>establishment of a properly resourced Working Group to Examine, Analyse, Discuss and Agree on appropriate measures. This should be afforded whatever time necessary to achieve a sustainable outcome.” These accepted principles were applied to Abstraction Licensing and being low risk and non-consumptive, Aquaculture sites were provided with a Derogation. This afforded NIEA to address the more important abstraction sites having most impact on the environment. # The Derogation was provided on the basis that a mutually acceptable and beneficial outcome was achieved from a review of Discharge Consents. This was discussed at considerable length during a meeting in Cookstown between the Departmental, Agency and practitioners. The outcome of which was an agreement to establish a Working Group to review Abstraction Licensing for Aquaculture and other related matters. # Several brief meetings and discussions have taken place over the ten years (or more) since this was agreed. The Sector await the establishment of the Working Group and appointment of Members/Representatives.</p>	<p>Other stakeholder forums will also be engaged to ensure all opinions/ solutions are captured in the development and implementation of AIL licences.</p>
<p>Pat Hughes/Mervyn Parr/Jim Gregg/Maurice Parkinson/A Sides /Pat Hughes</p>	<p>As previous stated, unnecessary dams and obstructions must be removed. Abstraction limited to normal water levels only and forbidden at low water. More flow, less dams, more fish passes.</p>	<p>Where structures can be identified as barriers to fish migration and ownership identified barrier easement through the development of fish passage solutions or the removal of structures will be investigated. The first stage in this process is the detailed assessment of all barriers so that a prioritisation of the highest impact barriers can be made and plans for easement/removal made.</p>
<p>A Sides</p>	<p>Reconnect flood plain with rivers. Remove barriers to migration.</p>	<p>DAERA agrees with this this comment where permission can be obtained from landowners and budgets made available.</p>
<p>Maurice Parkinson</p>	<p>Urgent reassessment of the regulations associated with hydros on rivers. There is a lot of case history about their ineffectiveness and enormous damage from an environmental and climate change perspective, The survival of a range of species is currently under threat in some rivers because of them. E.g. the Erne system because of the hydro at</p>	<p>Fish passage on the Erne is the subject to ongoing research by AFBI and discussions with hydro owners/operators will focus on direct impacts upon fish migration and survival. Trap and transport is utilised as an effective measure to ensure elvers can make it to Lough Erne and a conservation eel fishery is operated to ensure downstream passage and spawning escapement can occur. A statutory stocking programme for Atlantic salmon is operated in Ireland.</p>

	Ballyshannon and also Europe wide. Major studies have shown this to be the case throughout Europe.	
RSPB	Flows and water levels have been disrupted by over-abstraction, compounded by physical modifications to water bodies, pollution and poor management of riparian zones and wider catchments. We need to ensure that we have put in place the policy, planning and management conditions to increase the resilience of rivers, aquifers and wetlands.	NIEA have commenced a significant Water Regulation Reform. The project will cover all of the regulatory functions carried out by NIEA in relation to Drinking Water, Wastewater and Groundwater Protection. Protection of public health and the aquatic environment are the key drivers for the reform. Specifically, the reform will allow for the establishment of long awaiting operational policies ensuring UK Alignment as we exit the EU, improved protection of raw water quality for drinking water, protection of sensitive waters (Natura 2000 sites, Shellfish Waters and Bathing Waters) and the wider delivery of WFD objectives.
RSPB	There is a need to end unsustainable abstraction and 'grandfathered' deemed authorisation abstraction licences that are causing environmental damage, such as to high biodiversity value and protected sites.	NIEA have commenced a significant Water Regulation Reform. The project will cover all of the regulatory functions carried out by NIEA in relation to Drinking Water, Wastewater and Groundwater Protection. Protection of public health and the aquatic environment are the key drivers for the reform. Specifically, the reform will radically change how NIEA regulates freshwater abstractions. It includes a continuation of the review of Drinking Water Abstractions to ensure sustainable abstraction. The reform also includes the finalisation of decision making operational policy for contentious abstractions to ensure adequate provisions are in place to protect the environment.
UFU	While it is estimated that around 2000 farmers currently abstract water, they do not abstract significant amounts and are therefore not seen as a significant threat to groundwater. Farm abstractions are covered by the Abstraction and Impoundment (Licensing) Regulations NI 2006 and abstraction for irrigation is part of the cross-compliance regime.	The Department notes your comment.
UFU	The UFU believes that much of the work done only serves to create bottlenecks in water courses which increase, rather than decrease, the risk of flooding. River's Agency should be looking into relieving these bottlenecks. A fairer balance needs to be struck in the sustainable management of rivers. This is particularly an issue in the Limavady area.	The Department notes your comment.
RSPB	There is a need for more widespread community understanding about short, medium and long-term water demand and supply measures, and the benefits	The Department notes your comment.

	from holding the water in the system through slowing the flow and water storage.	
RSPB	Build on 'Source to tap'. A reduction in water usage also requires policy change including government initiatives, regulation, and financial support to drive action, underpinned by better water labelling, and initiatives to increase public awareness around water saving approaches (e.g. leaky loos, water efficient hardware, water saving initiatives such as rainwater harvesting).	The Department notes your comment.
UFU	In relation to the physical condition of the water environment, the consultation document does not mention that under cross-compliance, farmers may not remove ditches and sheughs without prior permission from DAERA. Farmers are encouraged to carry out watercourse maintenance on farms although it is only recommended that 'sheugh cleaning' is carried out during the autumn to late winter and only vegetation and silt should be removed. Deeping and widening of sheughs should be avoided and farmers are encouraged to leave vegetation untouched along one side as this is an important area for wildlife and biodiversity.	The Department notes your comment.
UFU	Given the amount of flooding in recent years, the UFU have concerns around River's Agency's handling of river cleaning operations, with many rivers being cleared only every six years. The method of clearing the rivers- using the claw of the digger rather than the bucket is also of concern, as is the irrational timing of river clearances which often results in farmer's crops being damaged.	The Department notes your comment.

