

Irish Water



The Heritage Council



An Chomhairle Oidhreachta



Irish Water

*Water is not
a commercial product
but a heritage
which must be protected,
defended and
valued*

Without water there would be no life on Earth – no plants, no animals, no humans. We are dependent on water in more ways than we can mention. We drink water and need it to grow our food. We use it in our homes for cooking and cleaning. Agriculture and industry depend on it. Wildlife would not exist without it. Our quality of life is linked to an abundance of clean, uncontaminated water. In Ireland, where water is fresh and plentiful, we do not realise how lucky we are. We do not have to fetch and carry water. We are rarely afflicted by drought. Water comes directly into our homes and we can drink from the tap without becoming ill.

Quite apart from its practical uses, water is an integral part of our natural and cultural heritage. We are surrounded by beautiful rivers, lakes, and seas in which we can swim, fish, and sail, and which support a huge range of plant and animal species. Many of the most beautiful places in Ireland are associated with water – from the Lakes of Killarney to the Cliffs of Moher, from the River Shannon to Brú na Boinne. Our history is linked to water; the earliest settlers followed the paths of rivers and built their homes by lakes and wells. Those who settled in Ireland, from saints to Vikings,

came to us over the sea and people have travelled on rivers, lakes, and seas, for both war and trade since they were able to build boats. Even our place names reflect the importance of water; Baile Átha Cliath is only one of the numerous references to fords, bridges, lakes, or rivers. Our myths and folklore, both Christian and pre-Christian, show the high regard in which we have held our water sources, from the holy wells of Ireland to Fionn and the Salmon of Knowledge.

In fact the water of Ireland is so good and so plentiful that we take it for granted – often complaining about the rain and damp! We fail to see that our water is a precious resource that needs to be safeguarded so that future generations can benefit from the same plentiful clean water that we enjoy today.



Ireland's Water - a decline in quality

Although Ireland has one of the cleanest water supplies in the European Union, there has been a serious decline in water quality over the last thirty years. That decline is not surprising. In a developing economy, it is common for environmental safeguards to take second place to the expansion of the economy. Various substances, mainly from mainland Europe, are also transported through the atmosphere and deposited on land and water here in

Ireland. The result is that there is hardly a water body in the country that could now be considered truly free of contamination. This is cause for great concern. As our population grows the demands on our water resources will only increase. Unless the decline in water quality is reversed, future generations will not be able to enjoy the abundance of clean water that is Ireland's trademark. It is vital that these issues are addressed while there is still time to reverse the decline.

Why is our water under threat?

Water is under threat because of the ways that we use it. We extract water from the rivers and from underground, use it for different purposes and then return it to the environment, often polluting it in the process. Dams and drainage systems also change the relationship between land and water. Our use of water is affecting the balance of nature and contributing to the decline in water quality.

Sewage is a fact of life, but domestic septic tanks that are not installed or operated properly can pollute sources of drinking water. Public sewerage schemes can cause difficulties too. Sewage contains nutrients that, unless adequately treated, feed aquatic plants and algae that can damage water quality. Some smaller towns cannot afford the expensive tertiary treatment that significantly reduces the nutrients in sewage and provide only secondary treatment.

What are



Sewage Outlet 137cm x 153cm © Barrie Cooke 1993

Rubbish creates many problems. Discarded pesticides, paints, thinners, solvents, disinfectants, oil and other hazardous substances can pollute waterways, either directly or by leaching from inadequate landfills. Household chemicals like bleaches, cleaning agents, unused medicines and contraceptives, can affect fish and other aquatic life when discharged in sewage.

Intensive agriculture contributes to water pollution when excess fertilisers, sewage, or slurry is washed off the land into the water. All these contain nutrients which artificially feed certain species of algae in the water creating the notorious 'algal bloom'. Algal bloom occurs when algae over-breed to the exclusion of other species, depleting oxygen levels, killing fish, and damaging the ecology of seas, lakes, and rivers. Irresponsible use of pesticides on roadsides, gardens, and parks as well as on fields and in sheep dips, can kill fish and damage water ecosystems. Drinking water supplies can be damaged if an excess of these toxins leaches into the groundwater.

