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Suzie Cave

River Pollution: Background and summary of potential issues

1 Introduction

The following briefing paper provides background to the Committee's River Pollution Review. As requested by the Committee, the paper outlines the different governmental responsibilities regarding water quality/river pollution. It aims to reflect on the impact that the Water Framework Directive (WFD) has had on water quality and pollution incidents. It also considers the implementation of the WFD, focusing on the key role that partnership has in the delivery of the measures through the draft River Basin Management Plans (RBMPs). It provides examples of partnership approaches from other jurisdictions and, finally, discusses a number of potential points for further consideration.

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2 Background: The Water Framework Directive

Domestic water policy and legislation sits within a framework created at European Union (EU) level. The overarching legislation is provided by the Water Framework Directive (2000/60/EC)¹, which requires Member States to have an integrated approach to managing inland and coastal waters. The Water Framework Directive (WFD) establishes long-term objectives for water protection in the EU, which apply to surface waters (lakes and rivers), transitional waters (estuaries), coastal waters (up to one nautical mile from land), and to ground waters (water below the surface of the ground).²

The key principles within the WFD are:

- the protection and improvement of the aquatic environment and its ecosystems (WFD - Article 1);
- the organisation and regulation of water management at the level of river basins (WFD - Article 3); and
- the principle of recovery of the costs of water services (WFD Article 9).

2.1 Complementary Directives

The Water Framework Directive has been complemented by measures contained in a series of subsequent laws – the so-called 'daughter directives'.³ These provide further operational guidance and additional criteria on how to achieve good chemical status:

- The Groundwater Directive: Under Article 17 of the Water Framework Directive, the European Commission (EC) was required to propose specific measures to prevent and control groundwater pollution and achieve good groundwater chemical status. These measures include criteria for assessing the chemical status of groundwater and for identifying trends in pollution of groundwater bodies. In order to fulfil the requirement, the Commission adopted the Directive on the Protection of Groundwater against Pollution and Deterioration on 22 November 2006.
- The Environmental Quality Standards Directive: Article 16(7) of the Water Framework Directive required the establishment of environmental quality standards applicable to water. Since 2008, this Directive has limited concentrations in surface waters of 33 priority substances and eight other pollutants.
- The Floods Directive (FD) (2007/60/EC) is a sister Directive of the WFD. It expands the scope of the framework of European Water Policy towards flood risk management. The directive is strongly linked to the WFD implementation process, as flood risk management plans should be coordinated with River Basin

¹ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy [online] available from: <u>http://nia1.me/vv</u>

² Ibid (Articles 1&2).

³ European Commission (2010) Water is for life: How the Water Framework Directive helps safeguard Europe's resources

Management Plans (RBMPS) and reviews are based on the same six year cycle of planning.

There are two key Directives adopted before the WFD which address key sources of pollution – waste water, agriculture and major industries: The Urban Waste Water Treatment Directive (UWWTD), and the Nitrates Directive (NiD). These are linked to the Water Framework Directive in that implementation should be mutually supportive, but implementation cycles are not synchronised and the Water Framework Directive does not directly change the obligations of these Directives.

2.2 Implementing the WFD

The WFD has a series of key milestones for delivery, these are listed in Table 1 (below). After the Directive came into force (in 2000), Member States had to define their river basin districts geographically, and identify the authorities responsible for water management (2003). The next task was to undertake a joint economic and environmental analysis of these areas' characteristics (2004), and to identify water bodies at risk of not achieving the 2015 target. By 2006, countries had to launch water monitoring networks.

Year	Issue	Reference
2000	Directive entered into force	Art. 25
2003	Transposition in national legislation	Art. 23
	Identification of River Basin Districts and Authorities	Art. 3
2004	Characterisation of river basin: pressures, impacts and economic analysis	Art. 5
2006	Establishment of monitoring network	Art. 8
	Start public consultation (at the latest)	Art. 14
2008	Present draft river basin management plan	Art. 13
2009	Finalise river basin management plan including programme of measures	Art. 13 & 11
2010	Introduce pricing policies	Art. 9
2012	Make operational programmes of measures	Art. 11
2015	Meet environmental objectives	Art. 4
	First management cycle ends	
	management plan.	
2021	Second management cycle ends	Art. 4 & 13
2027	Third management cycle ends, final deadline for meeting objectives	Art. 4 & 13

Table 1: Timetable for the implementation of the Water Framework Directive⁴

The 22 December 2009 was a key milestone regarding the WFD, as it was the deadline for Member States to draw up their River Basin Management Plans (RBMPs).

⁴ European Commission [online] WFD: Timetable for implementation. Available from: <u>http://nia1.me/vt</u>

Each plan had to include a 'programme of measures' (PoM) to meet the WFD's objectives. This process will be repeated on a cyclical basis, whereby RBMPs are prepared, implemented and reviewed every six years; the first cycle covers the period 2009-2015 with the second cycle covering 2015-2021.

