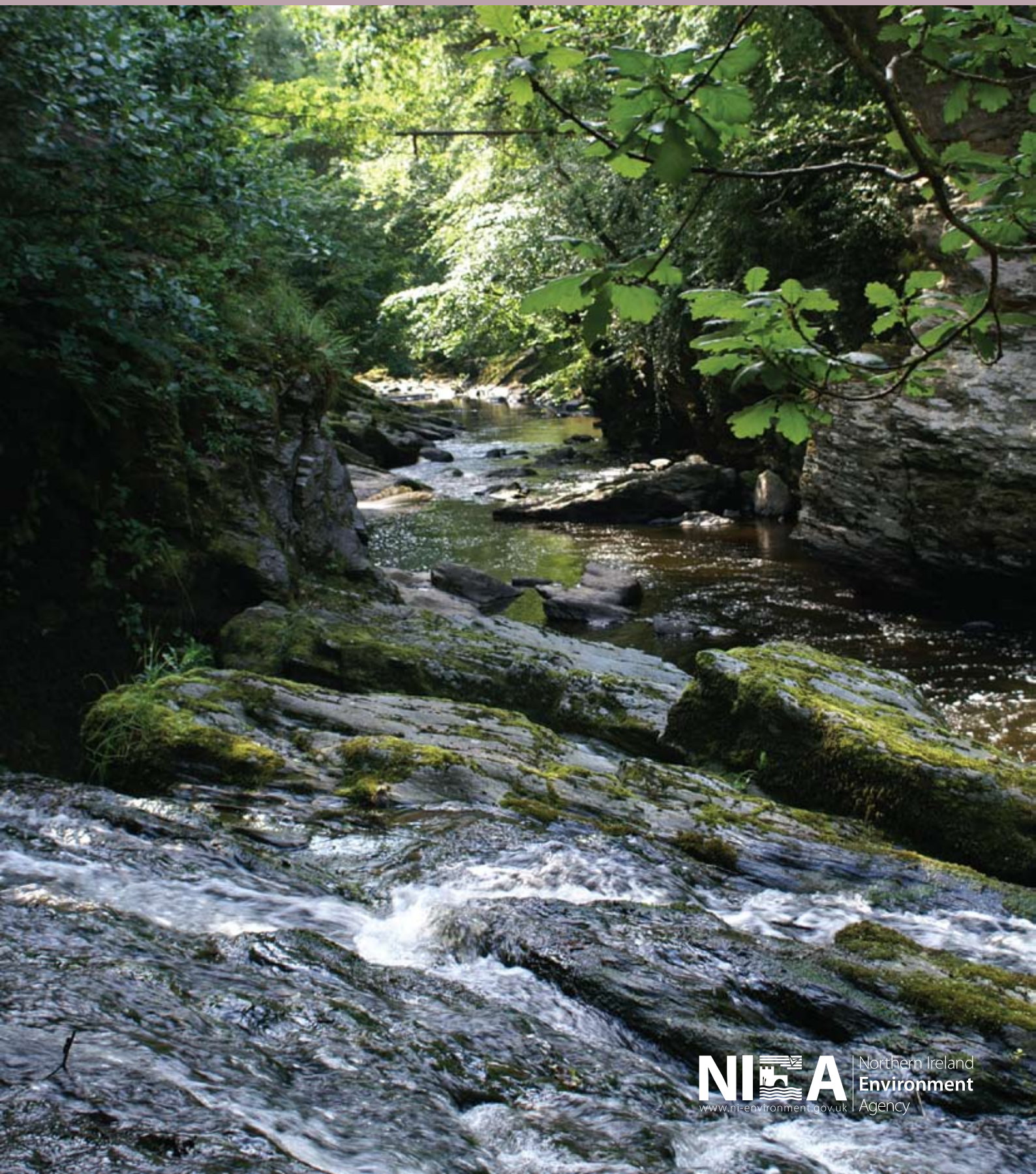


Northern Ireland
Environment Agency

ROE

Local Management Area Information Leaflet



Information Leaflet - Roe Local Management Area

The River Basin Management Plans will be implemented through Local Management Areas (LMAs) during the 2010 to 2015 planning cycle. This information leaflet is one of a series, for each of the 26 LMAs, across the Neagh Bann, North Western and North Eastern Districts. The leaflet includes details of the characteristics and quality of the water environment within the area and specific local measures identified to improve the water environment.