FISHERIES

Respondent	Respondents Comment	DAERA Comment
Brendan Kerr	<p>An urgent need to ensure that salmon habitats are assessed hydro-geomorphologically in addition to current fishery protection and river management measures in place. Although the hydro-geomorphological condition of rivers has been incorporated into WFD analysis with some rivers classed as “heavily modified” this does not provide a full assessment of the impacts and opportunities for salmon populations within individual rivers. Analysing and managing rivers as habitats for Atlantic salmon needs to be further developed to prioritize hydro-geomorphology profile as a habitat indicator, to inform salmon improvement plans. Identifying spawning habitat, nursery habitat, and holding habitat, their interconnectedness and proximity to each other needs to be recorded spatially. In that way hotspots of productivity could be identified, protected and enhanced where appropriate. An individual river may have an excess of nursery in relation to spawning habitat or an excess of spawning habitat in relation to nursery habitat creating limiting bottlenecks in productivity. In addition commitments to the forestry buffer strips, upland water management sediment movement can impact critical salmon habitat. Incentives to avoid the negative consequences of economic pressure to drain uplands and speed up water transmission to sea should be encouraged. The significance of climate change rainfall patterns and fishery assessments all need to continue and be assessed for risks to salmon populations.</p>	<p>DAERA Inland Fisheries agree that diverse habitats are essential to maximising freshwater production for Atlantic salmon and other native fish species that spend part or all of their life cycle within freshwaters. An understanding of hydro geomorphological processes is essential when developing conservation and protection orientated projects in line with international and national objectives including those emanating from the North Atlantic Salmon Conservation Organisation (NASCO) and WFD. The Fisheries Act (Northern Ireland) 1966, places an onus on DAERA Inland Fisheries to ensure the conservation and protection of Salmon and inland fisheries. NASCO obligations include commitments within the 2019 to 2024 Implementation plan to implement suitable habitat improvement projects and fish passage assessments. A key aspect of these are the restoration of natural processes including longitudinal and lateral connectivity (giving rivers space and ensuring fish passage over obstructions). A past NASCO Focus Area Report for Northern Ireland presented an audit and analysis of salmon spawning, nursery and holding habitats. Restoring natural processes where space for rivers can be provided will be progressed where possible and as opportunities arise. This will be dependent on landowner’s agreement.</p>
Jim Gregg	<p>Address the pollution issues as a priority and the fish will look after themselves basically. Whilst there is a focus on salmon, a lot can be learned by other inshore species such as flounder which appear to be suffering in relation to catch returns. Just how much impact are microplastics and pharmaceuticals having on fish stocks?</p>	<p>An appreciation of wider impacts upon freshwater, estuarine and marine fish species will aid in identifying impact and bottlenecks to production and facilitate the implementation of source to sea POM's this will further be addressed through MSFD implementation.</p>

Maurice Parkinson	<p><i>Do you think the measures outlined adequately address the impact on fish?</i> Far insufficient bearing in mind fish damage and kills, difficulty or on occasion's fish and other forms of wildlife not capable of ascending or descending. There is very limited or virtually no checking to see if these hydros are operating satisfactorily. Self-regulation is the 'take' of water is clearly far too great and using the same basic formula for this in all circumstances is a major flaw that needs to be corrected urgently. An appalling approach in these circumstances. Anglers need to be given a far greater role in this regard. An urgent review and correction of the obvious mistakes as outlined above. This will require new and revised legislation. Fish passage and ALSO that of all other species must be protected. What about crayfish, gudgeon, perch, eel, lamprey etc. A major flaw is the diversion and creating new death traps for migrating fish as at Ballyshannon. The Association proposes that a major study be undertaken to redress the flaws at Ballyshannon on the Erne waterway large scale depletion of water on stretches of waterways and in other cases</p>	<p>DAERA Inland Fisheries liaise closely with colleagues in NIEA Abstraction and Impoundment Licensing team. Where issues arise these are addressed in consultation with operators, their agents, angling associations and other interested parties. DAERA Inland Fisheries also works closely with AFBI scientists to identify impacts upon fisheries, to assess impacts and to address these. With regards to fish passage issues on the Erne, as a cross border waterbody this requires ongoing cooperation and coordination on a cross border basis.</p>
S Donnelly	<p>Poor habitats will continue to be so, as you have seen. The stocking of fisheries with poor species diversity should be stopped (a lake being stocked with trout should also have a percentage of fish added that would benefit the lake system. The introduction of predator fish/mammals as a means to improve fish quality.</p>	<p>Ensuring good chemical and biological water quality is a primary requirement to assist with the restoration of natural processes. Standing waterbodies can naturally have low fish species diversity and predators are generally widespread and able to colonise freely.</p>
Patrick Greer	<p>Over the past few years many of our rivers have been cleaned and fish stocks reintroduced using (natural to this area) species of fish and other aquatic animals this has improved the biodiversity and the physical conditions of our rivers and this progress should continue.</p>	<p>River maintenance can have a negative impact upon diverse in-channel and riparian habitats. DAERA IF works closely with DfI Rivers to minimise impacts upon fish species and their habitats. If water quality and habitat quality can be improved this should result in improved fisheries biodiversity.</p>
Keith McClintock	<p>I have already mentioned the problem of livestock access - any livestock access points upstream of spawning beds should be quickly identified and should be the first access points to be addressed.</p>	<p>DAERA agree that protection of spawning beds should be a priority and that stock exclusion is essential. Appropriate riparian buffer zones should be created including native tree planting, provision of gates, styles and provision of water.</p>
A Sides	<p>Fishery Habitat enhancement is required.</p>	<p>Agreed. DAERA Inland Fisheries is actively engaged in the development of aquatic and riparian habitat improvement projects.</p>

FORESTRY		
Respondent	Respondents Comment	DAERA Comment
Lough Agency	In relation to forestry, Loughs Agency considers best forestry practice when planning to clear, fell or replant sites which are situated in or near to salmonid rivers, or if there is a hydrological connection to a salmonid rivers. Consultation with angling clubs, riparian owners and Loughs Agency should take place, this consultation should include a very detailed plan of the proposed works prior to contractors being brought in to undertake the work. The consultation should include detailed maps of the site, the coups to be felled, watercourses on the boundary or through the site and the boundary of any designated area. It should include a method statement for the clear felling and extraction of the timber off site, including a list of mitigation / pollution prevention measures. For Natura 2000 sites they should also include an Appropriate Assessment.	The Department's Forest Service implements best practice as specified in UK Forestry Standard Forests and Water Guidelines (www.daera-ni.gov.uk/uk-forestry-standard) and UK Forestry Standard Practice Guide 'Managing forest operations to protect the water environment' (www.forestresearch.gov.uk/research/managing-forest-operations-protect-water-environment/) which do not distinguish between salmonid and non-salmonid rivers, and has an internal audit mechanism to monitor compliance. Consultation with Loughs Agency and other bodies takes place at the scoping stage of forestry planning; responses are recorded and incorporated into plans. Details of sustainable wood production plans are made available to statutory stakeholders as GIS datasets and can be viewed in published plans. [Grant aid applications are required to meet UK Forestry Standard prior to approval. Applications for felling licences are required to include measures reflecting UKFS requirements and guidelines. Habitats Regulations Assessments (HRAs) are undertaken where required in accordance with procedures specified by an internal regulations branch].
Lough Agency	They should also provide details of where species of native broadleaves will be planted along boundaries, and in particular along watercourses. Control measures for the areas of self-seeded coniferous trees, spreading out from existing forestry's, often blanketing over small waterways and limiting native trees, should also be taken into consideration.	In line with its duty to promote afforestation and sustainable forestry, the Department specifies areas that are to be maintained as or converted to native woodland in its forest plans. These can be made available to Government bodies as GIS datasets to assist them in fulfilling their statutory responsibilities, if requested, and can be viewed in published plans via the DAERA website (pending).
Olga Harper	Forestry Branch of commercial planting of conifers means that the land beneath dies - is stripped of native fauna and flora. We need the planting of deciduous trees to enhance our ecological footprint.	As above.
Noel Crymble / Joanne Lusby / Mary McGuiggan	The Regulations for Commercial Forestry have failed to prevent emissions from forestry operations entering our waterways.	Water quality is monitored by NIEA WADE; issues are raised directly with Forest Service and formally at the WFD Strategic Planning and Resources Group (SPAR)
RSPB	A more ecological approach to commercial forestry is needed which delivers biodiversity enhancement and considers long-term carbon storage benefits.	The Forestry Act (Northern Ireland) 2010 has placed a duty on the Department promote afforestation and sustainable forestry, which it delivers through undertaking forest management, environmental regulation and running grant schemes. The Department has been developing a more

