

working together

Managing Our Shared Waters

neagh bann
international
river basin district



North-South Shared Aquatic Resource (NS-SHAR)

The Neagh Bann International River Basin District

December 2008



Consultation on the Draft River Basin Management Plan for the Neagh Bann International River Basin District

This document forms part of the draft River Basin Management Plan for the Neagh Bann International River Basin District. This draft plan has been issued for public consultation in accordance with the requirements of the EU Water Framework Directive.

The Neagh Bann International River Basin District lies partly in Ireland¹ and partly in Northern Ireland. The Water Framework Directive requires that, in cross-border River Basin Districts, Member States must coordinate their activities with the aim of producing a single management plan covering the entire district.

The Neagh Bann International River Basin District Management Plan has four components.

- This document “**Working Together**” which describes the coordination that has taken place between the two jurisdictions and the commitment to future coordination. It focuses on the status of the shared waters (those water bodies which lie along the border), the future environmental objectives for these waters and the measures proposed to achieve these objectives. It also provides a summary of the whole international district’s status, objectives and measures.
- The **draft plan summary documents** which contain more focussed information on the assessments and proposals for status, objectives and measures for each jurisdiction.
- **Electronic information systems** which provide access to the status, objectives and measures for each individual waterbody.
- An extensive range of **background documents** which have contributed to the development of the plans including technical studies of key water issues, details of monitoring programmes and classification of waters, environmental objectives and programmes of measures. (Other items covered in the background documents include the registers of protected areas, economics, climate change, Strategic Environmental Assessment, links to plans and programmes, and a list of the District’s authorities and stakeholders).

The documents and electronic information are accessible on www.wfdireland.ie & www.ni-environment.gov.uk/wfd.

Getting involved

Public consultation on the Draft River Basin Management Plan will be open until **22 June 2009**. Comments, views and suggestions are welcomed and will be taken into consideration when finalising the River Basin Management Plan before 22 December 2009.

Contact details for the consultation process may be found in the draft plan summary documents for the relevant jurisdiction.

¹ * In this document ‘Ireland’ refers to the ‘Republic of Ireland’

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The Water Framework Directive

The EU Water Framework Directive, which came into force on 22 December 2000, aims to promote common approaches, standards and measures for water management on a systematic and comparable basis throughout the European Union. It establishes a new, integrated approach to the protection, improvement and sustainable use of Europe's rivers, canals, lakes, reservoirs, wetlands, transitional waters (estuaries), coastal waters and groundwaters. These waters are to be managed on the basis of natural geographical areas called river basin districts, with a management plan to be prepared for each district. These plans will set out the environmental objectives for the district and the measures that will be required in order to achieve the objectives.

Within the European Union, many river basin districts are shared by Member States; these cross-border districts are called International River Basin Districts. The Water Framework Directive requires Member States to coordinate their efforts in these districts 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. The Neagh Bann district is one of the cross-border districts and this document forms part of the draft management plan for the Neagh Bann International River Basin District.

Prior to the introduction of this Directive, there had already been a tradition of coordination in relation to the protection of our water resources. In 2003, the first steps in the coordinated implementation of the Directive included the identification and delineation of the river basin districts on the island of Ireland. Since 2003, substantial coordination of effort between the two jurisdictions has accompanied every stage of the Directive's implementation. The publication of this joint ***Working Together*** document marks a further important step in this process. It identifies the work already done and underlines the common commitment to implement plans to protect and conserve the island's shared waters.

The need for coordination

The Directive requires Member States to coordinate their efforts in relation to international river basin districts with the aim of producing a single management plan. The Directive also makes it clear that individual Member States carry full responsibility for ensuring implementation of all aspects of the Directive in their national territory, including any part of an International River Basin District that lies within their national territory. On the island of Ireland:

- substantial areas lie within cross-border river basins;
- some waters in each jurisdiction flow into or through the other jurisdiction;
- the rivers and lakes of the island of Ireland are designated as being within a single eco-region (eco-region 17) requiring a high degree of coordination between the authorities in both jurisdictions, to ensure consistent management of the entire aquatic environment;
- all coastal and transitional waters surrounding the island of Ireland are also included in one eco-region (eco-region 1) and their management must be closely coordinated.

What this document covers

This document begins by describing the three International River Basin Districts on the island of Ireland.

After a brief discussion of the features of this Neagh Bann International River Basin District, there is an account of the coordination between the authorities in Ireland and Northern Ireland. That process has led to the production of this and other documents as part of the implementation of the Water Framework Directive.

There follows a short account of the status of our shared waters which lie along the border. From the current status, this document moves on to the future objectives, and to the measures that will be required in order to achieve these objectives in our shared waters. These measures include full and coordinated implementation of 11 key EU Directives, other stipulated (mandatory) measures and whatever supplementary measures may also be necessary.

The document ends with a short section on the continuing process of coordinating activity and with a summary of the status and objectives for the whole international river basin district. More detail on the whole district's waters is contained in the draft plan summary documents which cover each of the jurisdictions.

The International River Basin Districts

As Map 1 shows, there are three International River Basin Districts on the island of Ireland:

- **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, Cully Water, Kilcurry, Ballymascanlan and Flurry) and Carlingford Lough (Newry River)
- **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 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 the Shannon international district lies in Northern Ireland. Consequently the drafting of the plan for the Shannon District has been led by the authorities in Ireland. Full consultation has been maintained with the authorities in Northern Ireland, who are represented on the Shannon District's Steering Group.

A tradition of coordination has been maintained for many years in relation to cross-border water quality management. Before the introduction of the Water Framework Directive, this coordination was less structured and formalised, but it included arrangements on notification of and responses to pollution incidents. During the early 1990s water quality management strategies were jointly developed for the Foyle and Erne catchments.

The principal areas of cooperation in the development of the River Basin Management Plans are shown in tabular form under the heading "**Coordination so far**". So far, the responsible government authorities in both jurisdictions have maintained a high level of coordination and have successfully met all the Directive's early milestones.



Map 1
International River
Basin Districts

The Neagh Bann IRBD: a brief overview

The Neagh Bann District is an international river basin district: around 6,000 km² in Northern Ireland and 2,000 km² within Ireland. It takes in all of County Armagh, large parts of Antrim, Louth, Monaghan and Londonderry, significant areas of Down, Meath and Tyrone and small areas of Cavan and Fermanagh.

