

Significant Water Management Issues

Protected Areas in the North Eastern River Basin District

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Protected areas

There are many areas in the North Eastern River Basin District (RBD) where the water environment is particularly important for wildlife conservation, bathing, drinking water supply, shellfish harvesting, or their vulnerability to eutrophication. These areas are known as 'protected areas' and are given particular legal protection. These designated areas are vital to ensure that the diverse ecosystems and cultural and economic benefits within them are safeguarded.

Drinking Water Protected Areas

There are 26 Drinking Water Protected Areas in the North Eastern RBD, including groundwater. Since 2010, Northern Ireland Water have produced and reviewed Drinking Water Safety Plans for Drinking Water Protected Areas which assess and mitigate against the risks to drinking water quality.

Implementation of the Sustainable Use of Pesticides Directive encourages integrated pest management to reduce risks to drinking water supplies and the environment. Within the agricultural sector, good practice is promoted in relation to the use of pesticide and fertiliser storage, handling and use. NIEA is working in partnership with Ulster Farmers Union, DARD and Northern Ireland Water (Water Catchment Partnership) and through the Voluntary Initiative to support action and advice to reduce pesticide emissions to surface and groundwater.

The Department for Regional Development, in partnership with Northern Ireland Water, Rivers Agency and NIEA, is developing a Long Term Water Strategy. The Strategy aims to encourage a sustainable and integrated approach to managing the different water needs within a catchment while promoting regional development without compromising the environment or increasing flood risk. A consultation on the Strategy will be launched in 2014.

Rivers and Lakes Protected under the Freshwater Fish Directive

Within in the North Eastern RBD 625 km of rivers and 2 km² of lakes are identified as salmonid and 37 km of rivers and 5.5 km of canals as cyprinid. From the 22nd December 2013 the Freshwater Fish Directive will be repealed and subsumed into the Water Framework Directive. Equivalent levels of protection and objectives for freshwater fish will be provided by the Water Framework Directive from that date onwards.

Nutrient Sensitive Areas

The main aim of the Urban Waste Water Treatment Directive is to protect the water environment from the adverse effects of urban waste water discharges and waste water discharges from certain industrial sectors. This will be achieved by ensuring discharges from relevant waste water treatment works meet the appropriate emission standards set out in the Directive. There are 7 Urban Wastewater Treatment Directive sensitive areas in the North Eastern RBD; Inner Belfast Lough, Tidal Lagan, River Lagan catchment, River Bush catchment, North end of Strangford Lough, River Enler catchment, and the Quoile Pondage and catchment.

The Nitrates Directive is aimed at preventing and reducing water pollution by nitrates from agricultural sources. A total territory approach has been adopted in Northern Ireland for the Nitrates Directive.

The introduction of actions under the Nitrates Action Programme and the Phosphorus (Use in Agriculture) Regulations has contributed significantly to reducing the concentration of nutrients in the water environment from agriculture. Under the Nitrates Directive the action programme has to be reviewed every four years. The current review has now started, with a revised Nitrates Action Programme due to be made in December 2014.

Protected Areas in the Marine Water Environment

Protected Areas within marine waters include shellfish waters and bathing waters. These sometimes need specific protection against faecal contamination or from other physical issues such as trawling. Faecal bacteria can affect public health, and the largest sources are found in sewage effluent and run-off from animal manure. Discharges from storm overflows and urban run-off can contain faecal bacteria. Faecal bacteria can be present in bathing waters, and can affect people using these waters, particularly while swimming. Faecal bacteria can also accumulate in shellfish, which means that shellfish harvested for consumption have to be treated to ensure they do not pose a threat to human health.

Shellfish Waters

In the North Eastern RBD there are 7 shellfish waters currently designated under the Shellfish Waters Directive (79/923/EC); Larne Lough, Strangford Lough (Marfield, Skate Rock and Reagh Bay/Paddy's Point), Killough Harbour, Dundrum Bay and Belfast Lough. In 2012, Larne Lough, Marfield, and Skate Rock complied with the guideline standard for coliform standards. The shellfish water at Reagh Bay/Paddy's Point was not in production during 2012 and therefore compliance data is not available.

NIEA and Marine Division manage shellfish waters to ensure that there is no deterioration in water quality, and that progress is made towards compliance with guideline standards. Compliance is assessed by measuring faecal indicators and other prescribed contaminants in shellfish flesh.