2.3 WFD in Northern Ireland

The WFD was transposed into Northern Ireland law through The Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2003 (Statutory Rule 2003 No. 544). This identified the Department of the Environment (and the Northern Ireland Environment Agency) as the responsible authority for co-ordinating the river basin planning process. Northern Ireland has four River Basin Districts, three of which are managed in close co-operation with the Republic of Ireland.⁵

This is common across the EU where many river basin districts are shared by Member States; cross-border districts are referred to as International River Basin Districts (IRBD). The WFD requires Member States to coordinate their efforts in managing IRBD with the aim of producing a single management plan covering the entire district. On the island of Ireland, a total of eight river basin districts have been identified. One of these is entirely in Northern Ireland, four are entirely in Ireland and three are international river basin districts.

Figure one shows the three IRBDs and the one wholly contained river basin district in Northern Ireland:

- The North Eastern River Basin District is the only one contained wholly within Northern Ireland;
- The North Western International River Basin District, including the Erne and Foyle river basins, together with the basins of Lough Melvin, Bradoge River, Lough Swilly and related small coastal river basins in west County Donegal;
- The Neagh Bann International River Basin District, including the Lough Neagh and River Bann basins as well as river basins draining to the outer estuarine limits of Dundalk Bay (Rivers Fane, Castletown, Glyde, Dee, Cully Water, Kilcurry, Ballymascanlan and Flurry) and Carlingford Lough (Newry River);
- The Shannon International River Basin District, including the Shannon river basin, which drains the midlands of Ireland and also a small portion of County Fermanagh in Northern Ireland, together with small coastal river basins in Counties Clare and Kerry. Only a very small portion of this International River Basin District lies in Northern Ireland. Consequently the preparation of the plan for the Shannon International River Basin District has been led by the authorities in the Republic of Ireland. Full consultation has been maintained with the authorities in Northern

⁵ DoE [2008] River Basement Management Planning [online] available from: <u>http://nia1.me/vw</u>

Ireland, who are represented on the Steering Group for the Shannon International River Basin District.⁶

2.3.1 Northern Ireland River Basement Management Plans

River Basement Management Plans (RBMP) set out the actions required within each district to achieve agreed environmental objectives. This process requires a gap analysis whereby every water body (surface and groundwater) is assessed for differences in its current state and where it has to get to in order to achieve 'good status. A programme of measures can then be identified and put in place to achieve the desired goals. The achievement of 'good status' is the measure by which Member States are assessed in terms of their compliance with the WFD. Each of Northern Ireland's three RBMPs detail the current status of Northern Ireland water and identify where it will be (or aim to be) at 2015, 2021 and 2027.



Figure 1: River Basin Districts in Northern Ireland

Source: DOE⁷

⁶ North Western IRBD (2009) River Basin Management Plan 2009 – 2015 [online] available from: <u>http://nia1.me/vx</u>
⁷ Ibid

3 Government Responsibilities

The following section outlines the different government responsibilities with regard to water quality and river pollution in Northern Ireland, though the distribution of those responsibilities will be subject to change following the reorganisation of Executive departments.

Table 2 maps the different departments and their responsibilities surrounding water quality and river pollution.

Department	Agencies	Role
DoE	Northern Ireland Environment Agency (NIEA)	Northern Ireland Environment Agency (NIEA) is an executive agency within the Department of the Environment. It has a duty under the Water (Northern Ireland) Order 1999 to promote the conservation of water resources in Northern Ireland having regard to the needs of industry and agriculture, the protection of fisheries, the protection of public health, the preservation of amenity and the conservation of flora and fauna. NIEA is also responsible for the implementation of the European Union Water Framework Directive (2000/60/EC) on the management of water quality. Within NIEA, Water Management Unit has responsibility for the protection of the aquatic environment. Its responsibilities include: • monitoring water quality management plans; • controlling effluent discharges; • taking action to combat or minimise the effects of pollution; • supporting environmental research; and being the 'competent authority' under the Water Framework Directive.
	Drinking Water Inspectorate	The Drinking Water Inspectorate for Northern Ireland acts on behalf of the DoE in the administration of the implementation of the Water Supply (Water Quality) Regulations (Northern Ireland) 2002.
DARD	Rivers Agency	The Rivers Agency is primarily responsible for arterial drainage and flood protection as set out in the Drainage (Northern Ireland) Order 1973 ⁸
		to protect and secure the free flow of designated watercourses. This includes discharge consents to regulate the volume and flow of water into watercourses.
DRD	NI Water (NIW)	 Northern Ireland Water is a company owned by the Department for Regional Development as the sole shareholder. Responsibilities under the Water and Sewerage Services (Northern Ireland) Order 2006 include: the supply and distribution of drinking water; the provision of the collection system and treatment service