		ecological approach to commercial forestry for over 20 years since the publication of the UK Forestry Standard which sets out the governments' approach to sustainable forestry. Forest Service is independently certified under the UK Woodland Assurance Standard.
RSPB	Planting the 'right tree in the right place' can provide important nature-based solutions for water quality and flood risk management, as well as other multi-benefit outcomes for nature, people and climate.	Noted with thanks
RSPB	We welcome the Forest Service commitment to tree removal through its open habitat restoration plans. However, we would encourage FS to increase the scale of ambition to undertake extensive restoration of peatland habitats which will allow society to benefit from enhanced ecosystem services, as well as contributing towards national biodiversity targets and climate action (mitigation and adaptation).	Comments gratefully acknowledged. A NI peatland management strategy is being formulated by the Department.
UFU	The UFU believes that all sectors must play their role in contributing to enhanced water quality. The application of nutrients to forests needs to be better controlled in line with regulations placed on agricultural land. Sediment loss to waterways following deforestation also needs to be managed better in many locations.	Accepted; nutrient application to forests has not taken since the inception of the first cycle of measures (>15 years). Significant attention has been placed on management of felling operations in order to minimise or prevent the movement of soil into watercourses by strict adherence to UK Forestry Standard Forests and Water Guidelines www.daera-ni.gov.uk/uk-forestry-standard Forest Service plans to open a new stand-alone Small Woodland Grant Scheme (minimum size 0.2 hectare) by December 2020. The Scheme will support the establishment of native woodland in areas previously not wooded, with the aim of helping landowners to enhance their holdings and support their land management objectives by introducing small areas of woodland. This has potential to help mitigate accidental diffuse pollution as a result of agricultural land management practices.
UFU	As DAERA promotes more forestry plantations across NI, it is important that afforestation is carried out in the right places to avoid detrimental impacts to waterbodies. DAERA must be able to provide clear advice on suitable planting areas and on the protection of waterways to those interested in afforestation.	The Department ensures that afforestation of public and private land meets all necessary environmental regulatory and forestry standard assessments.
UFU	The UFU is concerned about the spread of invasive species from forests to adjacent agricultural land which could also impact on	The Department is aware of the UFU's concern and has engaged with UFU on this subject. The Environmental Farming Scheme or successor agri-

	waterways. The Union is particularly concerned about the spread of conifers from forestry plantations. We believe that wild conifers are having an adverse impact on the natural landscape; that wild conifers are a threat to biodiversity; that wild conifers are a wildfire risk; that there is considerable cost involved in the removal/control of wild conifers.	environment schemes will help provide the main support mechanism for landowners to achieve favourable condition on Natura 2000 sites or on priority habitat elsewhere. Forest Service does not take any specific measures to prevent trees seeding from its forests onto adjoining land, nor does it consider that this inconvenience is sufficient reason for removing the forests.
UFU	The UFU believes that forest owners have a duty of care to the environment and need to take responsibility for wild conifers that are spreading. Additionally, in situations where wild conifers are already established new enforcement measures should be introduced which ensure that forest keepers control and remove wild conifers; or that neighbouring landowners be compensated for the control and/or damage to their property.	The Department is aware of the UFU's concern and has engaged with UFU on this subject. The Environmental Farming Scheme or successor agri-environment schemes will help provide the main support mechanism for landowners to achieve favourable condition on Natura 2000 sites or on priority habitat elsewhere. Forest Service does not take any specific measures to prevent trees seeding from its forests onto adjoining land, nor does it consider that this inconvenience is sufficient reason for removing the forests.
Jim Gregg	Plant more trees as wildlife zones, and allow to naturalize as buffer zones.	Thank you for your comment. The Department gratefully acknowledges your contribution.
Maurice Parkinson	As experienced recently at Ballyboley and Tardree there is no adherence to the damage caused by acidification of water waterways. There is an over planting of conifers and too few deciduous.	Thank you for your comment. The Department gratefully acknowledges your contribution.
Andrea Bingham	Teach children more in schools and really encourage eco schools and equip children with the resources to influence family and friends. Have more promotion around the benefit of trees and creation.	Thank you for your comment. The Department gratefully acknowledges your contribution.
Patrick Greer	Plant more local deciduous trees and less imported conifer species.	Thank you for your comment. The Department gratefully acknowledges your contribution.
Christine Doherty	Measures to minimise acidification, leaching, pesticides & fertilizer application.	The Department gratefully acknowledges your contribution.
Jean Dunlop	Ensure Government owned forests use native species planted with spacing for natural flora and fauna to support our environment and climate. Stop grass cutting of verges, parks, public bodies sites etc. except when necessary for safety reasons e.g. road junctions. Currently so much of our rates is wasted by Councils cutting unnecessarily. Encourage or shame, without financial aid, private companies and individuals to stop unnecessary cutting and start rewilding their lawns and green spaces and forests.	Thank you for your comment. The Department gratefully acknowledges your contribution.