Industrial peat harvesting can release particles that damage aquatic ecosystems by settling in lakes, smothering invertebrates and plants. These particles are also liable to block channels and contributing to flooding.

Forestry can lead to acidification, making water uninhabitable for certain species. It can also affect the way that water is retained in wetlands. Thoughtless harvesting can loosen topsoil, polluting trout and salmon habitats with cascades of sediment, while heavy machinery can compact the soil and contribute to flooding.

Construction can cause soil compaction and erosion.

Silt and mud can run into watercourses. As we cover more of our land with buildings, concrete and tarmac, we reduce the ability of the soil to absorb water so that heavy rain runs off in floods like those that have affected some residential areas.

Oil and diesel are washed from roads and car parks into storm drains, which flow into rivers and the sea. Although a single car only causes a very small amount of such pollution, the combined overall run-off may have a major impact on freshwater and marine areas.

Industries may discharge hazardous substances that eventually end up in our water. Monitoring systems don't necessarily measure every constituent of the discharges, so the potential effects may not be recognised.

Recreational boat users may spill petrol, diesel, and oil, and marine toilets can discharge raw sewage. Fast boats can erode riverbanks and destroy birds' nests. Marina developments can permanently alter waterside areas and their wildlife. Recreational boat users can help to spread damaging alien species, like the zebra mussels in the Shannon Catchment.

The sea can be damaged by land run-off, waste, dredging, and dumping of contaminated sediment. Land reclamation projects and the building of port infrastructure can cause loss of habitat and damage aquaculture. Shipping can release oil, toxic anti-fouling paints, or cause the introduction of alien species. The most obvious signs of a decline in water quality can be found in estuaries and sheltered inlets near cities. As with many rivers, excessive inputs of nutrients are often the worst offenders, causing algae to thrive at the expense of other aquatic life.

the threats to our water?

What is groundwater?

What are the threats to groundwater?

Although the quality of groundwater in Ireland is good compared to other EU countries, it is becoming increasingly polluted. It is usually more difficult to pollute groundwater than rivers or lakes, but many of our activities can have an impact on its quality. No part of Ireland is free from hazards. In remote rural areas bird droppings and sheep faeces can pollute the groundwater; in the populated countryside septic tanks and farmyard activities pose a threat, while in the towns and cities there are the more obvious dangers caused by industrial zones, refuse dumps, and petrol stations. In many parts of Ireland at least 30% of private domestic and farm wells are contaminated; in some highly vulnerable areas more than 50% are contaminated at some time during their use. Most of these wells are not only chemically contaminated but are also polluted by faecal bacteria.

How can we protect our groundwater?

A practical and effective means of protecting groundwater and preventing pollution regionally is through the use of a Groundwater Protection Scheme, drawn up by the Geological Survey of Ireland, the Department of Environment, Heritage and Local Government, and the Environmental Protection Agency. While the use of Groundwater Protection Schemes will reduce the threat to groundwater from human activities, they will not be sufficient on their own to prevent pollution of wells.

Groundwater

is water that is held underground in the soil and in pores or crevices in rock.

In Ireland between 20% and 25% of our drinking water comes from groundwater.

It is an unseen but highly valuable resource.



Ireland's Water

the good news

There are hopeful signs. In recent years Irish people become much more conscious of the importance of water. Many towns and cities have begun to appreciate their riverside settings, while increasing wealth has brought more people into water sports and water-based recreation; both activities have increased our appreciation of the value of clean water.

There has been a major programme of construction of sewage treatment plants in recent years, reducing (though not eliminating) discharges into water. Industry and the regulatory bodies have reduced polluting discharges, especially through the Integrated Pollution Control licensing scheme. We have largely been successful at tackling the point sources of pollution: the individual sources of serious pollution like a factory discharge or a town's untreated sewage. These sources are usually easy to pinpoint and to manage and, even though there is work still to do, in most cases we know what needs to be done and how to do it.

the bad news

We have been less successful at tackling diffuse sources of pollution: the small sources that individually contribute little but that, taken together, can cause serious problems. They include hazardous substances from homes, outflows from septic tanks, run-off effluent from roads and run-off nutrients from farms. These sources of pollution are numerous and more difficult to tackle, partly because people are less conscious of them.