The district is flanked by the Sperrin Mountains to the north-west, the Antrim Plateau to the north-east and the Mourne Mountains and uplands of Monaghan and Meath to the south. The northern part contains the broad, very fertile Bann valley; the southern part is dominated by small drumlin hills from the last ice age

People

The District is home to over half a million people. Most of the main urban areas — Antrim, Ardee, Armagh, Ballymena, Banbridge, Coleraine, Cookstown, Craigavon, Dundalk, Dungannon, Monaghan and Newry — are located beside rivers. In rural areas, many people live in small villages or single dwellings. The growing population increases pressure on the systems that deliver drinking water and treat wastewater.

Agriculture, mostly livestock grazing on pasture land, is the main activity. The district has internationally important wetlands, which support a wide range of plants and animals, and its waters provide fishing and boating: some areas



Map 2
The Neagh Bann International River
Basin District

within the district are popular holiday destinations. All of the activities in the district have the potential to impact our waters and therefore must be managed sustainably.

Waters

Surface waters

The principal river system is the Bann (on which Lough Neagh is situated) with its main tributaries the Blackwater, Sixmilewater, Maine, Moyola and Ballinderry. Smaller basins include the Newry River draining to Carlingford Lough and the Castletown, Fane, Dee and Glyde rivers draining to Dundalk Bay.

The main lake is Lough Neagh, almost 400 km², in the centre of the district: the largest lake in Britain and Ireland. Other lakes include Lough Fea, Lough Gullion, Portmore Lough, Stoneyford Reservoir, Spelga Dam, Cam Lough, Lough Island Reavy, Lough Ross, Lough Beg, Lough Muckno and Emy Lough.

Marine waters account for just over 200 km². There is a short length of coastline to the north where the Bann enters the North Channel. To the south the Newry River Estuary flows into the Irish Sea at Carlingford Lough and the Ballymascanlan and Castletown estuaries meet the Irish Sea at Dundalk Bay.

Groundwaters

In the west of the District, including the areas adjacent to Dungannon and Cookstown, permeable rocks and soils allow groundwater to be stored in underground aquifers, but most of the District has rocks and mixed clays that hinder water seepage.

Heavily modified waters

Some surface waters in the District have been substantially changed for such uses as navigation (for example ports), water storage, public drinking water supply, flood defence or land drainage. Such waters are described as heavily modified. Lough Neagh, Spelga Dam, Cam Lough, Lough Fea, Lough Portmore and Newry Estuary are heavily modified. Other waters within the District are man-made (artificial): for example the Ulster Canal. The benefits from such modifications need to be retained, and consequently such waters are subject to a different set of environmental objectives.

Protected areas

While all of our waters are important, some areas require greater protection because they contain sensitive habitats or wildlife species. Other areas are protected because of their beneficial uses or the need to protect human health: these areas include drinking water sources, shellfish growing areas and bathing areas. All of the areas requiring special protection in the Neagh Bann District have been identified, mapped and listed in a register of protected areas. The drinking water sources include Monalty Lough and Spelga Dam; the shellfish waters include Carlingford Lough; the bathing waters include Portstewart and Castlerock beaches. Nutrient-sensitive areas include Lough Muckno, the River Blackwater and Lough Neagh, Special Areas of Conservation include the Bann Estuary and Slieve Gullion and Special Protection Areas include Carlingford Lough and Lough Neagh/Lough Beg.

Table 1 identifies the number of water bodies of different surface water and groundwater categories within the district. Shared water bodies lie along the border between Ireland and Northern Ireland. These, along with water bodies that lie entirely within Ireland and Northern Ireland, comprise the whole International River Basin District.

Table 1 Neagh Bann International River Basin District: shared waterbodies

Waterbody	Number of Waterbodies			Total
	Shared Waterbodies	Northern Ireland Waterbodies	Ireland Waterbodies	
Rivers/Canals	26	233	70	329
Lakes/Reservoirs	0	10	16	26
Estuaries (transitional)	1	1	8	10
Coastal waters	3	0	2	5
Groundwater	5	9	23	37

Coordination so far

The primary means of co-ordination is through the North-South Water Framework Directive Coordination Group, which is supported by a number of technical working groups with representatives from the implementing authorities in Ireland and Northern Ireland. Table 2 presents the principal areas of cooperation in the development of the River Basin Management Plans.

Table 2 Coordination so far

Date	WFD requirements	Implementation: Ireland	Implementation: Northern Ireland
2000	Directive enters into force	n/a	na
2003	Directive to be transposed into national law	<i>Water Policy Regulations</i> (SI 722 of 2003, subsequently amended by SI 413 of 2005 and SI 219 of 2008); requirement to consult with Northern Ireland authorities included	<i>Water Environment (WFD) Regulations (Northern Ireland) 2003</i> (SR No. 544); requirement to consult with Ireland authorities included
	International River Basin Districts and River Basin Districts to be identified	Joint consultation document <i>Managing our Shared Waters</i> identified IRBDs and set out the administrative arrangements	
	Competent authorities to be identified	Listed in regulations	Listed in regulations
2004	Characterisation of surface and groundwaters to be completed	Submitted to European Commission in 2005	Submitted to European Commission in 2005
	Impacts of human activity (industry, farming etc) to be identified	Both jurisdictions used the same systems for characterising groundwaters, transitional waters and coastal waters. Both used the RIVTYPE system, developed in Ireland, for rivers and lakes. A joint identification code, recognising both jurisdictions, was used for cross-border shared waters.	
	Economic analysis of water use to be completed	Submitted to European Commission in 2005	Submitted to European Commission in 2005
	Location and boundaries of water bodies to be identified	Common risk assessment methodologies and rules developed by eco-region Technical Advisory Groups were applied. A joint working group ensured consistency. Results for shared waters were reviewed; most assessments were similar with some variations due to differences in national datasets; overall the process was well harmonised. A single characterisation report was prepared for each IRBD. Results from both jurisdictions are available on WISE (Water Information System for Europe).	
	Reference conditions for water status to be defined	Baseline submitted to European Commission in 2005	Baseline submitted to European Commission in 2005
	Register of protected areas to be established	Consultation between the two jurisdictions. Some differences in availability of economic data and in extent of cost recovery. Difficult to harmonise baseline economic information; consultations on economic analysis continue.	
		Submitted to European Commission in 2005	Submitted to European Commission in 2005
		The authorities consulted each other on the boundaries before reporting.	
		Submitted to European Commission in 2005	Submitted to European Commission in 2005
		The authorities consulted each other on the conditions before reporting.	
		Submitted to European Commission in 2005	Submitted to European Commission in 2005
		The authorities consulted each other on the registers before reporting. There is a high level of consistency in the approaches but with some differences stemming from historic decisions. Since then conservation authorities (Natural Heritage and National Parks and Wildlife Service) have been harmonising the registers, producing a joint electronic map of protected areas and progressing joint studies.	

