

Northern Ireland  
Environment Agency

## **SOUTH DOWN**

### Local Management Area Information Leaflet



## **Information Leaflet - South Down 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 Eastern District. These LMA Plans will be implemented on a three-year rolling programme within the North Eastern District as set out below:

- South Down, Strangford, Lagan and Bush in 2010;
- Quoile, Belfast Lough and Glens & Rathlin in 2011;
- Larne Lough in 2012.

### **Introduction**

South Down LMA is in the North Eastern River Basin District. It covers an area of approximately 500km<sup>2</sup> and includes approximately half of the Mourne Mountains. Three main rivers drain into Dundrum Bay. These are: Carrigs River, Moneycarragh River (Upper and Lower) and Blackstaff River. There are two main rivers that drain into the sea at Newcastle Bay. These are: Shimna River and Burren River. Both rivers rise in the Mourne Mountains. There are two main rivers along the South Down coast that rise in the Mourne Mountains and drain to the sea. These are: Annalong River and Kilkeel River. There are also a number of small rivers that flow direct to sea or are tributaries to the main rivers.

The major towns are Newcastle and Kilkeel. There are numerous smaller, mainly coastal, towns and villages throughout area e.g. Ardglass, Dundrum, Clough, Chapeltown and Annalong. Kilkeel and Ardglass are significant fishing harbours. The main land use is improved grassland, acid grass, dense dwarf heath and arable farming.

The coastal shore line and mountainous terrain provides a wide variety of protected habitats and contains Murlough Bay Nature Reserve and the Mournes Area of Outstanding Natural Beauty along with other areas of conservation status.

The area lends its self to a wide range of outdoor recreational activities such as walking, climbing, bird watching, angling, canoeing, bathing and other water sports that make the area a popular tourist attraction.

**Key Facts**

**LMA area:** 500km<sup>2</sup>

**WFD water bodies:**

- 18 river water bodies
- 1 lake water body
- 2 coastal water bodies
- 1 groundwater body