Table 2: Departmental Responsibilities

⁸ Drainage (Northern Ireland) Order 1973

Department	Agencies	Role
		 for domestic sewage, surface water and trade effluent; the adoption, management and maintenance of public water mains and sewers; and operation of the Company's reservoirs, pumping stations and treatment works. The Roads Division within Transport NI is responsible for
	Transport NI	managing, maintaining and developing the public road network (including its drainage systems).
DCAL		The Department for Culture, Arts and Leisure (DCAL) is responsible, under the provisions of the Fisheries Act (NI) 1966, for the salmon and inland fisheries of Northern Ireland and provide advice and guidance on matters relating to the conservation, protection, development and improvement of salmon and inland fisheries to angling clubs, fishery owners, and a range of other water users and interested parties. DCAL also has a responsibility for developing managing the recreational potential of inland waterways including the provision of recreation facilities such as riverside paths and boat moorings for public use.
	Waterways Ireland	DCAL is also the sponsor department in Northern Ireland for Waterways Ireland, the Cross-Border Body responsible for the management, maintenance, development and restoration of operational waterways throughout the island of Ireland.

4 Impact of the Water Framework Directive

The Northern Ireland figures for status of our water bodies show that 37% meet good status as required under WFD. This is better than England (17%), comparable to Wales (39%) and behind Scotland (65%). Ireland is at 52% (rivers only). Northern Ireland has shown the highest level of improvement, from 28% in 2009, to 37%, a 32% increase.

Problem: 'one out all out'

According to the Department the extent of progress is masked due to the 'one out all out' rule for classification as required by the WFD. This means that an indivual water body can fail for not being up to standard in just one of up to 40 elements assessed. For example, 19% of Northern Ireland's water bodies are currently failing on one element, meaning that 56% (37% +19%)of water bodies are either at good status, or failing one assessment.⁹

⁹ Information provided by DOE (13/11/2015)

Problem: diffuse pollution

According to the department, around 68% of water body failures are due to diffuse agricultural pollution, and 33% are due to point source discharges from WWTWs, industry, sewerage networks, urban runoff and other non-sewered discharges.¹⁰

The following section seeks to illustrate the impact of the Water Framework Directive since its implementation in 2009. It aims to identify the trends, since its implementation in 2009, on water quality, pollution incidents, pollution source type and fish kills.

4.1 Water Quality

The following section shows the overall river classification in relation to the WFD, as presented by the DOE¹¹. According to the DOE *WFD Statistics Report (2015)* the status of water quality is determined by assessing a combination of biological, chemical and hydromorphological quality elements (macroinvertibrates, Ph and ammonia) to assign status from ' high' to 'bad' quality.¹²

The data below is presented in two cycles. The reason being that the second cycle data has been produced using new water body sets and revised ecological assessment methods. The Department explains that this change corresponds with standards used to define good ecological status across Europe and will be the new approach used for the second cycle RBMPs.¹³

4.1.1 First Cycle Data

	Northern Ireland				
	2009 2010 2011 2012 2013				
High	1.0	1.9	0.4	0.5	0.3
Good	24.3	19.8	22.8	21.7	22.4
Moderate	44.9	49.9	49.7	54.4	53.7
Poor	24.7	24.0	23.1	19.8	20.5
Bad	4.9	4.0	3.7	3.1	2.6
No Data	0.2	0.3	0.3	0.3	0.3

Table 3 Overall River Classifications 2009 – 2013 (first cycle water body set and environmental standards) (%)

¹⁰ ibid

¹¹ Data supplied by DOE and <u>Northern Ireland Water Framework Directive Statistics Report October 2015</u>

¹² DOE (2015) <u>Northern Ireland Water Framework Directive Statistics Report October 2015</u>

¹³ ibid



Figure 2: Trend in Overall River Classifications 2009 – 2013 (first cycle) (%)

Source: DOE¹⁴

4.1.2 Second Cycle data

Table 4 Overall River Classifications 2013 - 2014 (second cycle water body set and environmental standards) (%)

	Northern Ireland		
	2013	2014	
High	2.2	1.8	
Good	29.8	30.9	
Moderate	52.4	54.4	
Poor	12.9	10.0	
Bad	1.8	1.8	
No Data	0.9	1.1	

¹⁴ Data supplied by DOE and <u>Northern Ireland Water Framework Directive Statistics Report October 2015</u>



Figure 3: Trend in Overall River Classifications 2013 - 2014 (second cycle) (%)

What the data shows

The data from the first cycle may not be directly comparable to the second cycle due to a step change in approach and standards in 2013 (as explained above). However, the data may still give an indication of the trend in river quality as a result of the first RPMPs from 2009 to 2014. The tables and figures above show that:

- Most rivers are in the 'moderate' category across both cycles from 2009 to 2014.
- Rivers of high quality are low in comparison; they showed a decrease in the first cycle, with an increase in the second cycle. However, the figures for 2013 in both cycles show a marked increase from 0.3 to 2.2. Therefore it is hard to tell whether the overall increase in cycle two is directly attributed to improved water quality or the change in data set and approach used.
- Rivers of bad quality have decreased in general across both cycles despite the step change in approach in 2013.