2006	Environmental monitoring to be established and operational to ensure comprehensive view of water quality in each River Basin District	Monitoring programmes designed, consulted on and implemented by end-2006	Monitoring programmes designed, consulted on and implemented by end-2006
	Both jurisdictions monitor groundwater sites and transitional and coastal waters, as well as representative sites on cross-border rivers and lakes. Joint programmes, set up through the NS Share study, monitor dangerous substances and biological status. Scientists across Europe have collaborated on the development of compatible water classification systems; Ireland and the UK are in the same geographical intercalibration groups. The authorities in Ireland and Northern Ireland are also cooperating, through the eco-region's Technical Advisory Groups, on harmonising water status systems. Maps of monitoring networks for both jurisdictions are available on WISE.	Both jurisdictions monitor groundwater sites and transitional and coastal waters, as well as representative sites on cross-border rivers and lakes. Joint programmes, set up through the NS Share study, monitor dangerous substances and biological status. Scientists across Europe have collaborated on the development of compatible water classification systems; Ireland and the UK are in the same geographical intercalibration groups. The authorities in Ireland and Northern Ireland are also cooperating, through the eco-region's Technical Advisory Groups, on harmonising water status systems. Maps of monitoring networks for both jurisdictions are available on WISE.	Both jurisdictions monitor groundwater sites and transitional and coastal waters, as well as representative sites on cross-border rivers and lakes. Joint programmes, set up through the NS Share study, monitor dangerous substances and biological status. Scientists across Europe have collaborated on the development of compatible water classification systems; Ireland and the UK are in the same geographical intercalibration groups. The authorities in Ireland and Northern Ireland are also cooperating, through the eco-region's Technical Advisory Groups, on harmonising water status systems. Maps of monitoring networks for both jurisdictions are available on WISE.
	Work programme for production of River Basin Management Plans for each River Basin District to be published	Published in 2006	Published in 2006
	Public Participation	The two environment departments consulted each other on the draft work programmes. Both work programmes confirmed that coordinated action in shared waters would include production of a single report on significant water management issues for each international river basin district.	The two environment departments consulted each other on the draft work programmes. Both work programmes confirmed that coordinated action in shared waters would include production of a single report on significant water management issues for each international river basin district.
2007	Interim overview of the significant water management issues for each River Basin District to be published	Published June 2007	Published June 2007
		The authorities in both jurisdictions agreed a common timeframe and report content. For each international river basin district, a single report on significant water management issues was produced; stakeholders and authorities groups were asked to help identify the key issues and views were gathered at public workshops in the following six months. A strategic environmental assessment scoping study and subsequent consultations were undertaken, based on the single Significant Water Management Issues report for the international river basin districts. Ongoing coordination arrangements regarding public participation include reciprocal invites to attend meetings of the formal stakeholder groups in Northern Ireland and the Advisory Councils in Ireland.	The authorities in both jurisdictions agreed a common timeframe and report content. For each international river basin district, a single report on significant water management issues was produced; stakeholders and authorities groups were asked to help identify the key issues and views were gathered at public workshops in the following six months. A strategic environmental assessment scoping study and subsequent consultations were undertaken, based on the single Significant Water Management Issues report for the international river basin districts. Ongoing coordination arrangements regarding public participation include reciprocal invites to attend meetings of the formal stakeholder groups in Northern Ireland and the Advisory Councils in Ireland.
2008	This document forms part of the Draft River Basin Management Plan to be published for public consultation by December 2008	Draft management plans to be published for public consultation in December 2008	Draft management plans to be published for public consultation in December 2008
		The authorities have developed guidelines on coordinating implementation of river basin management plans. Representatives from environmental agencies in both jurisdictions were involved in steering groups to share knowledge, aiming for consistency in method and approach. North South Technical Advisory Groups applied the classification systems to determine the status of waters, with the results being reviewed by officials in both jurisdictions. Consultations on objective setting for international waters continued during 2007 and 2008, including shared technical studies of objectives for heavily modified waters and protected areas. For the draft plans, the authorities in both jurisdictions agreed to use a common template. This component of the Draft River Basin Management Plan describes collaboration to date and the commitment to future coordination of implementation. Detailed information on status, objectives and measures is presented separately, to allow focused consultations, in draft plan summary documents for each jurisdiction. An electronic information system covering the status, objectives and measures for each waterbody and background documents are available on websites. It has been necessary to carry out a Strategic Environmental Assessment of the draft plans and programmes of measures. A single collaborative strategic environmental assessment has been commissioned to cover both jurisdictions. During 2008 an environmental report was produced for each of the island's eight national and international river basin management plans and their associated programmes of measures.	The authorities have developed guidelines on coordinating implementation of river basin management plans. Representatives from environmental agencies in both jurisdictions were involved in steering groups to share knowledge, aiming for consistency in method and approach. North South Technical Advisory Groups applied the classification systems to determine the status of waters, with the results being reviewed by officials in both jurisdictions. Consultations on objective setting for international waters continued during 2007 and 2008, including shared technical studies of objectives for heavily modified waters and protected areas. For the draft plans, the authorities in both jurisdictions agreed to use a common template. This component of the Draft River Basin Management Plan describes collaboration to date and the commitment to future coordination of implementation. Detailed information on status, objectives and measures is presented separately, to allow focused consultations, in draft plan summary documents for each jurisdiction. An electronic information system covering the status, objectives and measures for each waterbody and background documents are available on websites. It has been necessary to carry out a Strategic Environmental Assessment of the draft plans and programmes of measures. A single collaborative strategic environmental assessment has been commissioned to cover both jurisdictions. During 2008 an environmental report was produced for each of the island's eight national and international river basin management plans and their associated programmes of measures.

The status of our shared waters

In accordance with the Water Framework Directive, classification schemes identify status classes, which indicate how much human activity has impacted on waters. Surface waters have been classified according to their ecological status and chemical status; and groundwaters on a system that combines chemical and quantitative status. Surface waters are classified as high, good, moderate, poor or bad. Groundwaters are classified as good or poor.

The status of our shared surface waters and groundwaters is summarised in Table 3 and Table 4 and presented in Map 3 and Map 4.