The leaflet will inform work with stakeholders, through **Catchment Stakeholder Groups**, to develop focused implementation plans for each LMA in the North Western District. These LMA Plans will be implemented on a three-year rolling programme within the North Western District as set out below:

- Lower Lough Erne, Owenkillew and Burn Dennet & Foyle in 2010;
- Upper Lough Erne, Derg & Mourne and Roe in 2011;
- Lough Melvin and Arney, Strule and Faughan in 2012.

Introduction

Roe LMA, part of the North Western River Basin District, covers an area of approximately 580 km². Roe River rises about 400m above sea level within the Sperrin Mountains in County Tyrone and flows northwards being joined by other rivers e.g. Owenrigh, Owenbeg and Curly and smaller streams along the way before ultimately draining into Lough Foyle, east of the Roe Railway Bridge. Other smaller rivers flow directly into the Lough from this LMA – Bessbrook, Ballykelly, Faughanvale and Muff. The River Roe is transitional from Roe Bridge on the B69 until it reaches Lough Foyle. Lough Foyle itself falls within Burn Dennet Foyle LMA and further details on issues and actions in the Lough can be found in the information leaflet for that LMA.

The main towns are Limavady, Eglinton and Dungiven with a number of smaller villages including Greysteel, Ballykelly, Feeny and Castlerock. In all, the area supports over 30000 people. The dominant land use in the area is improved grassland with acid and neutral grass.



Key Facts

LMA Area: 580km²

WFD water bodies:

- 20 river water bodies
- 1 transitional water body
- 2 complete and one partial groundwater body

Main land use:

Agriculture (Improved grassland and Arable 44%)

Key industry:

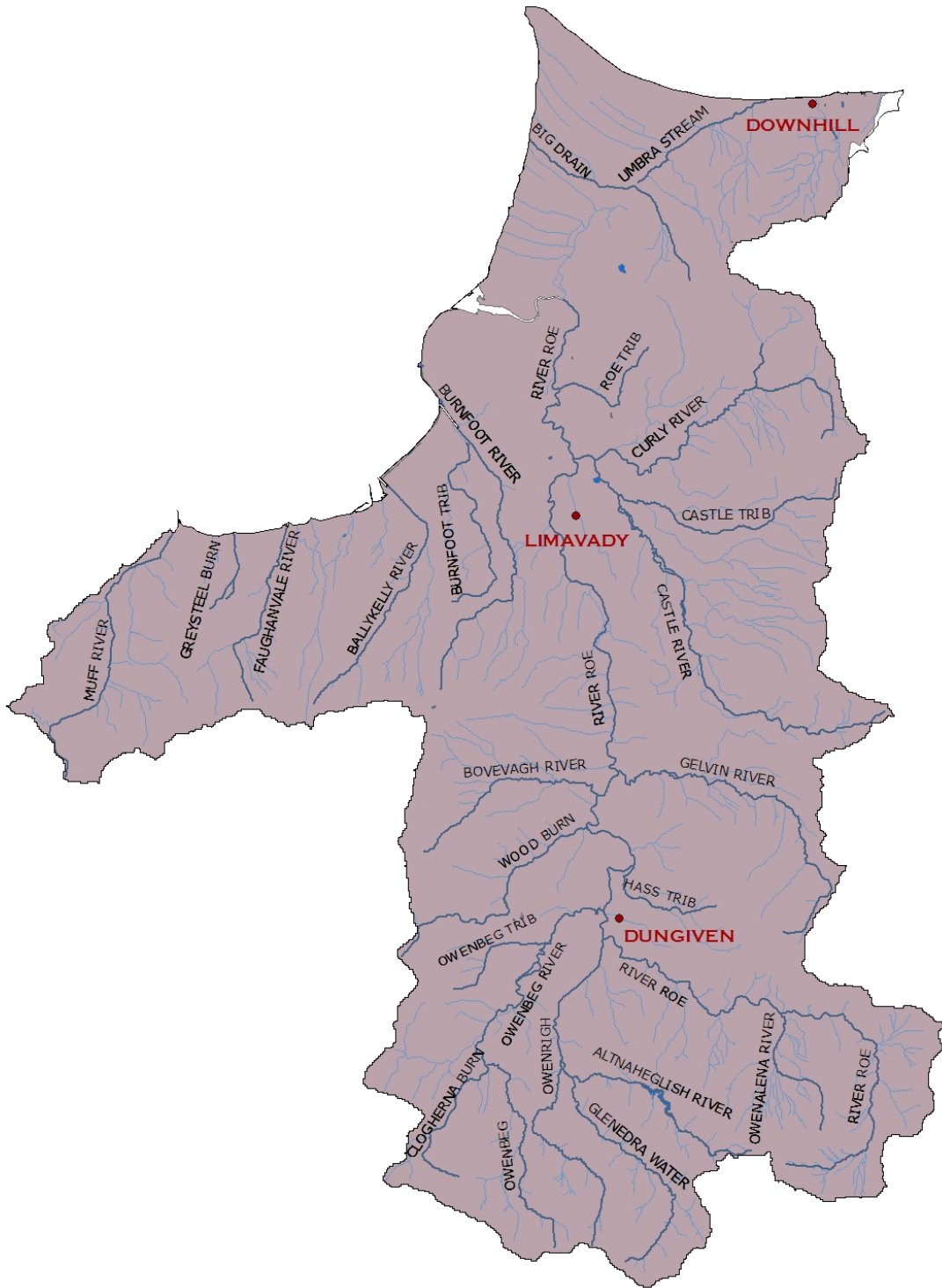
Agriculture

Main towns and populations:

- Limavady (12135*)
- Eglinton (3165*)
- Dungiven (2993*)

* Figures based on 2001

Roe LMA with main rivers identified



The quality of water bodies in Roe LMA

Our understanding of the state of Northern Ireland's Water environment and Roe LMA has developed as we have adapted to the requirements of the Water Framework Directive. Now, when assessing water quality, we consider both ecological and chemical quality, as well as the pressures that can affect these factors.

Some water bodies have been changed to such a degree that they can no longer be restored to their original condition without compromising their current use. For example, some have been deepened to allow for navigation, others have flood defences or have been dammed to provide a source of drinking water. These are called Heavily Modified or Artificial water bodies and are required to meet Good Ecological Potential (GEP) rather than good status.

One water body, Owenrigh River, has been classified as heavily modified.

What is the current status of surface waters in Roe LMA?

62% of the surface water bodies in Roe LMA have been classified as less than good. The main reason is due to the impact on invertebrate communities.