However, the first implementation round of the WFD has only just been completed; therefore it may be difficult to determine any trends at this stage.

¹⁵ Data supplied by DOE and <u>Northern Ireland Water Framework Directive Statistics Report October 2015</u>

4.2 Water pollution incidents

The following section focuses on pollutions incidents from 2001 to 2014. Pollution incidents are classified by the Department in terms of source, category (type of pollution), cause, and severity with regards to its environmental impact.

The following section illustrates the trend in pollution incidents, including fish kills, from 2001-2014.



Figure 4: Number of Pollution Reports confirmed

■ Confirmed ■ No pollution found

Source: DOE¹⁶

¹⁶ Data provided by DOE 13/11/2015 and DOE (2014) Water Pollution Incidents and Enforcement 2013



Figure 5a : Incident severity 2009-2014

Low Medium High

Source: DOE¹⁷

¹⁷ Data provided by DOE

Figure 5b: Trend in high and medium incidents



Source: DOE¹⁸

18 Ibid



Figure 6: Trend in Incident Source 2001 to 2014

Domestic Northern Ireland Water Ltd ■ Farm ■ Other ■ Industry

Source: DOE (2013)¹⁹

¹⁹ Data provided by DOE and DOE (2014) Water Pollution Incidents and Enforcement 2013





Source: DOE²⁰

²⁰ Data provided by DOE and <u>DOE (2014) Water Pollution Incidents and Enforcement 2013</u>



Figure 8: Total number of Fish Kills 2001 to 2013

Source: DOE²¹

²¹ ibid

What the data shows

In summary:

Overall, from 2001 the number of confirmed pollution reports has decreased; in fact the number has not changed significantly since the implementation of the WFD in 2009. 'Low severity' and 'farm' represent the largest type and source of pollution, with high severity showing a slight increase, albeit not quite to the same level as 2000. 'Unknown', 'equipment failure' and 'poor working practice' remained consistently the largest cause of pollution. In general, the numbers of fish kill incidents have decreased since 2001. The following section gives a commentary on each of the figures presented above:

Figure 4 – Overall, since 2001 there has been a slight reduction in pollution reports from 2534 to 2133 in 2014. Since 2009 there does not appear to have been any significant change in pollution reports to 2014. This figure also shows, that of pollution reports received, more were 'confirmed' rather than 'no pollution found'.

Figures 5a and 5b shows low severity incidents as the most common from 2009 to 2014. However, looking at the wider perspective trend in Figure 5b from 2001 to 2014, medium incidents have reduced, and while high incidents have shown a gentle decline, there has been a slight rise from 2012 to 2014; however, this is still an improvement on 2000 levels.

Figure 6 shows farm source to have been consistently the highest pollution source from 2001 to 2014, showing a slight reduction to 2006, followed by a gradual rise to 2014. The other main contributors seem to fluctuate over the years between 'other', industry and at times NIW. However, NIW appears to have had a slight decrease from 2009 to 2014. In comparison, the number of 'other' sources has increased since 2012 from 177 to 242 in 2013 and 269 in 2014.

Figure 7 shows that poor working practice, equipment failure and 'unknown' have been the main causes of pollution incidents since 2001. In fact 'unknown' appears to have increased since 2009 from 211 to 317 in 2014. Also, deliberate dumping appears to have increased particularly since 2011 from 31 to 136 in 2014.

Figure 8 shows the total number of fish kills (in terms of the number of incidents) from 2001 to 2014. In general the numbers of fish kill incidents have decreased since 2001 from 45 to 11 by 2014, with a few fluctuations – including a rise to 22 in 2010 and 23 in 2011 – in between times.

5 Implementation of WFD – the role of partnership working

According to the Department, the Second Cycle plans set out 120 new measures that are needed to improve Northern Ireland's situation since the first cycle of RBMPs.²² These aim to achieve up to 70% of water bodies at good status by 2021, if the measures are implemented and funded.