Table 3 Surface water status in the Neagh Bann District's shared waters

Surface Water Category	High	Good	Moderate	Poor	Bad
Rivers and canals (number) % of total	(0) 0	(3) 11.5	(8) 30.8	(14) 53.9	(1) 3.8
Lakes and reservoirs (km ²) % of total	-	-	-	-	-
Estuaries (km ²) % of total	(0) 0	(0) 0	(2.9) 100		
Coastal (km ²) % of total	(0) 0	(184) 80.3	(45) 19.7		

Table 4 Groundwater status in the Neagh Bann District's shared waters

Groundwater	Good	Poor
Chemical Status (km ²) % of total	(2,499) 100	(0) 0
Quantitative Status (km ²) % of total	(2,499) 100	(0) 0
Combined Status (km ²) % of total	(2,499) 100	(0) 0

Protected areas

While all of our waters are important, some areas require greater protection because they contain rare and vulnerable habitats or wildlife. Other areas require special protection because of their beneficial use or the need to protect human health. These include drinking water sources, shellfish growing areas and bathing areas. There are 94 protected areas amongst the shared waters of the Neagh Bann International River Basin District. They include Carlingford Lough, Portstewart Bay, Lough Muckno, River Blackwater and Lough Ross.





Map 3 Shared waterbody surface water status in the Neagh Bann International River Basin District



Map 4 Shared waterbody groundwater status in the Neagh Bann International River Basin District



Map 5 Shared waterbody surface water overall objectives in the Neagh Bann International River Basin District



Map 6 Shared waterbody groundwater overall objectives in the Neagh Bann International River Basin District

The objectives and measures for our shared waters

Environmental objectives define what it is proposed to achieve by implementing the river basin management plan and measures are the methods used to pursue these objectives.

Objectives

The core objectives are:

- achieve protected areas objectives
- prevent deterioration
- restore good status
- reduce chemical pollution.

In general, the aim is to achieve these core objectives by 2015. In certain instances alternative objectives may be set, for example where it is not possible to achieve good status by 2015 due to technical, economic, environmental or recovery constraints. Improvements may be phased over further river basin planning cycles if these constraints mean we can't meet objectives within the first river basin planning cycle.

The core objectives have been translated into detailed and specific objectives for each of our shared surface waters and groundwaters (Map 5 and Map 6). Table 5 shows when we expect to achieve those detailed objectives:

Table 5 Timescale for achieving surface water and groundwater objectives in our shared waters

	Rivers and Canals (Number)	Lakes and Reservoirs (km ²)	Estuaries (km ²)	Coastal Waters (km ²)	Groundwaters (km ²)
Objective Achieved 2007	(3) 11.5%	-	(0) 0	(184) 80.4%	(2,499) 100%
Objective Achieved 2015	(20) 76.9%	-	(0) 0	(229) 100%	(2,499) 100%
Objective Achieved 2021	(26) 100%	-	(2.9) 100%	(229) 100%	(2,499) 100%
Objective Achieved 2027	(26) 100%	-	(2.9) 100%	(229) 100%	(2,499) 100%
Less Stringent Objective – objective timescale beyond 2027	(0) 0%	-	(0) 0%	(0) 0%	(0) 0%

All objectives have to be reviewed every six years as part of the river basin planning cycle.

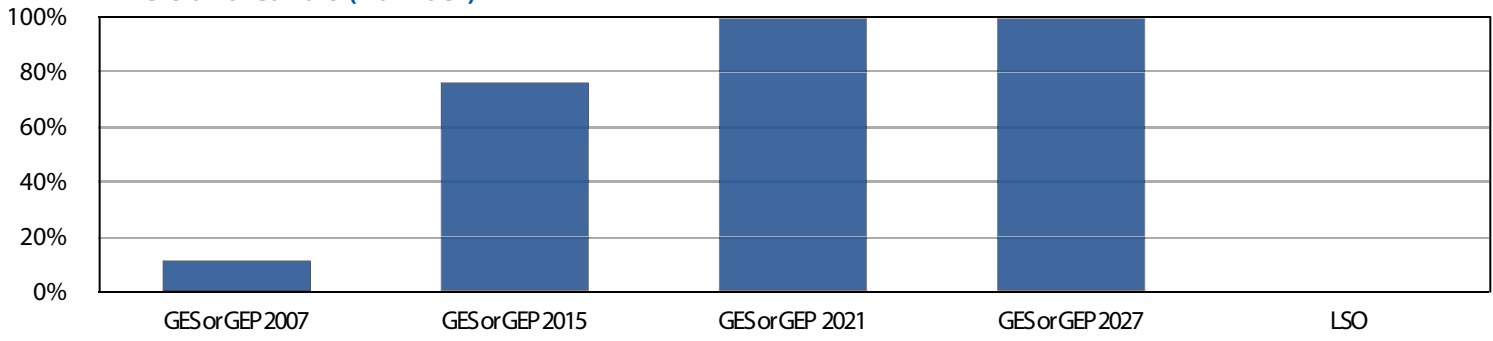
Timescale for achieving surface water and groundwater objectives in our shared waters

These charts show the improvements we expect in each category of waters over three cycles of the river basin district planning process.

GES or GEP means **good ecological status** or **good ecological potential**, in other words compliant with the Water Framework Directive. The standard of good ecological potential is applied to artificial and heavily modified waters (such as canals and reservoirs) where the benefits to humans need to be retained.

LSO means **less stringent objective**, which means that the waters won't achieve good status or good potential before 2027.

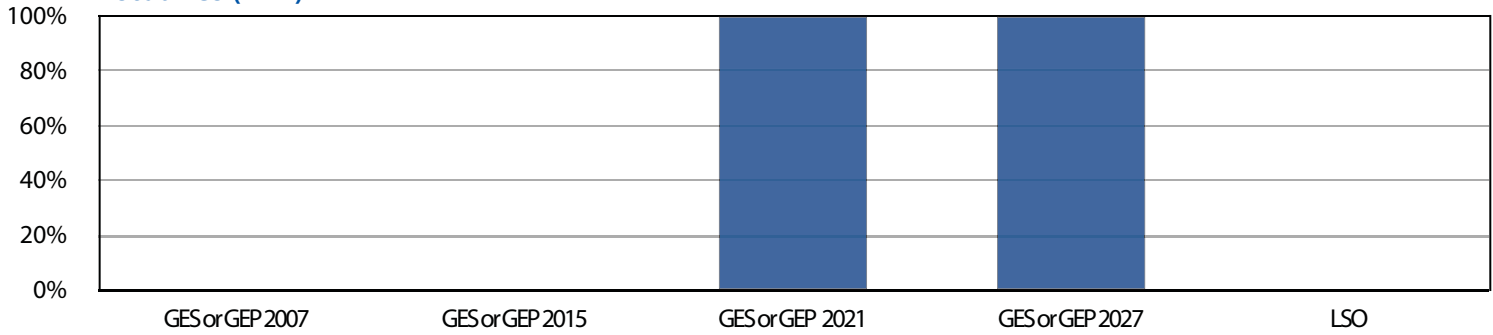
Rivers and Canals (number)