S Donnelly	The uplands need to be re-forested, not for harvesting.	Thank you for your comment. The Department gratefully acknowledges your contribution.
A Sides	Riparian buffer strips. Slow the flow - block drains in forestry.	Thank you for your comment. The Department gratefully acknowledges your contribution.
Nikki Ardill	The Public bodies do a lot to assess, analyse and mitigate the impact of timber removal and on the whole they are doing a good job.	Thank you for your comment. The Department gratefully acknowledges your contribution.
Nikki Ardill	The problems can arise with public access and the risk of fires. Fire has a major impact on potential pollution incidents, destruction of habitats and use of valuable water resources to control the spread. I would like to ensure this issue is addressed in the consultation process.	Thank you for your comment. The Department is mindful of the devastating effects of wildfires and works closely with NI Fire and Rescue Service.
Nikki Ardill	There is no mention of the impact of removing small areas of woodland for development or harvesting? Is there advice or published guidelines for landowners on the design of woodland planting, perhaps associated with ponds or adjacent to watercourses and what measures can be designed in, to reduce risks when the timber is harvested?	Thank you for your comment. Guidance on these aspects is provided in the UK Forestry Standard Practice Guide 'Design techniques for forest management planning' (www.forestresearch.gov.uk/research/design-techniques-for-forest-management-planning/) and UK Forestry Standard Practice Guide 'Managing forest operations to protect the water environment' (www.forestresearch.gov.uk/research/managing-forest-operations-protect-water-environment)
Nikki Ardill	On development sites hard-core are and access roads are hosed down when dry and filtered through settlement ponds to mitigate risk of pollution from quarry dust or soil; is this issue addressed in the forestry guidelines?	Thank you for your comment. Access roads and hard standing areas for stacking timber are not hosed down in the course of forestry operations. However, please be assured that the Department is aware of the importance of appropriately locating these features and undertakes careful planning prior to the commencement of operations to ensure that runoff cannot directly enter watercourses.
Nikki Ardill	Perhaps there should be more settlement ponds and drainage swales designed into the new plantations as future proofing for harvesting issues. This would add value to habitats as many of our forests are located adjacent to reservoirs in upland areas?	The Department's Forest Service implements best practice as specified in the UK Forestry Standard. This ensures that afforestation projects adjacent to watercourses are well designed and contribute to water quality, and incorporate protective features such as water buffer areas. Equivalent measures are taken by Forest Service in the course of forest regeneration works carried out after plantations are felled.
UFU	Agricultural land could be used to help address flooding in urban areas - tree planting, erosion control and wetland restoration on agricultural land can help to slow the flow of water upstream and	The Department endorses the UFU's position on the potential role afforestation in mitigating the risk of flooding in urban environments, and has published a report on quantifying-the hydrological effect of woodland

	<p>therefore reduce potential flooding further downstream. This should only be carried out where the landowners are in full agreement with the authorities and sufficient financial compensation is paid to farmers for the agricultural land taken out of production.</p>	<p>creation in the camowen-and-drumragh-catchments on the risk of flooding in Omagh (www.daera-ni.gov.uk/articles/quantifying-hydrological-effect-woodland-creation-camowen-and-drumragh-catchments-omagh-northern).</p>
--	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

INVASIVE NON NATIVE SPECIES

Respondent	Respondents Comment	DAERA Comment
Loughs Agency	<p>In relation to non-native invasive species, this issue is fast becoming one of the most significant issues in ecological management. Riparian invasive species management needs a holistic interagency strategy between local and central government, with a source to sea approach in partnership with landowners and managers. Given the rise of aquatic non-native species, and in particular those that threaten salmonids and other fish, Loughs Agency feels that the responsibility for the management of the species, and the associated resources should be redirected to fisheries authorities.</p>	<p>DAERA Inland Fisheries agree that riparian and aquatic invasive species pose a significant threat to biodiversity. An integrated multi agency approach is required to address their impacts with adequately resourced control and eradication programmes developed. A legislative basis for the management of invasive species would be required to empower fisheries organisations to lead on these issues. Other delivery mechanisms should be considered alongside this proposal with an appropriate analysis conducted to assess options. (Inland Fisheries). The Widely Spread Species (WSS) management measures have allowed us, since The Invasive Alien Species (Enforcement and Permitting) Order (Northern Ireland) 2019 came into force on 1st December 2019 - to so far initiate over 80 enforcement procedures for landowners to prevent their spread and eventually remove from their land those species classified as WSS, which include riparian species such as Himalayan balsam and giant hogweed and aquatics such as parrots feather.</p>
RSPB	<p>There is a need for increased resourcing for control measures, monitoring and biosecurity compliance to deliver on-ground practical outcomes to address invasive non-native species.</p>	<p>Removal of invasive species remains landowner's responsibility and they can already access funding via the Environment Fund and EFS schemes. Also as a requirement of EU Regulation 1143/2014, DAERA NED INNS Team have produced Pathway Action Plans (PAPs) for Zoos, Angling and Recreational Boating with the aim of trying to stop further new arrivals to NI/Ireland. These PAPs are currently available on the GBNNSS website for a pre- public consultation stakeholder comments request. This highlights the continued support for communications with stakeholders. The INNS Team continue to support campaigns such as Check Clean Dry, Be Pet Wise & Be Plant Wise and provide resources to stakeholders to promote. These campaigns include Invasive Species Week which is an annual event across all the British Irish Council jurisdictions. The BIC INNS Group have so far produced an action plan for D. vex and an Asian hornet task force.</p>
RSPB	<p>A key part of improved catchment-level management of NNIS will be the engagement of landowners, especially farmers, in all elements of NNIS work; prevention, surveillance and early eradication and long-term management.</p>	<p>DAERA NED INNS Team recognises the importance of effective engagement with, not only landowners and farmers but of all stakeholders in managing INNS. NED INNS Team now own outright and continue to maintain, update, develop and promote the Invasive Species Ireland website. As a requirement of EU Regulation 1143/2014, after a public consultation, management measures for 'Widely Spread Species' (WSS) were published with ministerial approval - https://www.daera-ni.gov.uk/articles/widely-spread-species-management-measures which</p>