As the result of an economic assessment, £17.5m per annum is required, which equates to £105m in total, to meet the 70% target. According to the Department, some of this funding will be sourced from the EC, between Interreg and RDP contributions (18%), and the NIW infrastructure improvement programme (56%). The final 26% will be required by Departments (DOE, DARD, DCAL, DRD) to fund ongoing and new activities and schemes, of which nearly a third is secured.²³

The following section considers the implementation of the Water Framework Directive (WFD), focusing on the key role that partnership has in the delivery of the measures in the Draft Second Cycle River Basin Management Plans (RBMPs) 2015-2021. It highlights measures which the Department is proposing to take forward, in each of the three second cycle plans, to achieve improvements in partnership working.²⁴ It also details comments made by respondents to the consultation and any response to these by the Department.

²² Information from DOE (13/11/2015)

²³ Information from DOE (13/11/2015)

²⁴ All three draft River Basin Management Plans are available on the DOE website

5.1 Department's Proposals

Table 5: Department proposals for partnership working in second cycle draft RBMPs

Improvement Required	Action	Delivery Mechanism	Owner	Deadline for implementation
Protection of rivers	Support established river trusts through specific projects.	Established NI River Trusts River Trust Action Plans Community Engagement	NIEA	2021
Reduction impacts from waste disposal	Work with local councils and wider stakeholders to increase awareness and support actions to address litter in the water environment.	Partnership working	NIEA	2021
Restoration of rivers and lakes	Develop and implement a programme of catchment scale pilot projects to protect and improve water quality and quantity.	INTERREG V and other funding sources	All partners and stakeholders	2021
Reduction in pollution	Consider options for civil sanctions, such as on the spot fines, as part of the regulatory reform programme for environmental regulation.	DOE Regulatory Reform programme	DOE RNRPD	2017
Protection of lakes and control of diffuse and point sources of pollution	Develop management measures for smaller lakes based on the outcomes from the DOLMANT project.	Set up an inter-agency Lakes Restoration working group	NIEA/DCAL	2018
Reduction in pollution	Develop and agree five prosperity agreements with local industry/business.	Partnership working with business and interest groups	NIEA	2015
Reduction in pollution and flood risk	Consider increased utilisation of flood plain storage as part of Flood Risk Management Plans (FRMPs).	Partnership working on local projects and schemes	DARD RA	2021
Education and awareness	Continue to work together to improve understanding of the wider public of value and wider benefits of the water environment.	Partnership working and Catchment Stakeholder Groups	NIEA	2017
Reduction in discharges/impacts from waste disposal	Review success of pilots with local councils to address fly tipping, including hazardous and fuel laundering waste.	Partnerships between NIEA and local councils	NIEA	2015
Education and awareness	Increase awareness of role of groundwater in the management of the aquatic environment as part of catchment wide projects.	GGSNI, Universities, new councils, local stakeholder groups	NIEA	2017
Education and awareness	Use the Water Catchment Partnership approach to work proactively together to promote and raise awareness of best practice when using pesticides on the farm and in gardens.	Water Catchment Partnership	WCP	2017

Restoration of rivers and lakes	Consider the inclusion of new woodlands, wet woodlands and floodplain forests as part of catchment wide pilot projects to protect and improve water quality and quantity	Partnership working with stakeholders, NGOs and other Government Agencies	All partners and stakeholders	2021
Reduction in pollution from sediment	Develop and enhance modelling tools to help understand the natural dynamics and science of the catchments, such as further development of the SCIMAP tool	Working in partnership with other agencies, and research community	NIEA	2017
Reduction in pollution from sediment	Develop a pilot project in a catchment with sediment problems to consider alternative sustainable methods to dealing with issues	Partnership working with stakeholders, NGOs and Government Agencies	All partners and stakeholders	2021
Reduction in pollution	Develop and agree a prosperity agreement plan with Quarry Products Association (QPA)	Partnership working	QPA/NIEA	2015
Reduction in pollution	Develop partnership process with Local Councils to support their effective management of significant waste contracts	Development of Stakeholder engagement structure	DOE RNRPD	2015
Reduction in dangerous substances	Coordinate activities to reduce Dangerous Substances through an Expert Group	Partnership working across government	NIEA	2015
Protect drinking water sources	Further development of Drinking Water Protected Areas and establishment of safeguard zones to improve and maintain water quality with drinking water catchments	Partnership working with NIW and DWI	NIEA	2021
Education and awareness	Continue partnership approach between professionals and volunteers for invasive alien species monitoring to improve understanding of current distributions and spread	Invasive Species Ireland Project, NGO projects and Challenge Fund	NIEA	2020
Improved management of habitats	Develop and monitor a demonstration project based on adapted channel maintenance, and through a partnership approach	Inter-agency River Restoration and Continuity Group	DARD RA/ NIEA	2020

In addition to the measures presented in Table 1, the Department has informed that following two Fresh Water Summits in 2014, discussions are ongoing regarding the development of an Action Plan. It may be the case that further proposals will be suggested such as partnerships to promote Citizen Science and Award Schemes²⁵.