**Main land use:**

- Agriculture (Improved grassland and Arable 51%)
- Acid grass 14%

**Key industries:**

- Agriculture
- Tourism
- Fisheries

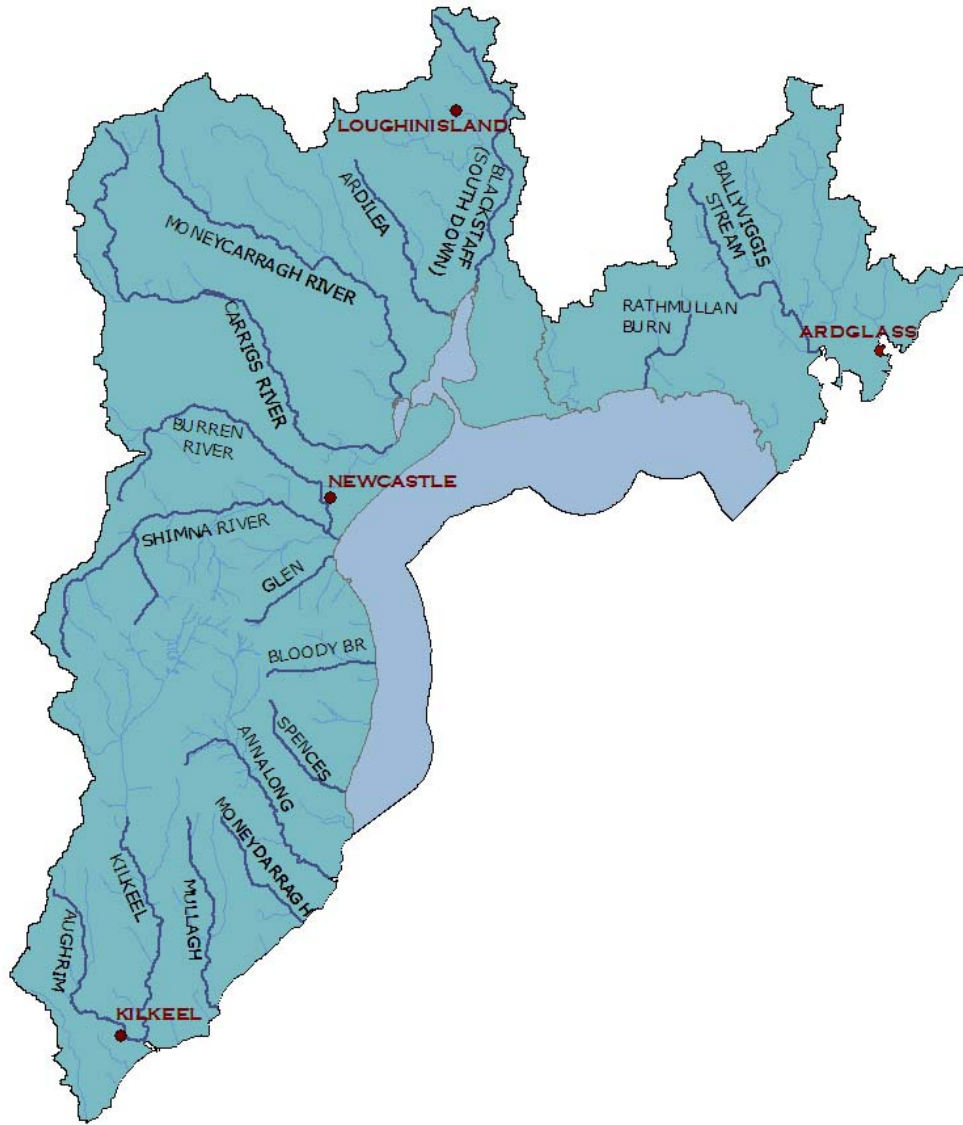
**Main towns and populations:**

- Newcastle (7444\*)
- Kilkeel (6338\*)
- Annalong (1778\*)
- Ardglass (1668\*)
- Dundrum (1065\*)

\*Figures based on 2001 census



**South Down LMA with main rivers identified**



## The quality of water bodies in South Down LMA

Our understanding of the state of Northern Ireland’s water environment and South Down 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 them.

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.

In South Down LMA, Annalong River, Shimna River, Kilkeel River and Silent Valley Reservoir have all been designated as heavily modified.

### What is the current status of surface waters in South Down LMA?

85.7% of surface water bodies in South Down LMA have been classified as less than good status and 14.3% of these were identified as heavily modified. Most rivers failed to achieve good status due to impacts on invertebrate and macrophyte communities. For coastal waters the reason for downgrading was due to elevated levels of inorganic nitrogen.