		highlights the continued support for communications with stakeholders. The WSS management measures have allowed us, since The Invasive Alien Species (Enforcement and Permitting) Order (Northern Ireland) 2019 came into force on 1st December 2019 - to so far initiate over 80 enforcement procedures for landowners to prevent their spread and eventually remove from their land those species classified as WSS, which include riparian species such as Himalayan balsam and giant hogweed.
UFU	Farmers are required to control invasive species under the cross-compliance system. There needs to be more advice and guidance around the identification and control methods permitted to tackle invasive species.	In addition to the Cross-compliance system, there is now also a further requirement for all landowners to manage INNS on their land under the 'The Invasive Alien Species (Enforcement and Permitting) Order (Northern Ireland) 2019'. Removal of invasive species remains landowner's responsibility and they can already access funding via the Environment Fund and EFS schemes. The NED INNS Team maintain, updates, develop and promote the 'Invasive Species Ireland' website, which provides resources on INNS, including identification guides and management methods.
Jim Gregg	Change in legislation to make it an offence to have these plants growing on your land.	The 'Invasive Alien Species (EU) Regulation' came into force in 2015, which aims to prevent and manage the introduction and spread of listed INNS. In December 2019 'The Invasive Alien Species (Enforcement and Permitting) Order (Northern Ireland) 2019' came into force which makes provision for criminal offences relating to breaches of the aforementioned EU regulation. Under this legislation it is an offence to grow, cultivate, sell, transport or release into the environment a Species of Union Concern'. This is further bolstered if a species is classified as Widely Spread, which allows the Department to force landowners to start a concentrated series of management measures in order to eventually eradicate.
Maurice Parkinson/Nikki Ardill	Must urgently put into place measures and funding to control these. Far too much talk and writing about the problem.	Under the 'The Invasive Alien Species (Enforcement and Permitting) Order (Northern Ireland) 2019' it is now a requirement for landowners to manage INNS on their land, with the aim of prevent their spread and ultimately eradication. By placing this requirement upon not only local authorities but all landowners, this has significantly increased the capacity to manage INNS in Northern Ireland.
Patrick Greer/Keith McClintock	a program of eradication should be introduced by way of informing the public and getting them to report any of these weeds and pests to DAERA so that they can be removed safely.	DAERA recognises the importance of surveillance and reporting of INNS, especially for those species requiring a rapid response. Reporting mechanisms (CEDaR online recording, iRecord app and Invasive Species Ireland website) already exist and the department continues to increase awareness of these through stakeholder engagement. The CEDaR online recording system has been cited to the EU Commission as DAERA's official invasive species monitoring tool.
Christine Doherty/Keith McClintock/N. Ardill	work with local authorities to increase capacity to address non-native invasive species	Under the 'The Invasive Alien Species (Enforcement and Permitting) Order (Northern Ireland) 2019' it is now a requirement for landowners to manage INNS on their land, with the aim of prevent their spread and ultimately eradication. By placing this requirement upon not only local authorities but all landowners, this has significantly increased the capacity to manage INNS in Northern Ireland.

A Sides	Treat / destroy - less time monitoring.	For certain species a rapid responses is critical, with monitoring not necessary. However for other established species, monitoring is an important part of INNS management. It allows for the identification of any trends or patterns, which will determine the most appropriate method of eradication. Data derived from monitoring INNS will not only provide best value for money, but can be used as evidence to apply for any available funding. By its nature, managing INNS can involve working with relatively unknown novel species, obtaining or providing knowledge gained from monitoring can be vital in preventing the spread of INNS and developing management procedures. For some persistent INNS, eradication is not a simple process and may take a number of years, in these cases monitoring forms an important part of eradication, e.g. Japanese knotweed, giant hogweed & Himalayan balsam.
Nikki Ardill	NIEA outsourced much of its land and estate management responsibilities to charities and trusts and then in 2016 removed the funding and many of their staff undertaking, managing land and leading monitoring work were made redundant. It has taken time for citizen science to gain volunteers and it still requires resources (capital and staff) to oversee, educate and train volunteers to undertake the monitoring work. This has been the case for the coastal surveys undertaken in September each year by Coachwatch for example; a valuable piece of work that identifies the current state of the coastline, its habitats and species, extent of management or pollution.	Still a lot of INNS work being carried out by volunteers on targeted projects such as grey squirrel and muntjac culling. DAERA NED INNS Team rely very much on volunteers entering their records via the CEDaR online recording system which has been cited to the EU Commission as DAERA's official invasive species monitoring tool. Organisations and landowners can apply for funding via the Environment Fund. There are also ongoing INTEREGG projects such as Spartina drone surveys in Strangford which will enable ongoing management via the Spartina Control Group (in operation since 2011).
Nikki Ardill	I am aware of the many bids made to the Challenge Fund to resource staff to monitor indicator species; work that cannot be done without funding but has to continue to innovate to compete against many other worthy environmental projects.	In December 2019 'The Invasive Alien Species (Enforcement and Permitting) Order (Northern Ireland) 2019' came into force which we hope will raise the management of INNS up the priorities.
Nikki Ardill	Engaging with the local community and school groups is a great way to collect data and to get the public involved as the Department's eyes and ears. It still requires resources for teachers to download. Resources that once were	DAERA recognises the critical role that the public plays in the monitoring and reporting of INNS and will continue to engage with all stakeholders. DAERA staff have given talks, presentations and hosted virtual training with both local community groups and schools in 2020. The department has ownership of, maintains, updates, develops and promotes the 'Invasive Species Ireland' website (invasivespeciesireland.com), which provides significant resources and guidance,

	<p>available on the DOE website before it was reorganised and reduced to a few paragraphs with sparsely populated hyperlinks, onward direction or details. I suggest NIEA creates an area of resources on the internet pages to assist with the capture of data. This is valuable for all monitoring not just NNIS.</p>	<p>although not specifically targeted at schools on INNS.</p>
<p>Nikki Ardill</p>	<p>The DAERA Estate is one of the largest of any of the NI Departments; compliance in your department will lead by example. Ensure your own practices are in order. I know I had to return statistics/data on spraying invasive species at CCP, what about other estate managers?</p>	<p>The NED INNS Team agrees that DAERA must lead by example in the management of INNS and are liaising with NIEA Regional Operations and Forest Service Operations to ensure that requirements of the new legislation are met, initially for all sites to put management measures in place to eventually eradicate areas of Widely Spread Species.</p>