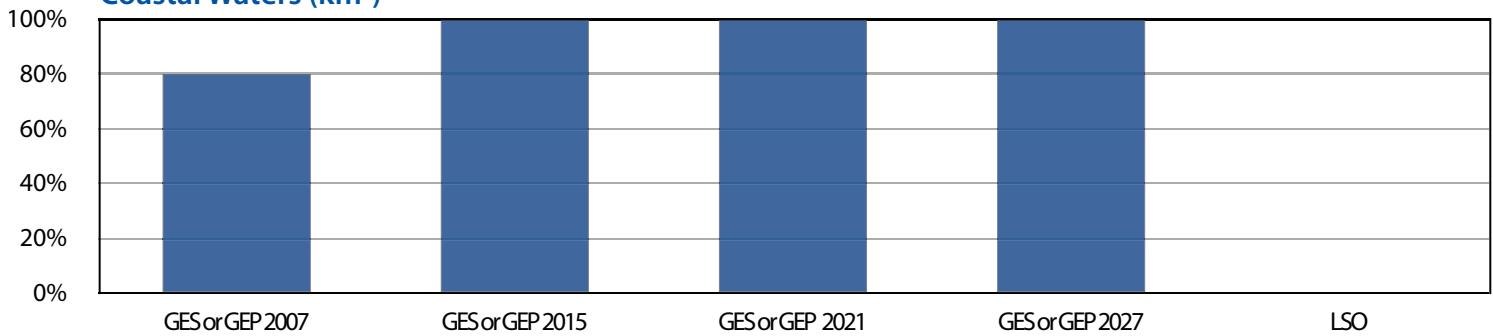
Lakes and Reservoirs (km²)



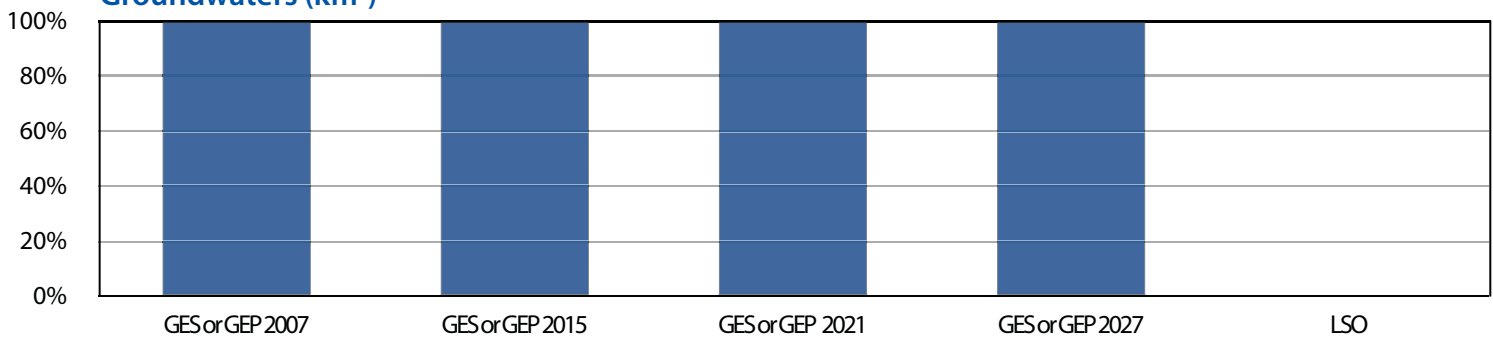
Estuaries (km²)



Coastal Waters (km²)



Groundwaters (km²)



Measures

The measures used to achieve the objectives for our waters fall into three categories:

- the implementation of 11 key directives specified under the Water Framework Directive. These directives have already been transposed into domestic legislation in both Ireland and Northern Ireland
- the implementation of other stipulated measures required by the Water Framework Directive. Again domestic legislation has been or will be made in both Ireland and Northern Ireland to address these stipulated measures: for example both jurisdictions will introduce new legislation requiring establishment of inventories of emissions, discharges and losses of priority substances
- the use of additional or supplementary measures.

Basic measures

The first two categories are referred to as basic measures. They are:

The 11 key EU Directives	Other stipulated measures
Bathing waters	Cost recovery for water use
Birds	Promotion of efficient and sustainable water use
Habitats	Protection of drinking water sources
Drinking waters	Control of abstraction and impoundment
Major accidents	Control of point source discharges
Environmental impact assessment	Control of diffuse source discharges
Sewage sludge	Authorisation of discharges to groundwaters
Urban wastewater treatment	Control of priority substances
Plant protection products	Controls on physical modifications to surface waters
Nitrates	Controls on other activities impacting on water status
Integrated pollution prevention control	Prevention or reduction of the impact of accidental pollution incidents

Additional or Supplementary measures

A range of possible additional or supplementary measures has been identified by a series of technical studies in both Ireland and Northern Ireland. Some are already being taken: they include farm based environmental protection schemes and implementation of a suite of forestry good practice guidelines. Other possible measures are codes of practice, voluntary agreements, demand reduction and rehabilitation programmes and legal, administrative and economic instruments.

Additional or supplementary measures range from reducing the pressure at source, through remediation by technical or engineering solutions, to relocation of the pressure. They have to be technically feasible; the combination of supplementary measures must be the most cost-effective and the cost of these combinations of measures must not be significantly

greater than the benefits gained. The impacts of the supplementary measures on the wider environment have to be considered, through Strategic Environmental Assessment, to ensure that they are sustainable.

Examples of additional or supplementary measures that are under consideration in both Ireland and Northern Ireland include:

Pressure and Sector	Possible measure
Urbanisation and Wastewater (Ireland) Urban Development, Collection and Treatment of Sewage (Northern Ireland)	Identify and address areas where there are potential constraints on development associated with insufficient capacity at treatment plants.
Industrial Discharges (Ireland) Industry and other businesses (Northern Ireland)	Introduce codes of practice for potentially polluting industrial discharges.
Agriculture (Ireland & Northern Ireland)	Increase participation in agri-environment / rural environmental protection schemes, particularly in priority catchments.
Forestry (Ireland & Northern Ireland)	Introduce more stringent actions for the most sensitive areas, when scientific evaluation establishes a need.
Wastewater from Unsewered Properties (Ireland) Collection and Treatment of Sewage (Northern Ireland)	Change current policy and guidance to improve existing controls on septic tanks and modify development control and enforcement practices to reflect restrictions in identified priority areas.
Physical Modifications (Ireland) Freshwater and Marine Morphology (Northern Ireland)	Investigate channelisation remediation schemes, such as reconstruction of pools, substrate enhancement, removal of hard bank reinforcement or revetment and replacement with soft engineering solutions.
Abstractions (Ireland) Abstraction and flow regulation (Northern Ireland)	Manage water demand through measures such as: implementing water conservation programmes, supporting voluntary initiatives (such as water conservation and rainwater harvesting schemes) and reducing leakage and unaccounted-for water in distribution systems.