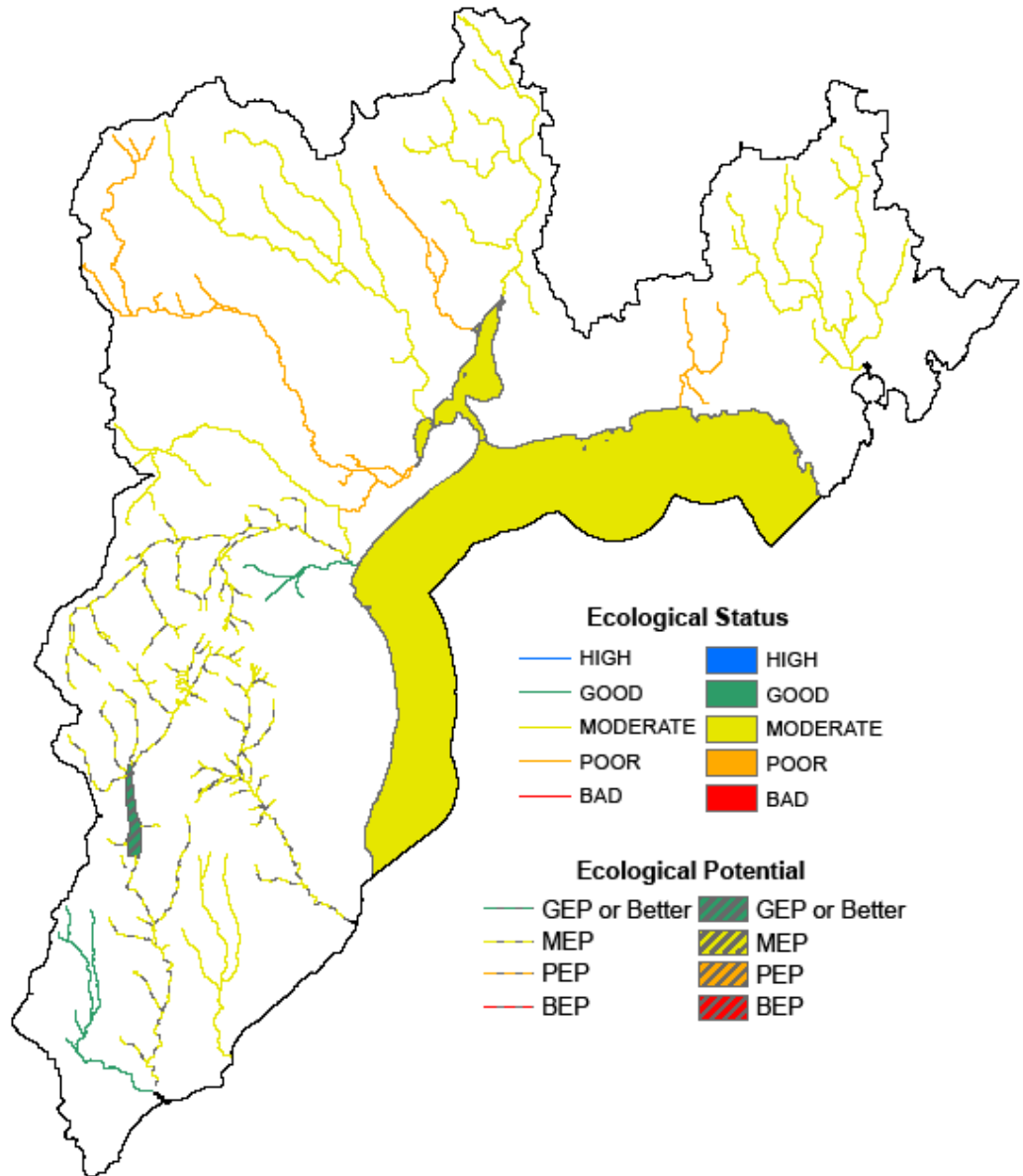
**Table 1: Status of surface waters in South Down LMA**

Water body type	High	Good	Moderate	Poor	Bad	GEP	MEP	PEP	BEP
River	0	2	10	3	0	0	3	0	0
%	0	11.1	55.6	16.7	0	0	16.7	0	0
Lake	0	0	0	0	0	1	0	0	0
%	0	0	0	0	0	100	0	0	0
Coastal	0	0	2	0	0	0	0	0	0
%	0	0	100	0	0	0	0	0	0
Total Surface Waters	0	2	12	3	0	1	3	0	0
%	0	9.5	57.1	14.3	0	4.8	14.3	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.

All groundwater bodies in South Down LMA are achieving good status.

Overall status of water bodies in South Down LMA



## Protected areas in South Down 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 South Down LMA**

Protected Area Type	Location
<p><a href="#">Waters used for the abstraction of drinking water (drinking water protected areas)</a></p>	<p>There are 4 drinking water protected rivers.</p> <p>There is one drinking water protected lake.</p> <p>There is one drinking water protected groundwater.</p>
<p><a href="#">Areas designed to protect economically significant aquatic species</a></p> <p>Freshwater Fish Directive (78/659/EEC)</p> <p>Shellfish Waters Directive (79/923/EC)</p>	<p>There are 106 km of rivers and 0.8 km<sup>2</sup> of lakes identified under the Freshwater Fish Directive, all designated Salmonid.</p> <p>There are 2 designated shellfish waters; Dundrum Bay and Killough Harbour.</p>
<p><a href="#">Bathing Waters</a></p> <p>These are bathing waters identified under the Bathing Waters Directives (76/160/EEC)</p>	<p>There are 4 identified bathing waters; Cranfield (Nicholson's Strand), Murlough, Newcastle and Tyrella.</p>
<p><a href="#">Nutrient Sensitive Areas</a></p> <p>Areas designated as sensitive under the Urban Waste Water Treatment Directive (91/271/EEC) and the Nitrates Directive (91/676/EEC)</p>	<p>There are no Urban Waste Water Treatment Directive sensitive areas.</p> <p>A total territory approach has been adopted in Northern Ireland for the Nitrates Directive.</p>
<p><a href="#">Areas designated for the protection of habitats or species (Natura 2000 sites)</a></p> <p>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.</p> <p>Habitats Directive (92/43/EEC)</p> <p>Birds Directive (79/409/EEC)</p>	<p>There are 3 water dependent Special Areas of Conservation; Murlough, Eastern Mourne and Lecale Fens.</p> <p>There is 1 water dependent Special Protection Area; Killough Bay.</p>