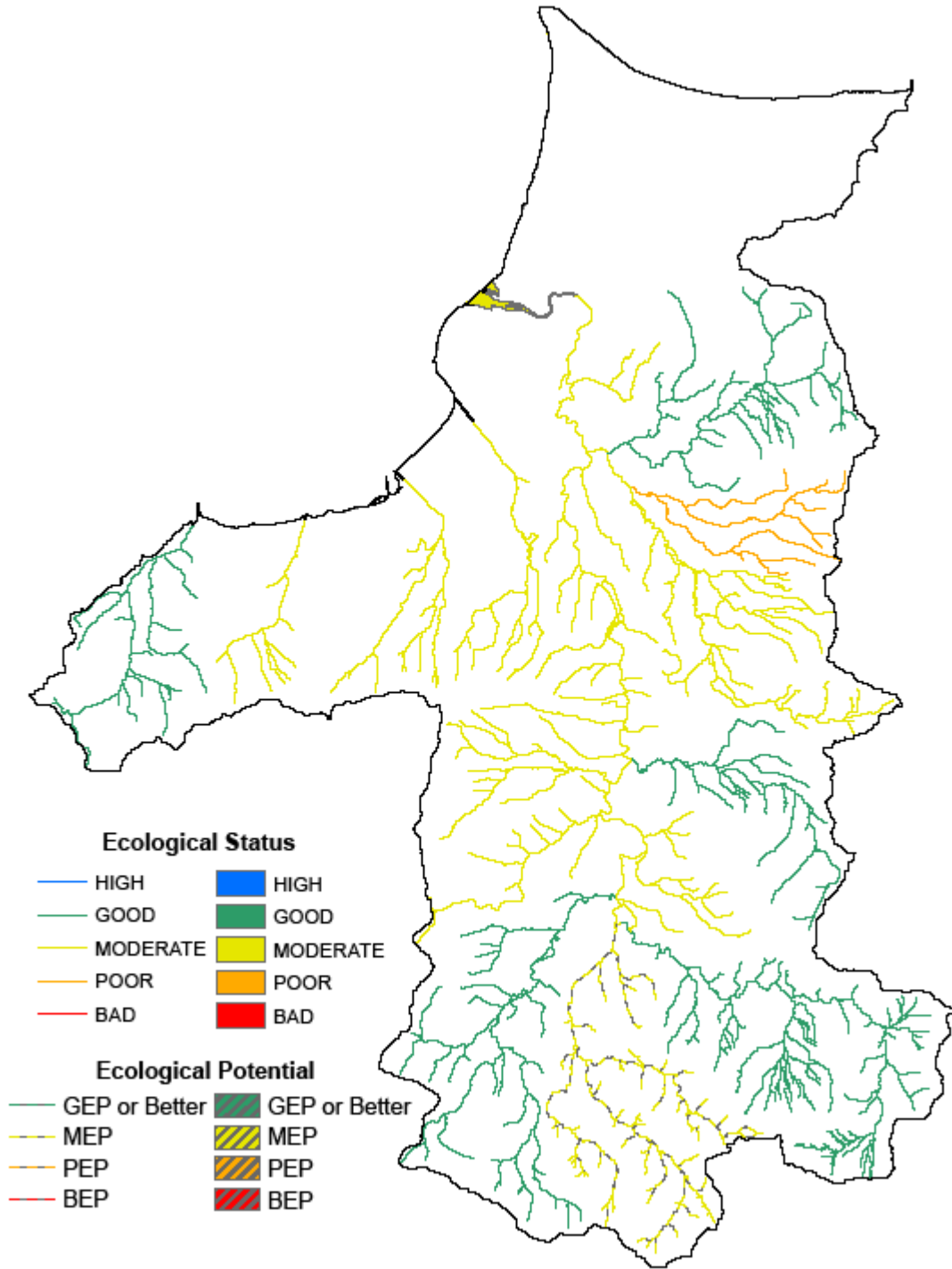
Table 1: Status of surface waters in Roe LMA

Water body type	High	Good	Moderate	Poor	Bad	GEP	MEP	PEP	BEP
River	0	8	10	1	0	0	1	0	0
%	0	40	50	5	0	0	5	0	0
Transitional & Coast	0	0	1	0	0	0	0	0	0
%	0	0	100	0	0	0	0	0	0
Total	0	8	11	1	0	0	1	0	0
%	0	38.1	52.4	4.8	0	0	4.8	0	0

Groundwaters (underground water) interact with the surface waters around them, thus the quality and quantity of an area's groundwater can affect the surface waters.

In Roe LMA all groundwaters are all classified as good status.

Overall status of water bodies in Roe LMA



Protected areas in Roe LMA

The LMA supports important habitats and wildlife. These areas have been designated under European Directives and require special protection. The protected areas are summarised in the following table.

Table 2: Protected areas in Roe LMA

Protected Area Type	Location
Waters used for the abstraction of drinking water (drinking water protected areas)	There are 6 drinking water protected areas.
Areas designed to protect economically significant aquatic species	
Freshwater Fish Directive (78/659/EEC)	There are approximately 224 km of rivers identified under this directive all designated salmonid.
Shellfish Waters Directive (79/923/EC)	There are no designated shellfish waters.
Bathing Waters These are bathing waters identified under the Bathing Waters Directives (76/160/EEC)	There are 3 identified bathing waters; Castlerock and Magilligan (Benone & Downhill).
Nutrient Sensitive Areas Areas designated as sensitive under the Urban Waste Water Treatment Directive (91/271/EEC) and the Nitrates Directive (91/676/EEC)	There is 1 Urban Waste Water Treatment Directive sensitive area: River Roe. A total territory approach has been adopted in Northern Ireland for the Nitrates Directive.
Areas designated for the protection of habitats or species (Natura 2000 sites) These are areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection.	
Habitats Directive (92/43/EEC)	There are 3 water dependent Special Areas of Conservation; Magilligan, River Roe and Tributaries and Carn-Glenshane pass.
Birds Directive (79/409/EEC)	There is 1 water dependent Special Protection Area; Lough Foyle which includes the Roe and Faughan Transitional Waters.