²⁵ <u>http://www.doeni.gov.uk/niea/2015-wfd-north-eastern-river-basin-management-plan-summary.pdf</u>

5.2 Consultation Responses

The following table summarises the responses to the consultation on the draft RBMPs concerning partnership working and approaches, and also includes the Department's response.

Торіс	Respondent's comments	Department's response
Improved engagement/ involvement/communication	 Respondents: indicated that there should be closer working with groups such as farmers, fishermen, NGOs, and all other stakeholders. highlighted the importance of trying to improve communication and promoting education and awareness campaigns. expressed the view that a more advisory approach to achieving compliance in the agricultural sector would be a more effective way to deliver a better environment. 	The Department is committed to ongoing engagement and partnership working at a local level and are willing to engage with all stakeholders and individuals who can assist in helping to meet the objectives of the WFD. The final second cycle RBMPs will build on the positive work already being carried out. The Department notes these comments and will continue to identify opportunities for working together in improving education and awareness on key water issues. In terms of adopting a more advisory approach with farmers and the agricultural sector in order to achieve positive environmental outcomes, the Department has been engaging with a range of stakeholders including NGOs and the Ulster Farmers' Union and the farming community to promote partnership working between NIEA and the agricultural sector.
Councils and Planning	 Respondents suggested: more liaison with the new super councils is important. water protection and enhancement measures should be an integral part of all new planning applications. 	The Department acknowledges and recognises the key role of the Councils going forward, in particular with respect to the processing of planning applications and ensuring that environmental and water quality objectives are a key consideration. This engagement will take place at various levels. While the majority of planning functions have transferred to local government, the key principles and policies on which planning decisions are made remain consistent with the current approach and NIEA will continue to provide input, advice and guidance in respect of the environmental aspects and impacts of any proposals. Councils in their statutory role as plan-maker will also be responsible for preparing Local Development Plans (LDPs) for their areas. In preparing their LDPs, councils must take account of the strategic policy contained within the SPPS (once published). It will enable councils to bring forward

Торіс	Respondent's comments	Department's response
		bespoke local planning policy tailored to the specific circumstances of their area. This process will also involve public consultation and stakeholder engagement which will provide opportunities to liaise and address issues such as water protection and enhancement measures.
Funding	A respondent commented that the current funding pressures will affect the statutory, environment, community and voluntary sectors and it will be difficult to implement genuine projects that can delivery robust outputs for water quality in NI.	The Department will continue to make a case for additional funding during the second cycle and, where additional funding becomes available, identify and implement further measures that may improve water quality.
Catchment Stakeholder Groups ²⁶	Respondents showed a willingness for continued and increased involvement at Catchment Stakeholder Group meetings with more open discussion exposing possible conflicts and possible partnership.	The Department is reviewing the use of CSGs as a form of stakeholder engagement. Low attendance rates combined with staff time and expense are the casue with this review. Therefore the Department wil be looking for more effective ways for engagement. After consulting via questionnaire with CSG attendees, the Department is recommending that one meeting per River Basin District is held annually with consideration to be given to a whole day conference on alternate years. Further engagement with stakeholders on this will take place through the WFD Stakeholder Forum.
Catchment Oversight Groups ²⁷	A respondent suggested that an action should be established for the Catchment Oversight Group for the identification and implementation of multi-benefit projects.	The Department will take these comments into consideration when finalising the plans. The Department also stated that through this group, the NIEA is currently leading on a catchment study on the Moyola, which will involve a number of Departments and groups. This will be the first such study in Northern Ireland, and aims to develop a process and methodology which can be used for further catchment studies. River Restoration Centre (of which

²⁶ The Catchment Stakeholder Groups (nine throughout NI) consist of representatives from Government Departments/ Agencies, angling groups, NGOs, landowners, and members of the public, to address local water management issues. Meetings (bi-annual) provide a forum to; discuss key local water management issues, influence decisions and assist in the implementation of solutions. See http://www.doeni.gov.uk/niea/water-home/wfd/public_partic_3/catchment_stakeholder_groups.htm

²⁷ According to the Department, the Catchment Oversight Group is an interdepartmental group looking at restoration and barrier issues, with the aim of identifying works and measures which would benefit a number of directives and plans.

Торіс	Respondent's comments	Department's response
		Rivers Agency is a core funder) has assisted in the development of both the group, and the study.
Timetable of change	Respondents highlighted the need for a clear timetable to be in place so that stakeholders are aware of when a review of progress will take place and when action will be scaled up from voluntary to mandatory measures.	In line with the requirements of the Directive, the Department will be conducting a review of progress in terms of the implementation of measures by the end of 2018.
Electronic Monitoring	It was suggested that the opportunity to develop electronic monitoring systems along river corridors with other agencies should be examined.	The Department is pursuing the use of new technologies to extend its investigative monitoring capabilities. This includes the use of in-river instrumentation and lake monitoring buoys as part of multi-agency catchment studies.