## 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**

Four river water bodies in the area were identified as being impacted by **abstraction and flow regulation**. Three of these were classified as heavily modified. The rivers affected were: Annalong River, Shimna River and Kilkeel River. Although the other water body, Burren River, was not classified as heavily modified, it did show impacts from abstraction and flow regulation due to flood risk management. One lake water body was identified as being impacted by abstraction and flow regulation. Silent Valley has been classified as heavily modified.

A number of biological and chemical elements 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	Lake	Coastal
Macrophytes	6	0	N/A
Diatoms	2	0	N/A
Phytoplankton	N/A	0	0
Macroalgae	N/A	N/A	0
Angiosperms	N/A	N/A	0
Invertebrates	12	N/A	0
Fish	1	0	N/A
DIN	N/A	N/A	2
Phosphorous	2	0	N/A
Dissolved Oxygen	3	0	0
Specific Pollutants/Priority Substances	2	0	0

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

In South Down LMA the main impact was seen in invertebrate communities and dissolved oxygen levels. These elements are associated with organic enrichment. The main rivers affected were: Annalong River, Ardilea Burn, Blackstaff River, Burren River, Carrigs River, Killough River, Moneycarragh River tributary, Mullagh River, Shimna River and Tyrella Burn.

Impacts were also observed in phosphorous levels and macrophyte and diatom communities. These elements are associated with nutrient enrichment. The main rivers affected were: Killough River and Blackstaff River, Ardilea Burn, Tyrella Burn, and Burren River. Evidence of nutrient enrichment was also observed in coastal water bodies. The element associated with nutrient enrichment in this type of water body is Dissolved Inorganic Nitrogen (DIN). The coastal water bodies affected were Inner and Outer Dundrum Bay.

Two river water bodies failed to achieve good status for specific pollutants/priority substances (specifically copper and zinc). It is currently unclear if this was due to natural conditions.

Seven river water bodies were identified as being affected by **changes to morphology (physical habitat)**. Three of these have been classified as heavily modified: Annalong River, Shimna River and Kilkeel River. Although the four other water bodies were not classified as heavily modified, they did show impacts from changes to morphology. The main rivers affected were: Blackstaff River Upper, Carrigs River, Killough River and Mullagh River. One lake water body was identified as being impacted by changes to morphology. Silent Valley has been classified as a Heavily Modified Water Body.

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:

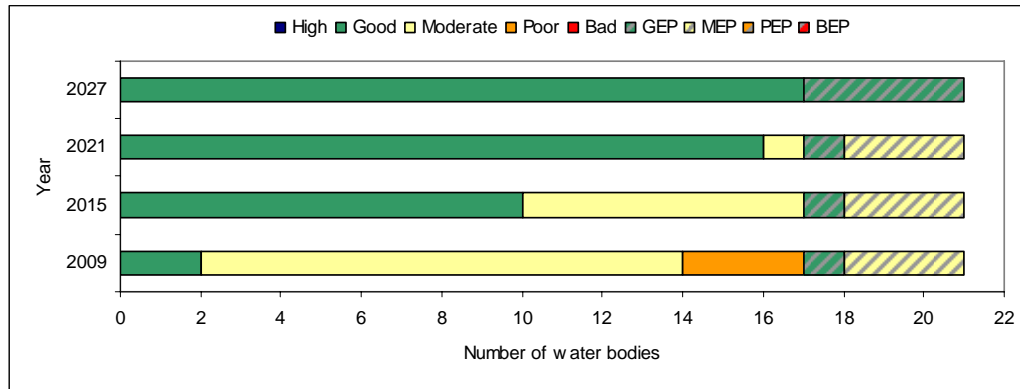
- Common Cord Grass (*Spartina anglica*)
- Japanese Knotweed (*Fallopia japonica*)

## What improvements do we plan to achieve?

We have set environmental objectives to deliver improvements as shown below. We aim to achieve good status or better in 47.6% of our surface waters by 2015 and GEP (for heavily modified water bodies) in 19% of our surface waters by 2027.