CHEMICALS		
Respondent	Respondents Comment	DAERA Comment
UAF /Olga Harper /Noel Crymble	The EU Watch List of Antimicrobials does not include all of the antimicrobials used in Northern Ireland pig, poultry and dairy farms. This omission in NIEA monitoring is a significant risk of failing in detecting Antimicrobials and AMR pathogens entering our waterways.	The EU Watch List is not the only driver for monitoring of Antimicrobials in the NI aquatic ecosystem. A much more comprehensive list of Antimicrobials are monitored under the AMR Monitoring Programme which forms part of the Northern Ireland One Health Programme, a 5 year action plan aimed at tackling antimicrobial resistance in NI. The AMR Monitoring Programme targets a much broader suite of Antimicrobials which includes those used in intensive farming. A larger number of sample stations are also monitored targeting potential sources of Antimicrobials, including intensive farming.
Olga Harper /Noel Crymble	There are antimicrobials in heavy use in NI agriculture that are not monitored by NIEA as they aren't on E.U. list. What will happen after we leave the EU in January next year? Will NIEA's standards of surveillance rise or fall? Bear in mind that many of our waterways are cross- border.	The UK will continue to monitor under WFD post transition and this includes commitments under the Watch List. The AMR Monitoring Programme, as outlined in the above response, will continue regardless of the status of WFD as it relates to a WHO initiative.
RSPB	We believe it is vital that any approach to address the issues of pollution related to both legacy and emerging chemicals.	Current WFD monitoring suites include both legacy chemicals and a number of emerging chemicals. The EU also intends to add a number of new substances to the Annex 10 list for monitoring during Cycle 3 that will include a number of additional emerging chemicals. Going forward chemicals of emerging concern will also be monitored by both targeted and non-targeted screening programmes designed to deliver commitments under a range of drivers.
RSPB	Measures currently set out are not ambitious enough. As a priority, we want to see a multi-faceted approach with a focus on action around regulation and compliance, together with a public awareness and education campaign to address the levels of harmful chemicals, such as metaldehyde, i.e. restricting chemicals of concern and replacing them with safer alternatives, through the approach employed by REACH (the Registration, Evaluation, Authorisation and restriction of Chemicals). It is important that the UK remains part of REACH post EU Exit in order to achieve our ambitions of protecting aquatic ecosystems and water supplies; this will be cost effective and will prevent unnecessary work, time and money being spent on system duplication.	At this point in time the intention is to remain aligned with EU product and technical drivers post transition, as required by the NI Protocol, which means that REACH will likely remain in force. Measures are also being taken to raise awareness of issues identified by chemicals monitoring programmes and to engage with stakeholders accordingly. Future monitoring programmes will also include both targeted and non-targeted screening thereby extending coverage of the chemicals monitored. With regards Metaldehyde specifically, although it has been frequently detected in surface waters in other parts of the UK this has not been the case in Northern Ireland as confirmed by targeted screening data.
RSPB	Microplastics should be added to the list of pollutants regularly	Microplastics are one of the chemicals of emerging concern. In keeping with the

	monitored in inland waters, requiring agreement of an accurate, repeatable, reportable method for microplastic quantification	proposed approach for investigating the presence of emerging substances in the NI aquatic ecosystem a screening programme will be completed during Cycle 3 of WFD to assess their presence and concentration.
RSPB	To accompany a regulation, monitoring and compliance programme, a large community education campaign should be established on the impacts and behaviour change. There should also be a complimentary programme of works to remove larger plastics and litter from the water environment through working with industry and local councils to ensure robust and integrated recycling processes are in place locally, making recycling more convenient and comprehensive.	DAERA introduced the Environmental Protection (Microbeads) Regulations (Northern Ireland) 2019 which ban the manufacture and sale of cosmetic products containing plastic microbeads. The Department supports the work being led by the Scottish Government to trial a supply chain approach to reducing pellet loss by the plastics industry. DAERA currently provides funding to Keep Northern Ireland Beautiful to deliver the Live Here Love Here campaign which improves environmental quality through initiatives such as clean-ups. (Marine)
Lough Agency	Loughs Agency notes that the Water Catchment Partnership is a working partnership between DAERA, UFU, NIW and CAFRE established to help address pesticide issues in the water environment, especially in Drinking Water Protected Areas. The potential for pesticide pollution affecting juvenile salmonid development and macro invertebrate food chains cannot be underestimated, and as such Loughs Agency supports the ongoing programme to monitor and mitigate pesticide use where possible.	The Department notes your comment.
Nikki Ardill	I had been actively involved in the Live Here Love here campaign by KNIB at CCP during my tenure as park manager. In 2018 my submission for the Green Coast Award was the only flag presented in NI as the entry criteria had tightened and included management in partnership with volunteers. Crawfordsburn and Helen's Bay facilitated many beach cleans and I improved signage and displays to reinforce the message. Park rangers regularly emptied the bins and this was sent by skip for waste recovery, but each year, during high season the sheer volume of litter, mainly plastic took at least 20 man hours per day to clear. On the warmest days the 14tonne skip was replaced daily. Even with all the Blue planet programmes and focus on plastic reduction, little has changed. Folk of all ages deem litter not to be an issue for their concern and on the whole they don't take it home, even though it probably weighed twice the weight when they carried it	Staff continue to manage large amounts of litter on site and it remains a substantive issue as it has continued to be over recent years, it also remains a significant aspect of the site work over the summer in particular. Enforcement of litter offences does not rest with the Department but with the Council authority, there previously had been an agreement with Ards and North Down Council which involved an annual payment for delivery of enhanced litter and dog foul enforcement, this has not been renewed because it was unclear if enhanced benefit was delivered on site. The Department is currently funding a multi-year Tackling Plastic project that is targeted at different sectors e.g. schools, businesses, government and the wider public with education programmes, toolkits and social media messaging with a view to changing behaviours on plastics to both reduce plastic use where possible and to ensure when plastic is used it is disposed of responsibly.)

	<p>in. Fines appear to be ineffective or too few to make a difference. Changing behaviours is a slow process and removing bins just makes extra work for the park rangers. On the positive side there are small wins. The installation of a sea bin in Bangor Marina. The education about micro plastics at the Beach Forum in 2016 highlighting the adverse environmental impacts that lead to NI Councils considering the reduction of purchasing products containing micro-plastics as a worthwhile agenda item. Fishing line receptacles placed at coastal location fishing hotspots.</p>	
<p>Mary McGuiggan/Nikki Ardill</p>	<p>Real-time monitoring of chemicals in all river catchments.</p>	<p>Real time monitoring is only applicable to some chemical parameters. Organic substances, for example, cannot be monitored by this approach as they require the use of extremely detailed and complex analytical methodology. However novel sampling technology, such as passive sampling and flow triggered automatic sampling, has been employed for monitoring of organic substances in the past and when necessary will form part of future monitoring programmes. Passive samplers can be deployed in rivers for up to a month at a time and sequester pollutants as they flow through the sampler. When the period of deployment is complete the sampling media is retrieved, extracted and analysed for a range of different organic substances, a resource intensive process. Passive samplers and automatic samplers offer the advantage of being able capture pollution events throughout the period of their deployment.</p>
<p>UFU</p>	<p>If cypermethrin has been identified in certain catchments and an agricultural source is suspected, the UFU would urge DAERA and NIEA to take a partnership approach and work with the Union and other key stakeholders to address this issue at an early stage. The Water Catchment Partnership approach has been shown to be effective and this type of initiative should be progressed to tackle cypermethrin without delay if it is felt necessary.</p>	<p>The Department notes your comment.</p>
<p>UFU</p>	<p>In relation to agriculture the use of sheep dip is regulated under the Groundwater Regulations which state that farmers must have a Groundwater Authorisation to dispose of spent sheep dip. The number of farmers dipping sheep is declining due to the use of 'pore-on' alternatives. Groundwater authorisations also apply to the disposal of spent pesticides. These regulations are also part of the cross-compliance regime and are checked in Farm Quality Assurance Schemes. Disappointingly the consultation document</p>	<p>The Department notes your comment.</p>