Quality

Local authorities operate treatment works to ensure that the water supply is of high quality. The cost of water treatment is greatly increased if the water comes from a river or lake that has been polluted by nutrients that have caused an increased growth of microscopic plants.

Quantity

While we have been paying more attention to water quality, we have been less attentive to quantity. We use the flow of water from some rivers to generate electricity at hydroelectric stations, but it is the local authorities that take most water from rivers, lakes, and underground sources to supply us with drinking and flushing water. In recent years, management of water abstraction and supply has become more sophisticated. Better management of the supply will reduce leakage and waste. More long term planning will help us to understand the demand for water. Nonetheless, it is a little startling to learn that Dublin's growth may mean that water is brought from the Shannon to supply the capital.





Managing our water a better way

We need to take a broader view of our water.

In the past, we have not really thought about the aquatic environment as a whole, to include drainage basins and their habitats, fish and wildlife.

In practice they are affected by activities like building, over-fishing, excessive water abstraction, and land drainage.

To take account of them, we need an integrated approach to the management of water.



An integrated approach to water management

The new Water Framework Directive will help us to manage our water resources more effectively. The Water Framework Directive came into force on 22 December 2002 and covers water resources throughout the EU.

It addresses all water, from groundwater to coastal areas of sea water, and gives us a framework for dealing with both water quality and water quantity.

Aims

- To maintain the ‘high status’ of water where it exists
- To prevent any deterioration in the existing status of water
- To achieve at least ‘good status’ for all water by 2015

Targets

- The provision of enough good quality surface water and groundwater for sustainable, balanced and fair water use
- A significant reduction in pollution of groundwater
- The protection of territorial and marine waters
- Achieving the objectives of relevant international agreements

Principles

- **Precaution** – where there are risks of serious or irreversible damage, lack of scientific certainty should not be used as a reason to postpone cost-effective measures to prevent degradation.
- **Polluter pays** – those who cause pollution must pay for its effects, both by finding ways to avoid further pollution and by covering the costs of the restoration of water quality
- **Putting a real value on water** – member states must use water-pricing policies that provide adequate incentives for users to use water resources efficiently

The Water Framework Directive is innovative in that it requires that water be managed in an integrated way. The full text of the Directive is available on www.wfdireland.ie

Other sources of information are listed at the end of this document.