We aim to maintain good status in 100% of our groundwaters.

### Current status and proposed objectives for surface waters in South Down LMA



## How are we going to maintain and improve the water environment in South Down LMA?

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

The programme of measures described in the North Eastern 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 (2006/7/EEC);
- The Birds Directive (79/409/EEC);
- The Drinking Water Directive (80/778/EEC) as amended by Directive (98/83/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 Nitrates Directive (91/676/EEC);
- The Habitats Directive (92/43/EEC).; and
- The Integrated Pollution Prevention Control Directive (96/61/EC).

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;
- Point source and diffuse source discharge control;
- Abstraction and Impoundment 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:

- Rivers Agency Management protocols (Japanese Knotweed)
- NIEA/National Parks and Wildlife Service best practice management guidance for Japanese Knotweed.
- A number of codes of practice, educational and awareness leaflets have been prepared and are available to download from [www.invasivespeciesireland.com](http://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.

There are no specific measures for the Murlough, Eastern Mourne or Lecale Fens Special Areas of Conservation as there are no water related adverse activities causing the condition assessment of the water dependent features.

Killough Bay Special Protection Area is in favourable condition. Further details on Special Areas of Conservation and Special Protection Areas in the South Down 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 4: <sup>1</sup>Supplementary measures in South Down 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 & treatment of sewage	Assess significance of septic tanks and take action accordingly	See Table 3 for number of water bodies where invertebrates are less than good
	Upgrade WWTWs under the Rural Wastewater Investment Programme	<sup>2</sup> Maghera to be completed by 2010
	Upgrade sewer network	<sup>2</sup> Upgrades to Downpatrick, Newcastle, Castlewellan and Kilkeel sewer networks under PC10
Industry & other business	Improve compliance with discharge consents	There are 5 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
Abstraction, Flow and Morphology	Develop mitigation measures identified for hydromorphology pressures	There are 3 HMWBs at <GEP and 7 water bodies are affected by changes to morphology.
Specific & priority substances	Develop and implement Pollution Reduction Programmes	See Table 3 for number of water bodies impacted by specific pollutants/priority substances
Pressure Unknown	Carry out further investigation	There are 2 water bodies not reaching good status for Zinc and Copper. There are 11 water bodies where confidence in class is low.

<sup>1</sup> 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.

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

In addition, 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.

**Local measures** are also being applied in this LMA. 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 applied in South Down 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 South Down LMA are shown below.

**Projects at National Trust Sites:**

- Actions/plans to bring Natura 2000 sites and Areas of Special Scientific Interest towards favourable condition by 2015 for sites in National Trust ownership. The actions are ongoing at Dundrum Coastal Path, Murlough Nature Reserve (Murlough Dunes Special Areas of Conservation), Mourne Coastal Path and Slieve Donard (Eastern Mourne Special Areas of Conservation);
- Environmental Compliance Audit of all Natural 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. Ongoing at Murlough Nature Reserve;
- Ongoing advice to farm tenants on resource management, waste control and environmental performance. Encouraging tenants to adhere to best practice for pollution control. Ongoing at various sites in the Mourne.
- 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 for Mourne Coastal Path and Murlough Nature Reserve;
- Audit of water use at all National Trust sites to establish a baseline to enable targets to be set for reduction in use and water efficiency measures. Abstraction and flow pressure. Ongoing at Murlough Nature Reserve.

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

If you are running a project or carrying out work that will assist in protecting the water environment or water dependent 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.

Our aim is to protect, conserve and promote the natural environment and built heritage for the benefit of present and future generations.

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