5.3 Examples of partnership working in Northern Ireland

According to the Department, the following are examples of successful partnership working with regard to river pollution:

1. Diffuse Agricultural Pollution

In the Department's opinion this remains the most significant pressure affecting water bodies and leads to failures of good status across Northern Ireland. Although levels of phosphorus have declined significantly in the last 20-30 years, the rate of change has now reduced, and may be reversing. DOE and DARD are already working closely together to address nutrient levels, and are jointly supporting a workshop on 5th November 2015, aimed at initiating discussions with the farming sector on how to reduce phosphorus inputs to the environment from animal feed.²⁸

2. The Water Catchment Partnership project on the River Derg.

Northern Ireland Water, DARD through their training provision at CAFRE, UFU, and NIEA have worked together to promote and raise awareness of best practice when using pesticides in the garden or on the farm in catchments supplying drinking water. This has been achieved through events, and farm and home visits. The project remains on going, as according to the Department, it takes time for best practice to be fully adopted in the long term.²⁹

3. Riverfly Partnerships

This is a community-led initiative to monitor river stretches to identify pollution. Those involved are trained in simple river monitoring techniques, using aquatic animals, which can be checked on a regular basis. Any significant changes can be quickly identified and investigated. Groups are active on the Enler, Lagan, Six Mile Water, Faughan, Derg and Roe rivers.³⁰

4. The Living with Water Programme

According to the Department, this is an example of where Government Departments, Agencies, and Local Government are coming together to deliver a cross-sectoral approach to improve Belfast's Drainage Infrastructure. Approaches and capital investment are shared by all departments involved to address the quality of Belfast Lough and surrounding catchments, with the aim of achieving good status in 2027.

²⁸ Information provided by DOE 13/11/2015)

²⁹ ibid

³⁰ ibid

6 Examples of partnership approaches – England and Scotland

6.1 England

In England, an example of partnership working with regard to the implementation of the WFD, is the Catchment Based Approach (CaBA). The CaBA establishes partnerships engaging with people and organisations (anyone with an interest in water and the environment) at a more local catchment scale. The partnerships aim to identify pressures, agree priorities and evoke more or improved action to enhance water quality in each catchment.

According to the Catchment Based Approach Team (based within DEFRA), CaBA also provides the opportunity for the Environment Agency (EA) and DEFRA's other Arms Length Bodies to consider its interventions to tackle other water pressures (e.g. management of flood risk, water resources and biodiversity) in a more comprehensive way at the local catchment level, so as to support meeting WFD targets.³¹ In fact the evaluation of the original pilot scheme for the CaBA stated,

There appears to be considerable opportunity for the Catchment Based Approach to link with a range of other landscape or catchment based planning and funding initiatives including among others existing agrienvironment stewardship schemes, flood risk management initiatives, Local Nature Partnerships, Nature Improvement Areas and Catchment Sensitive Farming. These have the potential to result in efficiency savings (avoided duplication of effort, pooling of resources) and synergies which integrate a range of planning activities, for example flood risk management, water resources and biodiversity planning should be investigated further.³²

The CaBA began in 2013 and was rolled out across all of England's 87 (93 including cross border) catchments, with over 100 partnerships (some working at sub-catchment scale) set up across the catchment network (see Figure 1).³³ These partnerships are supported by over 60 Environment Agency catchment co-ordinators, with more than 1500 public, private and voluntary organisations engaged in the approach.³⁴

³³ Ibid ₃₄

Providing research and information services to the Northern Ireland Assembly

³¹ Correspondence from Catchment Based Approach Team (Defra) (27/10/2015)

³² Defra (2013) The Catchment based Approach: Learning from the Pilot phase for Wider Adoption



Figure 9: Catchment Partnerships in Operation (as of August 2015)

Source: Environment Agency (UK)³⁵

In keeping with DEFRA's policy framework on the Catchment Based Approach³⁶, the majority of partnerships are hosted by third sector organisations. This host role has been funded by DEFRA with £1.6 million in 2013/14 and a further £2.2 million in 2014/15. According to DEFRA, funding in 2015/16 will see a change of focus towards delivery of water environment improvements; however, the partnerships can choose to use a small part of this for the host role.³⁷

³⁵ Environment Agency (UK) (August 2015) Catchment Based Approach Catchment Partnerships

³⁶ Defra (2013) <u>Catchment Based Approach: Improving the quality of our water environment</u>

³⁷ Correspondence from Catchment Based Approach Team (Defra) (27/10/2015)

Impacts of the Catchment Based Approach

Information provided by the UK Environment Agency³⁸ detailed that independent evaluations have found that:

- catchment partnerships can deliver significant cost efficiencies and benefits;
- engagement and community involvement has increased significantly as a consequence of catchment partnership approaches;
- the Catchment Based Approach is broadly supported by public, private and voluntary organisations;
- catchment partnerships are becoming proficient at securing leveraged funding; and
- the approach is likely to increase in value over time as it matures and ensures coordination, collaboration and partnership.