Why are some waters not reaching good status?

There are a number of pressures that may prevent some waters reaching good quality. The main ones are considered to be:

- **Abstraction and Flow regulation**
- **Diffuse and Point source pollution**
- **Changes to Morphology (physical habitat)**
- **Invasive Alien Species**

One river water body is being impacted by **abstraction and flow regulation** – Owenrigh River which is heavily modified.

A number of biological and chemical water quality elements used in classification can be affected by both **diffuse and point source pollution**.

Table 3: Water bodies not reaching good status due to diffuse and point source pollution

Classification element affected*	Number of water bodies showing impacts	
	River	Transitional
Macrophytes	1	N/A
Diatoms	2	N/A
Phytoplankton	N/A	N/A
Macroalgae	N/A	N/A
Angiosperms	N/A	N/A
Invertebrates	11	0
Fish	1	1
DIN	N/A	0
Phosphorous	0	N/A
Dissolved Oxygen	0	0
Specific Pollutants/Priority Substances	1	0

*More than one element may be affected in each individual water body.

In this LMA the main impact was seen in invertebrate communities. This element is associated with organic enrichment. The rivers affected include Roe, Woodburn, Bovevagh, Castle, Burnfoot, Ballykelly and Faughanvale.

Seven water bodies were identified during site visits as being affected by **changes to morphology (physical habitat)**. These include Owenbeg, Woodburn, Roe, Gelvin and Castle River. Types of morphology pressures include channelization, embankments, water regulation, overgrazing and barriers to migration.

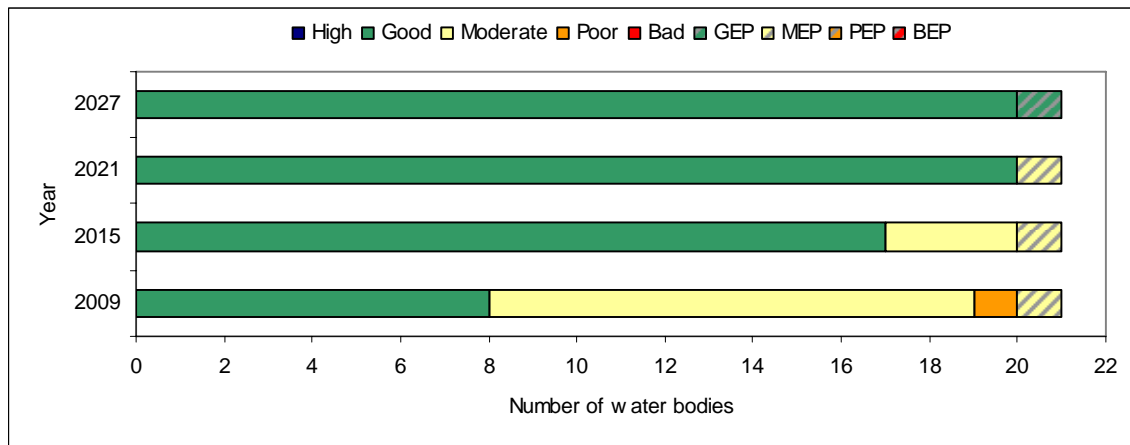
The water environment in Northern Ireland has been impacted by the introduction of **invasive alien species**. Species which have already become established in this area include:

- Japanese Knotweed (*Fallopia japonica*)
- Himalayan Balsam (*Impatiens glandulifera*)
- Giant Hogweed (*Heracleum mantegazzianum*)
- Rhododendron (*Rhododendron ponticum*)
- Salmonberry (*Rubus spectabilis*)
- Common Cord Grass (*Spartina anglica*)

What improvements do we plan to achieve?

We have set environmental objectives to deliver improvements as shown below. For our surface waters we aim to achieve good quality or better in 81% by 2015. We aim to maintain good status in 100% of our groundwaters.