Both jurisdictions are also proposing educational programmes, measures to target local issues (such as the presence of invasive alien species) and other research programmes as additional or supplementary measures in support of the Water Framework Directive.

The full suite of proposed additional or supplementary measures is set out in the detailed draft plan summary documents for each of the two jurisdictions.

Continuing coordination

There is still important work to be done before the final plans can be completed. Authorities in both jurisdictions will continue to coordinate their activities with the aim of producing a single management plan for each of the cross-border river basin districts.

Coordinating with other plans and programmes

It will be necessary to integrate and coordinate river basin management plans with plans and programmes in other relevant policy areas, both at national level and for shared waters. The plans and programmes include:

- Habitat and Species Protection Plans under the Habitats Directive
- Water Services Strategic Plans (Ireland) or Northern Ireland Water (NIW) investment programmes
- the Nitrates Action Programmes, already closely aligned in both jurisdictions
- Strategic National Development Plans and related Local Plans.

The development of new plans and programmes will also be coordinated. For example, under Ireland's new Surface Water Environmental Quality Objectives Regulations, implementation committees are to develop river basin district pollution reduction programmes. Under these regulations public authorities must consult, cooperate and liaise with other public authorities within the river basin district and, where appropriate, with the competent authorities in Northern Ireland.

Assessing regulatory impacts

The Water Framework Directive requires a range of regulatory controls (for example authorisation of direct discharges to water, abstractions and physical modifications) to give legal effect to measures. Any significant regulatory proposals in either jurisdiction require regulatory impact assessment to evaluate whether new regulations will have the desired impact or will have undesirable side-effects or unforeseen extra costs. Such assessment also helps to clarify the cost of enforcement of the regulation. The introduction of new regulatory controls will also be coordinated between authorities in the two jurisdictions where appropriate.

Implementing the management plans

In Northern Ireland, implementation of each plan will be coordinated by the Department of the Environment and the Northern Ireland Environment Agency, through the Interdepartmental Working Group, which includes the four main government departments responsible for implementing the plan.

In Ireland, implementation of the plans will be coordinated by the Department of the Environment, Heritage and Local Government, working together with the local authorities, the Environmental Protection Agency, and other relevant public authorities. Monaghan and Donegal County Councils, the respective lead local authorities for the Neagh Bann and North Western international districts, will be assisted in the development of River Basin Management Plans by a project funded by the Department of the Environment, Heritage and Local Government.

The North South Water Framework Directive Coordination Group will continue to oversee the ongoing coordination between the authorities in the two jurisdictions during the implementation of the management plans. Future coordination efforts are outlined in Table 6. Consideration will be given to further enhancing coordination arrangements to support implementation of measures in the District's shared waters.

Table 6 Future coordination

2009	River Basin Management Plans to be finalised and published	<p>The North South Ministerial Council confirmed in October 2007 that implementation of the Water Framework Directive in both jurisdictions would be carried forward with the aim of producing a single river basin management plan for each of the International River Basin Districts. These plans are to be adopted by December 2009.</p> <p>During 2009 the strategic environmental assessment process will continue with consultations and preparation of a single environmental statement to accompany the final river basin management plan for each district.</p>
	Programmes of measures to be established in each River Basin District to meet environmental objectives	Preparation of the draft programmes of measures has revealed some differences in existing legislative and implementation systems. Further harmonisation will be achieved through future review of supporting plans and programmes.
2010	Water pricing policies to be in place	Coordination will be advanced under the remit of the North South Water Framework Directive Coordination Group.
2012	Programmes of measures to be fully operational	Coordination will be advanced under the remit of the North South Water Framework Directive Coordination Group.
	Progress to be monitored	Interim progress reports will be prepared on implementation of planned programmes of measures.
2015	Main environmental objectives to be met	River Basin Management Plans to be reviewed and updated
2021	Second six-year planning cycle ends	River Basin Management Plans to be reviewed and updated
2027	Third six-year planning cycle ends	River Basin Management Plans to be reviewed and updated





appendix

*Summary of the Status and Objectives for the whole
Neagh Bann International River Basin District*



Current status

The status of our surface waters and groundwaters in the whole international District is summarised in Tables 7 and 8 and Maps 7 and 8, which include all the district's waters: those in Ireland, those in Northern Ireland and all shared waters.

Table 7 Surface water status in the whole Neagh Bann International District

Surface Water Category	High	Good	Moderate	Poor	Bad	Yet to be Determined
Rivers and canals (number) % of total	(0) 0	(76) 23.1	(149) 45.3	(71) 21.6	(15) 4.6	(18) 5.5
Lakes and reservoirs (km ²) % of total	(0) 0	(0.17) 0.04	(3.48) 0.87	(6.63) 1.66	(388.7) 97.42	(0) 0
Estuaries (km ²) % of total	(0) 0	(0) 0	(41.72) 100		(0) 0	
Coastal (km ²) % of total	(0) 0	(184.56) 55.7	(108.39) 32.7		(38.45) 11.6	

Table 8 Groundwater status in whole Neagh Bann International District

Groundwater	Good	Poor
Chemical Status (km ²) % of total	(6,683) 88.8	(843) 11.2
Quantitative Status (km ²) % of total	(6,759) 89.8	(767) 10.2
Combined Status (km ²) % of total	(6,683) 88.8	(843) 11.2

Protected areas

There are 94 protected areas amongst the shared waters of the Neagh Bann International River Basin District. In the whole District there are 650 protected areas. These include drinking water sources such as Monalty Lough and Spelga Dam; the shellfish waters include Carlingford Lough; the bathing waters include Portstewart and Castlerock beaches. Nutrient-sensitive areas include Lough Muckno, the River Blackwater and Lough Neagh, Special Areas of Conservation include the Bann Estuary and Slieve Gullion and Special Protection Areas include Carlingford Lough and Lough Neagh/Lough Beg.