	<p>does not refer to the Voluntary Initiative and the Plant Protection Products (Sustainable Use) Regulations 2012. As outlined above, the UFU is involved in the Voluntary Initiative (VI) (a UK wide scheme along with National Farmers Union (England, Scotland and Wales), agri-chemical companies, contractors, Government and environment groups). The VI encourages farmers to build on best practice when using pesticides with a focus on maintaining and improving biodiversity and water quality. This is another example of how farmers are positively engaging with other stakeholders to successfully address water quality issues without the need for strict legislation. There is a need for local Councils and the amenity sector to participate in VI and other pesticide schemes to ensure appropriate use and to minimise the risk to water bodies</p>	
UFU	<p>The 'Rush Solution without Pollution' weed wiping trial was a successful Water Catchment Partnership initiative within the Seagahan catchment in County Armagh. MCPA used for rush control has resulted in exceedances of this active ingredient within watercourses in some areas of Northern Ireland. During 2017 and 2018 NI Water funded a weed wiping trial using Glyphosate instead of MCPA. Five hundred acres in this area of County Armagh were treated resulting in 320 litres less MCPA per year being applied and the MCPA detected in raw water is less than half of average levels for the previous 5 years within the treated catchment. A similar initiative was progressed in Finvoy, Co Antrim and this practice is also part of the Source to Tap Interreg Project. This is another excellent example of partnership working in catchment areas to address a specific issue can be successful and should be continued and rolled out further. There needs to be better education of the public in the use and disposal of household detergents and chemicals including containers of these substances to ensure that potential pollution of waterways is minimised. The UFU would suggest a public information campaign is put in place with DAERA partnering with other stakeholders.</p>	<p>The Department notes your comment.</p>
UFU	<p>The agricultural sector across the UK has been dealing with the</p>	<p>The Department notes your comment.</p>

issue of AMR for some time and has seen a decline in antibiotic usage on farms. In the UK, around 36% of antibiotics dispensed are for animal use and of that 36% only about 26% are used in food producing animals.

<https://www.gov.uk/government/publications/uk-one-health-report-antibiotic-use-and-antibiotic-resistance-in-animals-and-humans>

In the UK total antibiotic sales for animals has fallen from 448 tonnes of active ingredient in 2014 to 226 tonnes in 2018 (down 49%). <https://www.gov.uk/government/publications/veterinary-antimicrobial-resistance-and-sales-surveillance-2018>

The overall trend of estimated use in food producing animals over the same period has been a 53% reduction from 62.5 mg/kg to 29.5 mg/kg. Our use of Highest Priority Critical Important Antibiotics (HPCIAAs) has fallen by 68% since 2014 (0.67 mg/kg to 0.26 mg/kg). The Highest Priority Critically Important Antibiotics actually make a tiny amount of the overall use in food producing animals in the UK. RUMA currently coordinates the agri-food industry action on AMR. The UFU is a member of RUMA and the Union subscribes and promotes their principle of responsible use – i.e. “as little as possible but as much as necessary” to maintain animal welfare. The RUMA targets task force is currently in the process of developing new targets for the UK industry for post 2020. This downward trend in antibiotic usage should ultimately result in lower levels found in slurry with less detection in waterways of substances coming from an agricultural source. The UFU welcomes the continued monitoring of antibiotics in waterways and will continue to work on promoting responsible use of antibiotics in the agricultural sector.

LOCAL ISSUES

Respondent	Respondents Comment	DAERA Comment
UFU	Farmers in the North Eastern River Basin District have expressed concern in the past about the erosion of the banks of the River Bann due to water skiing, boating etc. and valuable farmland is being lost. Controls on the speed of boats on the river in vulnerable areas should be investigated, implemented and policed were necessary.	Waterways Ireland have established no wake zones on the lower Bann https://www.waterwaysireland.org/news-centre/marine-notice/1112/marine-notice-no-68-of-2020---lower-bann-navigation---newferry---no-wake-zone
UFU	Farmers in the Neagh Bann River Basin District have serious concerns with the current operational water levels of Lough Neagh and the effect which this is having on their farming business. The UFU has raised concerns with the relevant Agencies about the amount of productive agricultural land lost due to flooding. This is also linked to the sedimentation at the mouth of the Upper Bann.	DfI Rivers is required to regulate and control water levels in Lough Neagh within a specified range, that is 12.450 metres to 12.600 metres Ordnance Datum, as defined in the Lough Neagh Levels Scheme (1955) (as amended).
Nikki Ardil	The watercourse that flows into Ward Park is a pollution hotspot and difficult to track the source due to the distance covered; the stream is culverted under housing developments, roads and the Balloo industrial estate. The larger waterfowl that now wade and rarely float in the ponds have no pondweeds or natural herbs to feed on with the exception of the grass in the park. On the rare occasion you do see fry in the upper sections close to Bloomfield Rd, they soon disappear when they get down past the weir gates. Whilst the Council have applied for HLF to improve the water quality for ecological value, this funding hasn't been forthcoming. I am sure similar situations occur all over NI? I have often deliberated over a plan to identify the polluters but officers in WMU tell me that there are too many discharge points to identify the source. Even as the industrial estate and housing developments have expanded, sustainable development appears low on the agenda. The NIW waste water depot and sewer upgrade of 2014 on the Gransha Rd roundabout doesn't appear to have improved the water quality downstream. Even when the sediment is removed from the ponds where will it go for decontamination? Perhaps technology will provide an answer? It	NIEA is aware that there are water pollution pressures impacting the waterway that runs through Ward Park in Bangor and there are a number of confirmed water pollution incidents recorded on the NIEA Pollution Incidents Management Systems (PIMS) in the area. To date, the incidents have generally been recorded as having a low severity environmental impact on an individual incident basis, however, the number of incidents recorded is clearly unacceptable. The majority of the incidents to date have been of short duration and appear to be from a variety of possible sources. With the culverted nature of the waterway above Ward Park, they have been difficult to investigate to confirm the exact source of the pollution observed. However, NIEA has identified the general area the sources are likely be from and an awareness raising project has commenced to target the premises involved.