Current status and proposed objectives for surface waters in Roe LMA



How are we going to maintain and improve the water environment in Roe LMA?

There are a number of measures which will be implemented in Roe LMA in order to maintain and improve the water environment.

The programme of measures described in the North Western River Basin Management Plan has been categorised into two types of measures: **existing and planned** and **supplementary**. Existing and planned measures aim to ensure that existing water uses are appropriately managed and that the water environment remains at good status.

Existing and planned measures include those which have been put in place to meet legal requirements. Those which apply in this LMA include:

- The current Bathing Water Directive (76/106/EEC) and revised Bathing Water Directive
- The Drinking Water Directive (80/778/EEC) as amended by Directive (98/83/EC);
- The Birds Directive (79/409/EEC);
- The Sewage Sludge Directive (86/278/EEC);
- The Integrated Pollution Prevention Control Directive (96/61/EC);
- The Environmental Impact Assessment Directive (85/337/EEC);
- The Urban Waste-water Treatment Directive (91/271/EEC);
- The Plant Protection Products Directive (91/414/EEC);
- The Habitats Directive (92/43/EEC); and
- The Nitrates Directive (91/676/EEC).

A number of **other existing and planned measures** apply in this LMA:

- Cost recovery for water use and promotion of efficient and sustainable water use;
- Protection of drinking water sources;
- Abstraction and Impoundment Control;
- Point source and diffuse source discharge control;
- Controls on physical modifications to surface waters;
- Prevention or reduction of the impact of accidental pollution incidents;
- Authorisation of discharges to groundwater;
- Priority substances control; and
- Controls on other activities impacting on water status.

Further information on existing and planned measures for each sector is available on the **programme of measures** section of the website.

The following measures are in place to manage the problems with alien species:

- Zebra Mussel Management Strategy for Northern Ireland 2004-2010

- Rivers Agency Management protocols (Giant Hogweed, Himalayan Balsam and Japanese Knotweed)
- NIEA/National Parks and Wildlife Service best practice management guidance for Japanese Knotweed, Giant Hogweed and the Himalayan Balsam. Management plans have also been developed for a wide range of species including the *Didemnum* species (sea squirt) and the Floating Pennywort.
- A number of codes of practice, educational and awareness leaflets have been prepared and are available to download from www.invasivespeciesireland.com

What measures are agreed for water dependent Natura 2000 sites in unfavourable condition?

Special Areas of Conservation (Habitats Directive) and **Special Protection Areas** (Birds Directive) are assessed as being in favourable or unfavourable condition. These areas have been examined to determine if **water dependent features** are present.

The condition of all the features of the River Roe and Tributaries Special Area of Conservation has not been assessed. The Carn-Glenshane Pass and Magilligan Special Areas of Conservation in this LMA, have water dependent features which are in unfavourable condition.

Table 4: Measures for water dependent features of Special Areas of Conservation

Name	Current condition assessment of water dependent features	Measures in place
Magilligan	Fixed dunes with herbaceous vegetation ("grey dunes") unfavourable due to under-grazing	No water related adverse activity identified
	Humid dune slacks unfavourable due to under-grazing	No water related adverse activity identified
	<i>Euphydrias (Eurodryas, Hypodryas) aurinia</i> unfavourable due to under-grazing	No water related adverse activity identified
	<i>Petalophyllum ralfsii</i> unfavourable due to water management (including drainage, dredging or alterations to the water table. Could be too much water or too little)	Investigation ongoing - hydrological monitoring
Carn-Glenshane Pass	Blanket bogs unfavourable due to water management (including drainage, dredging or alterations to the water table. Could be too much water or too little) and also over-grazing (including deer browsing)	There are currently 2 MOSS agreements for the site. A total of 9 NICMS referrals were received from DARD. Moor grips in some areas.

Lough Foyle Special Protection Area is in unfavourable condition. Unfavourable Special Protection Areas require investigation to identify external and internal factors. The issues are unclear, may be changes in migratory patterns, disturbance to high tide roost sites, water quality and/or ecological factors. Further details on Special Areas of Conservation and Special Protection Areas in Roe LMA are available in the **protected areas** section of the website.