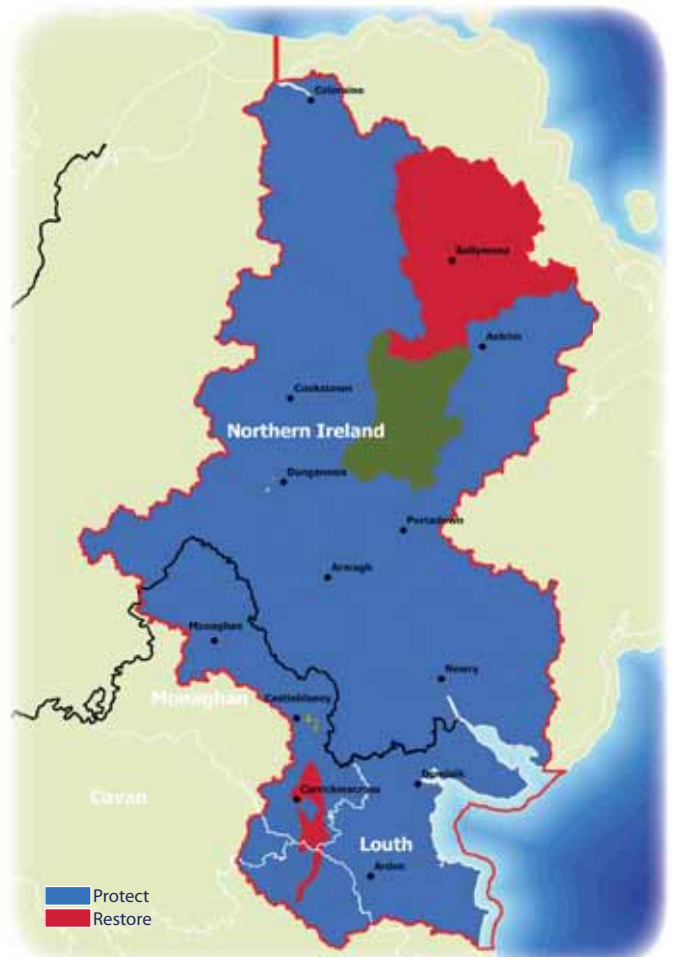
Map 7 Surface water status in the Neagh Bann International River Basin District



Map 8 Groundwater status in the Neagh Bann International River Basin District



Map 9 Surface water overall objectives in the Neagh Bann International River Basin District



Map 10 Groundwater overall objectives in the Neagh Bann International River Basin District

Objectives

The detailed objectives for the surface waters and groundwaters in the whole international District are summarised in Table 9 and Maps 9 and 10. This is when we expect to achieve those objectives:

Table 9 Timescale for achieving surface water and groundwater objectives in the whole Neagh Bann International District

	Rivers and Canals (Number)	Lakes and Reservoirs (km ²)	Estuaries (km ²)	Coastal Waters (km ²)	Groundwaters (km ²)
Objective Achieved 2007	(76) 23.1%	(0.17) 0.04%	(0) 0%	(184.6) 55.7%	(6,683) 88.8%
Objective Achieved 2015	(217) 66.0%	(7.74) 1.9%	(41.72) 100%	(292.95) 88.4%	(6,759) 89.8%
Objective Achieved 2021	(324) 98.5%	(13.07) 3.3%	(41.72) 100%	(292.95) 88.4%	(7,526) 100%
Objective Achieved 2027	(328) 99.7%	(399) 100%	(41.72) 100%	(292.95) 88.4%	(7,526) 100%
Less Stringent Objective – objective timescale beyond 2027	(0) 0%	(0) 0%	(0) 0%	(0) 0%	(0) 0%
To be determined	(1) 0.3%	(0) 0%	(0) 0%	(38.45) 11.6%	(0) 0%

Timescale for achieving surface water and groundwater objectives in the whole Neagh Bann International District's waters

The charts opposite show the improvements we expect in each category of waters over three cycles of the river basin district planning process.

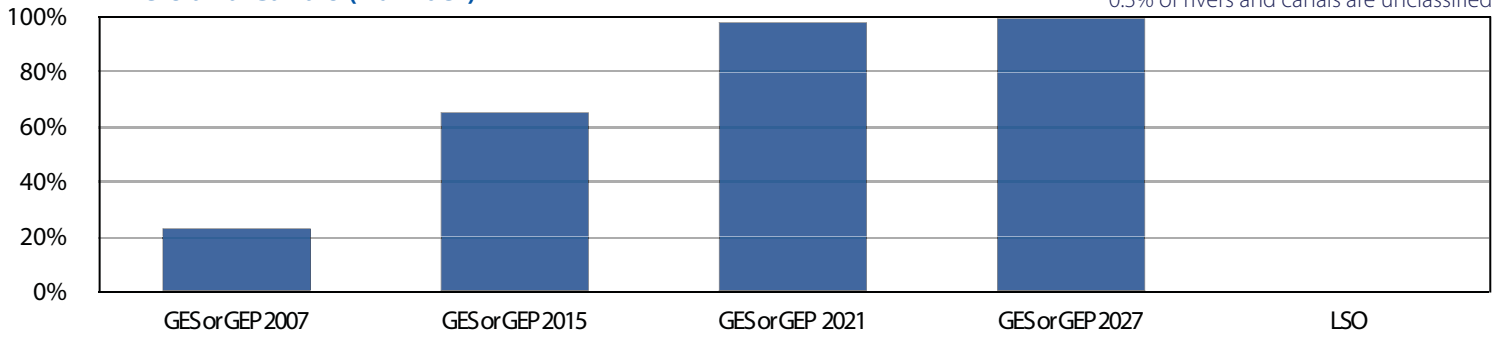
GES or GEP means **good ecological status** or **good ecological potential**, in other words compliant with the Water Framework Directive. The standard of good ecological potential is applied to artificial and heavily modified waters (such as canals and reservoirs) where the benefits to humans need to be retained.

LSO means **less stringent objective**, which means that the waters won't achieve good status or good potential before 2027.