Case studies

The following case studies illustrate examples of collaborative catchment working:

Integrated local delivery

A collaborative project between Dorset Wildlife Trust and Nottinghamshire Wildlife Trust has produced a number of resources to aid local authority officers in understanding their duties under the Water Framework Directive and how they can apply this to their everyday work³⁹. The documents can be accessed <u>HERE</u>.

More case studies from CaBA can be accessed HERE

The Nene Integrated Catchment Management pilot

This was a pilot, hosted by the River Nene Regional Park Community Interest Company, to integrate the numerous existing initiatives in the Nene catchment. The aim was to develop an overarching plan across existing Strategic Spatial Plans, Green Intrastructure plans, and Local Enterprise Partnerships. The pilot used catchment processes such as urban walkovers to draw together organisations that might not usually meet, to look at waterside sites and discuss in an open forum.⁴⁰

More case studies can be accessed through Defra Guidance (Annex 1)

³⁸ Correspondence and information from Environment Agency (UK) (27/10/2015)

³⁹ CaBA [online] <u>Best Practice – Engaging with the Water Framework Directive</u> [accessed 11/11/2015]

⁴⁰ Defra (2013) <u>Catchment Based Approach: Improving the quality of our water environment P.19</u>

6.2 Scotland

The Diffuse Pollution Management Advisory Group (DPMAG) is the key partnership in Scotland and focuses on reducing rural diffuse pollution. DPMAG was formed in 2010 and is chaired by SEPA. It aims to create a decision–making and governance framework for the delivery of rural diffuse pollution RBMP actions, while ensuring input from those with rural, environmental and biodiversity interests.

The Rural Diffuse Pollution Plan, produced under the Controlled Activities Regulations⁴¹, ensures the buy-in and co-ordinated work of key stakeholders. It contains an action plan explaining the actions that DPMAG and its members are required to perform to ensure a co-ordinated response to tackling diffuse pollution from rural sources. It also has a communications plan requiring members to develop and promote the national awareness campaign.

According to the Water Environment Team (Scottish Government), the Regulations and Plan was based on good practice, and this encouraged joint up working as shown in the following case study. The Scottish Government plans to continue the above approach into the next round of RBMPs.⁴²

Case study

NFU Scotland was keen to be involved in awareness raising for their members, to bring them up to the required standard of compliance. The stakeholders have been involved in joint on-farm workshops and contributed to farmer friendly guidance, including the Farming and Water Scotland <u>website</u>.⁴³ This is hosted by Scotland's Rural Universities and Colleges which provides ideas, information and contacts to help reduce diffuse pollution from farms.

43 ibid

⁴¹ The Water Environment (Controlled Activities) (Scotland) Regulations 2011 and SEPA [online] Water Regulations

⁴² Correspondence and information from Water Environment Team Scottish Government (26/10/2015)

7 Possible areas for consideration

- Problems related to river quality and pollution incidents are not solely an NIEA problem due to the dispersal of responsibilities across departments. Therefore, there is need for an integrated and joined-up approach.
- The Department has highlighted the problem of tackling and identifying *diffuse* source pollution as contributing to the failure of reaching good status in some river bodies. Also, statistics indicate that low severity incidents and farm sources appear to be the largest contributors to river pollution. There appears to be a growth in 'other' unidentified sources and 'unknown' causes since 2009. Scotland has a Rural Diffuse Plan with legislation in place to tackle diffuse pollution from rural sources (see section 6.2).
- Equipment failure and poor practice have been identified as other main causes of pollution between 2001 and 2014, suggesting the need for improved education, awareness development and support across the business, industry and the agriculture sector. Is such work taking place?
- Partnership working has been identified as an important and necessary element for the effective implementation of the WFD. Possible areas for consideration in relation to improvement may be:
 - Should consideration be made of the current approach to Catchment Stakeholder Groups? The Department is recommending reducing meetings to once a year per River Basin; however, respondents to the RBMPs consultation expressed willingness for continued and increased involvement with meetings.
 - The Department has suggested the use of the Water Catchment Partnership approach (see Table 5) – how does this compare with the Catchment Based Approach (CaBA) in England (see section 6.1)?
 - Should consideration be made of the use of legislation, similar to Scotland, to ensure stakeholder engagement and partnership buy-in (see section 6.2)?
- How will the current distribution of responsibilities for river quality and pollution incidents, as illustrated in table 2, above, change with the forthcoming reorganisation of Executive departments?