	would be helpful if during the consultation, this query could be answered.	
Olga Harper	Pollution from agriculture has affected the water quality of our rivers with slurry and fertiliser spills causing damage to the fish stocks. In this area, I have seen slurry at Drenagh being spread within a metre or two of the Roe banks, in an area where the river is prone in heavy rain to flood and wash the slurry into the river. I have seen the same at Roe Valley Country Park, I am aware of slurry spreading at Bellarena where tidal waters wash the land which is cut into by drainage channels and it just runs off into the water.	All reports of slurry spreading in contravention of the NAP regulations are investigated by NIEA. All pollution incidents can be reported through the water pollution hotline on 0800 80 70 60.
Olga Harper	Discharge from AD Plants which is twice the quantity of the original burn-off. It is now spread on the land and I've seen dead chicken carcasses as part of that spreading. Diseased animals spread disease in our lands where traditional drains and burns lead straight to the Roe. Again, I have noted the Curley Burn being contaminated by discharge which can only have come from the AD plant at Drenagh- a foul smell and a clouding of the water which was clearly contaminated by the smell of death, and that burn yards away and going straight into the Roe, our important salmon river.	All reports of slurry spreading in contravention of the NAP regulations are investigated by NIEA. All pollution incidents can be reported through the water pollution hotline on 0800 80 70 61.
Olga Harper	Run off of cement etc. from new housing developments and roads. We have two current applications for housing at Bolea. In one, NIEA has stipulated the filtration systems and storage methods of materials to be used. All very fine but how is this policed? Building Control, in my experience, cannot cope with the demands of policing. In the Bolea park development of 1983, I pointed out that foul sewer and storm water were housed in the same manhole against the regulations. No one from B.C. had apparently noticed this. Surveillance of 'conditions' of builds is a joke, and everyone knows this.	NIEA would require a planning reference to enable comment to be made on specific developments. However, in general terms any conditions contained within the planning permission for a site are primarily for the planning authority to enforce. Should there be a polluting discharge from any development it should be reported to NIEA's Water Pollution Hotline on 0800 80 70 60.
Olga Harper	Sperrin Gold - I don't have direct personal knowledge of this but, from contacts, I am aware of concern for the waterways from run-off of gold excavation. Indeed any blasting from for example quarries can affect the water table as has been reported by residents living below the Keady Quarry, and the sheuks and	The draft Programme for Government aims to ensure that NI's ambition for economic growth and social progress takes into account the impact on the environment and the depletion of our finite natural resources. More specifically, the Strategic Planning Policy Statement for Northern Ireland states that Minerals, including valuable minerals, are an important natural resource and their responsible exploitation is supported by

	waterways go straight down to Curley Burn with all the blasting chemicals washed off.	government. The minerals industry makes an essential contribution to the economy and to our quality of life, providing primary minerals for construction, such as sand, gravel and crushed rock, and other uses, and is also a valued provider of jobs and employment, particularly in rural areas. The Sustainable Development Strategy recognises that while it is important that we respect the limits of our natural resources and ensure a high level of protection and improvement of the quality of our environment, 'sustainable development' does not prevent us from using and capitalising on such resources. It states that an enduring successful economy will effectively use natural resources and contribute towards the protection of the environment. While mineral developments can deliver significant economic benefits, there are also a number of negative aspects arising from this form of development. The effects of specific proposals can have significant adverse impacts on the environment and on the amenity and well-being of people living in proximity to operational sites. It is the responsibility of the planning system, and associated environmental authorisations, to address these negative aspects and where appropriate to support sustainable development but also to challenge development that is not deemed sustainable. NIEA play a key role in this process and the Agency's primary purpose is to protect and enhance Northern Ireland's environment. This is the context within which NIEA will review planning applications, and associated environmental authorisations, for new mineral developments.
Olga Harper	I'm particularly concerned about the Waste Water treatment Works at Bolea, where I have seen discharge cloud the water at exit point. NIEA's environmental statement acknowledges that the upper Curley is the spawning ground for Atlantic salmon but states that the location is above the treatment works. Surely if the water is contaminated at Bolea, then its effect on the safe spawning of salmon fry cannot be ruled out; they have to make their way past the WWTW to make their way to the sea. The discharge at Limavady WWTW discharges directly into the Roe. Fishermen talk about the high incidence of deformed and diseased salmon as being a relatively new development.	NIEA will investigate the concerns of pollution from the Bolea WwTW. The Water Order Consent for Bolea WwTW is descriptive. The works has been deemed compliant by NIEA from 2015 to 2019, following completion of an upgrade. There have been no reported pollution incidents for Bolea from 2013 to date.
Olga Harper	The illegal dumping on the banks of the Faughan allows discharges to leach into the water. The slurry lake at a dairy farm above the river is an accident waiting to happen.	DAERA through NIEA and CAFRE has a role in educating the public, industry and farming sector, offering advice on pollution prevention, and promoting good environmental practices. This is provided through training and advice through publications, regular press articles, newsletters on pollution prevention and minimising the effect of pollution on the environment once an incident has happened.'

ANNEX B

Name	Organisation	Response Type
Pat Hughes	Ex treasurer Seymour hill A.C	CITIZEN SPACE
Mervyn Parr	VSAHG	CITIZEN SPACE
Jim Gregg	Six Mile Water Trust	CITIZEN SPACE
Andrew Graham	Department for Infrastructure Roads	CITIZEN SPACE
Maurice Parkinson	Antrim and District Angling Association	CITIZEN SPACE
Andrea Bingham		CITIZEN SPACE
Patrick Greer	West Belfast Historical Society	CITIZEN SPACE
Christine Doherty	Derry City Strabane District Council	CITIZEN SPACE
Ruairi McHugh	Derry City and Strabane District Council	CITIZEN SPACE
Jean Dunlop	Individual	CITIZEN SPACE
S Donnelly	Private	CITIZEN SPACE
Keith McClintock		CITIZEN SPACE
Mary McGuiggan	The Gathering	CITIZEN SPACE
A Sides	Individual	CITIZEN SPACE
Mrs Nikki Ardill	NICSHR	CITIZEN SPACE
Brendan Kerr		EMAIL
John McCartney	Loughs Agency	EMAIL
Raymond Mairs		EMAIL
Jonathan Bell	RSPB	EMAIL
Aileen Lawson	UFU	EMAIL
Malachy Campbell	NIEL	EMAIL
Donnacha Doody	AFBI	EMAIL
Olga Harper		EMAIL
Noel Crymble		EMAIL
Angela Halpenny	NIW	EMAIL
Joanne Lusby		EMAIL
Gary Houston	UAF	EMAIL
Graham Smith	Consumer Council	EMAIL
Stephen Flynn	ARUP	EMAIL