Extensive water quality investigations have been carried out to identify and eliminate sources of pollution that could be associated with the downgrading of Dundrum Shellfishery. To date, several pollution sources have been identified, some of which are associated to Northern Ireland Water's sewerage infrastructure. A number of misconnections have been rectified and operational procedures within Dundrum Waste Water Treatment Works have been modified to minimise the risk of unacceptable polluting discharges.

From 22 December 2013, the Shellfish Waters Directive will be repealed and subsumed into the Water Framework Directive. Equivalent levels of protection and objectives for shellfish water will be provided by the Water Framework Directive from that date onwards. Relevant shellfish waters contaminants will be monitored under Water Framework Directive Annex VIII and Annex X specific pollutants and priority hazardous substances. In recent years the relevant Water Framework Directive environmental quality standards have not been exceeded.

A shellfish bed in Dundrum Bay has been downgraded by the Food Standards Agency because of occasional elevated bacterial levels with the shellfish. NIEA and Marine Division are conducting extensive water quality investigations to identify and eliminate sources of pollution that could be associated with this downgrading. Several high pollution risks have been identified within the catchment and are being addressed. In June the shellfish water at Dundrum was reclassified by the Food Standards Agency as Class B. Pending the outcomes of the investigation, the site is considered to be at risk of not achieving Class B in the future. Pollution Reduction Programmes are currently being revised for all shellfish waters and will be available in March 2014.

Bathing Waters

There are 19 bathing waters within the North Eastern District; Portstewart, Portrush (Mill) West, Portrush (Curran) East, Portrush (Whiterocks), Portballintrae (Salmon Rock), Ballycastle, Waterfoot, Carnlough, Ballygally, Brown's Bay, Helen's Bay, Crawfordsburn, Ballyholme, Groomsport, Millisle, Ballywalter, Tyrella, Murlough Co. Down, Newcastle. In 2013, all bathing waters in the District complied with the guideline standard of the Bathing Waters Directive (76/160/EEC), with the exception of Ballycastle and Ballyholme, which complied with the mandatory standard.



On the basis of these results, four bathing waters have been identified for further investigation in 2014. These are Portballintrae, Ballywalter, Groomsport and Newcastle, all of which exhibited a single mandatory sample failure.

The revised Bathing Waters Directive 2006 established new numerical standards for bathing waters that are more stringent than the current standards. Using these new standards, ten bathing waters in the North Eastern RBD were provisionally classified as 'Excellent', eight as 'Good' and one as 'Poor' in 2013.

In 2011, work commenced on investigative studies in five bathing water catchments, Waterfoot, Ballygally, Brown's Bay, Ballyholme and Ballywalter, to determine areas presenting the greatest risks to bathing water quality. Faecal bacteria monitoring across each catchment was used to identify these areas which required further investigation, and where river walks should be focused. The information obtained has been used to develop and implement actions within the catchments.

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. Within the North Eastern RBD there are 13 water dependent Special Areas of Conservation designated under the Habitats Directive (92/43/EEC); Rathlin Island, Aughnadarragh, Ballykilbeg, Breen Wood, Garry Bog, North Antrim Coast, Garron Plateau, Hollymount, Murlough, Eastern Mourne, Strangford Lough, Turmennan and Lecale Fens.

There are 8 water dependent Special Protection Areas designated under the Birds Directive (79/409/EEC); Larne Lough (including Swan Island), Strangford Lough, Rathlin Island, Outer Ards, Killough Bay, Antrim Hills, Belfast Lough and Sheep Island.

'Conservation objectives' describe the targets for Natura 2000 Protected Areas to reach and maintain in favourable condition, the habitats and species for which they are designated. The targets within these conservation objectives may be more stringent than those required to meet good ecological status. This may be due to the particular requirements of the wildlife or habitats at these sites that carry the highest level of nature conservation designation. Work is ongoing to align, as far as possible, the objectives and standards for the Water Framework Directive and Natura 2000 Protected Areas. This will enable better targeting and coordination of measures at these most sensitive sites.

Protecting Horse Mussels in Strangford Lough

Strangford Lough has been designated as a Special Area of Conservation, and one of the special features of the Lough is the presence of Horse Mussel (*Modiolus modiolus*) biogenic reefs. These reefs are unique within Europe and act as a habitat for several other important marine species. However, in recent years there has been a decline in the area of the Horse Mussel beds within the Lough. This special habitat is not at favourable conservation status, and is compromising ecological status the southern end of Strangford Lough.

To tackle this, in 2003 DARD introduced a total ban on mobile fishing gear within the Lough.

In 2012, the DOE supplemented this measure with the introduction of a byelaw which regulates anchoring, mooring and diving within the most sensitive area of the Lough.



Horse Mussel Beds