Supplementary measures required to achieve environmental objectives for rivers, lakes, transitional and coastal water bodies have been identified for a number of sectors and pressures in this LMA. Supplementary measures will be applied during the implementation phase of the River Basin Management Plans subject to necessary funding and tests to justify technical feasibility and cost effectiveness.

Table 5: ¹Supplementary measures in Roe LMA

Key Sectors	Supplementary measures	Additional information
Agriculture	Target education, advice and regulatory action	See Table 3 for number of water bodies where invertebrates are less than good
Collection and treatment of sewage	Upgrade WWTWs with a population greater than 250	² Limavady upgrade under PC10
	Upgrade WWTWs under the Rural Wastewater Investment Programme	² Myroe to be completed by 2010
	Assess significance of septic tanks and take action accordingly	See Table 3 for number of water bodies where invertebrates are less than good
Industry and Other Business	Improve compliance with discharge consents	There are 15 non compliant discharges based on 2008 compliance data
Agriculture, Collection & treatment of sewage Industry & other business	Assess point source phosphorus loads	See Table 3 for number of water bodies where SRP, diatoms or macrophytes are less than good
	Target further phosphorus controls from point sources	
	Assess diffuse nutrient loads using mathematical modelling	
	Target further phosphorus controls from diffuse sources	
Pressures	Supplementary measures	Additional information
Specific & priority substances	Develop and implement Pollution Reduction Programmes	See Table 3 for number of water bodies impacted by specific pollutants/priority substances
Abstraction & flow regulation Morphology	Develop mitigation measures identified for hydromorphology pressures	There is 1 HMWB at <GEP and 7 water bodies are affected by changes in morphology

¹ Strategic Environmental Assessment has considered the impacts associated with the suite of supplementary measures proposed. Where impacts were identified, mitigation measures were proposed and are detailed in the SEA Mitigation Measures document which is available on the website.

² The dates/works upgrades may be subject to change. PC10 upgrades cover the period April 2010 – March 2013

Responses from the draft River Basin Plan consultation were used to identify the measures below:

- promote efficient use of water;
- introduce seasonal discharge consents, where possible, to promote installation of reed beds and constructed wetlands for sewage treatment;
- improve septic tank maintenance installation and design;
- review and investigate the effectiveness of wetlands in the reduction of nutrient loadings;
- facilitate River Trusts across Northern Ireland.

The improvements in water quality proposed above will be delivered through a programme of measures coordinated by the Department of the Environment. Some of these measures are already being carried out in Roe LMA.

Local measures are also being applied in this LMA. There are a number of projects and initiatives run, for example, by local communities, angling groups and voluntary environmental organisations that will contribute to achieving the objectives we have set for our waters. Some of those happening in Roe LMA are shown below.

Bovevagh Issue Log

NIEA Regional Operations staff are completing investigations into water quality in this catchment. A river walk identified a number of pollution problems and these are being investigated further.

Port Master Plans

The nature of the ports' business means that investment decisions are generally over the medium to long term. Port master planning is therefore designed to provide an objective basis for the ports to engage with local stakeholders, including planning authorities and development agencies, in order to help co-ordinate medium-term planning of the port within their wider context.

The main purpose of the plans is to:

- clarify the port's own strategic planning for the medium to long term;
- assist planning authorities (at both regional and local level) and Roads Service in the preparation and revision of their own strategies and plans;
- inform port users, employees and local communities as to how they can expect to see the port develop over the coming years.

National Trust Site Projects:

Downhill Demesne:

- Coastal Risk Assessment to identify habitats at risk of coastal erosion and flooding. Based on the results, work to identify opportunities for managed realignment and habitat creation on National Trust land. Assessment complete, follow-up action ongoing.

www.ni-environment.gov.uk/wfd

- Environmental Compliance Audit of all National Trust owned sites. Emergency remedial action has been completed. Action on the remaining assets presenting a risk to water quality completed or in progress. Issue a code of practice to septic tank users.

If you are running a project or carrying out work that will assist in protecting the water environment or water dependant features, or restoring natural waters then we would encourage you to let us know.

Contact details for your **Catchment Stakeholder Group** are available on the **public participation** section of the website.