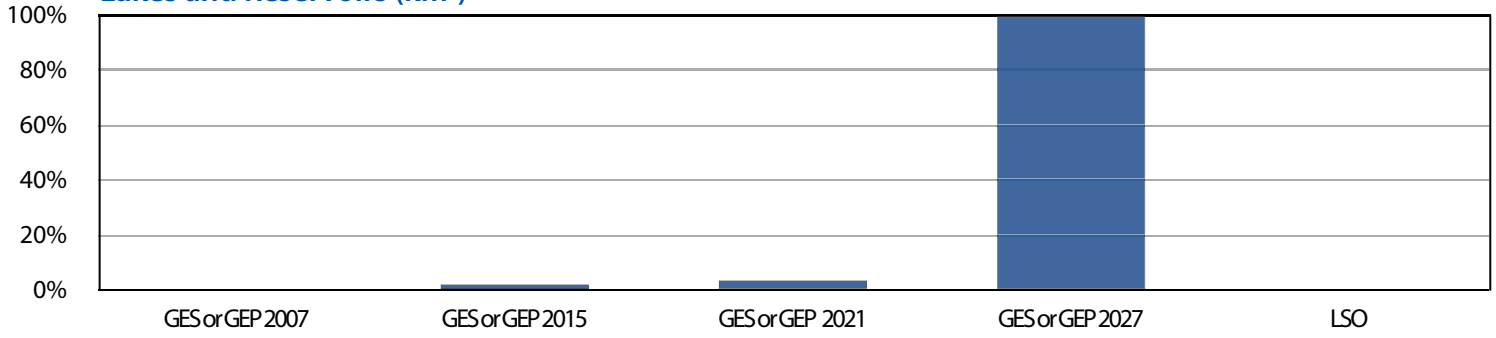


Rivers and Canals (number)

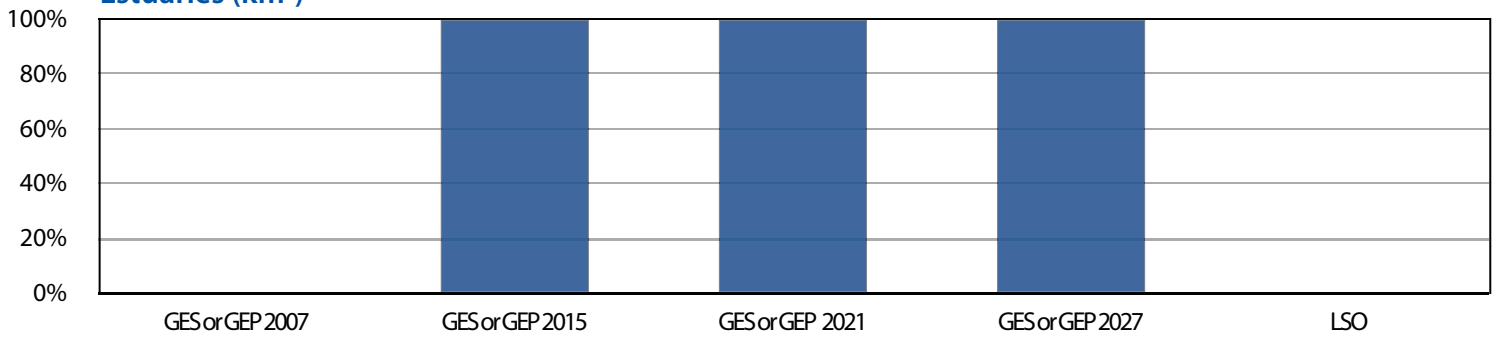
0.3% of rivers and canals are unclassified



Lakes and Reservoirs (km²)

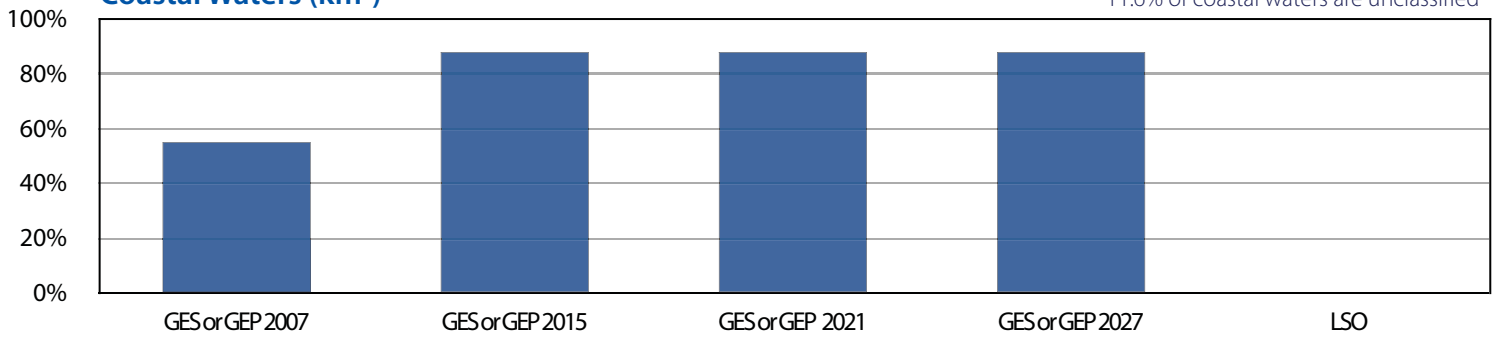


Estuaries (km²)

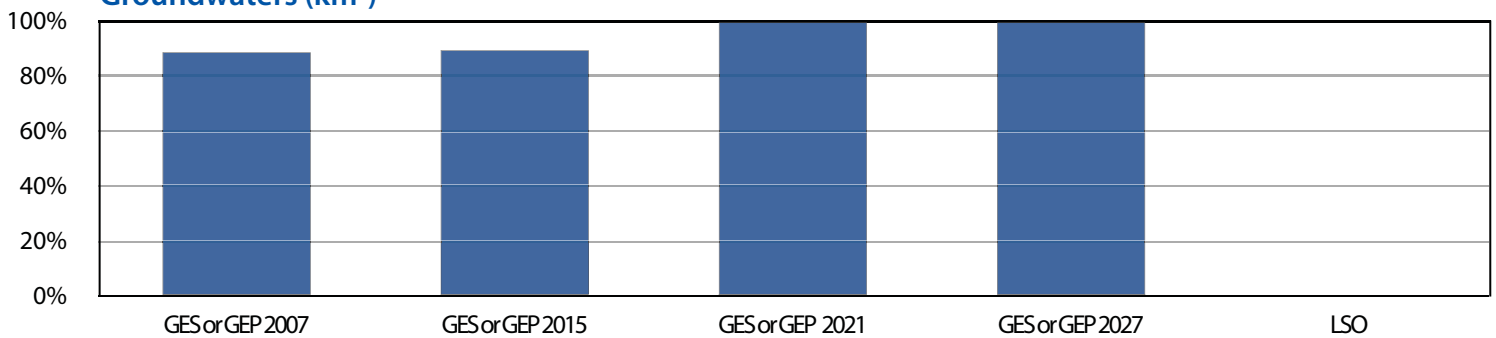


Coastal Waters (km²)

11.6% of coastal waters are unclassified



Groundwaters (km²)





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