Working together for better water

A ground level approach

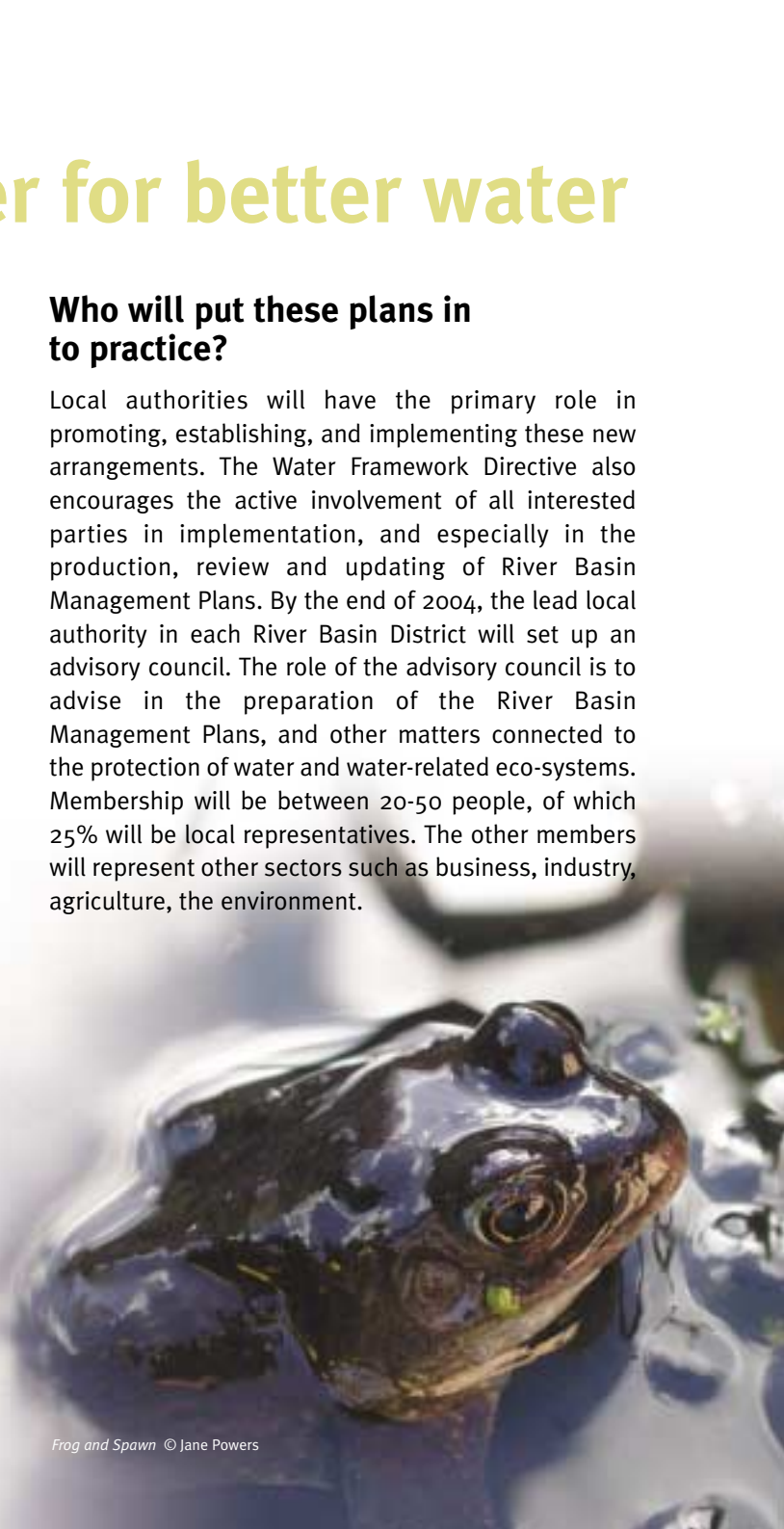
Water is managed in catchments. A catchment is the area of land from which water flows, either into rivers and lakes or directly into the sea. This includes groundwater, reservoirs, and canals, all of which must be managed in a balanced way. This involves a surprising number of people – those who use the water and those who have an interest in the way that it is used. These people are the stakeholders. The key to successfully managing the entire catchment is to get all the stakeholders involved. Several recent projects have already been successfully run on this basis, for example on Lough Leane, Lough Derg and Lough Ree, and the rivers Erne, Suir, Liffey, and Boyne.

Water without political boundaries

To successfully manage Ireland's water we need a comprehensive plan for the whole island, irrespective of political boundaries. The catchments throughout the island will first be identified and grouped together in River Basin Districts. A district may include one or more river mouths, estuaries, or deltas; it will also include coastal waters at least one mile from shore, because land-based activities have a significant impact at sea. The local authorities in each River Basin District will then produce a River Basin Management Plan. Some River Basin Districts will span the border with Northern Ireland. It is proposed that there will be four River Basin Districts in the Republic, one district in Northern Ireland, and three International River Basin Districts.

Who will put these plans in to practice?

Local authorities will have the primary role in promoting, establishing, and implementing these new arrangements. The Water Framework Directive also encourages the active involvement of all interested parties in implementation, and especially in the production, review and updating of River Basin Management Plans. By the end of 2004, the lead local authority in each River Basin District will set up an advisory council. The role of the advisory council is to advise in the preparation of the River Basin Management Plans, and other matters connected to the protection of water and water-related eco-systems. Membership will be between 20-50 people, of which 25% will be local representatives. The other members will represent other sectors such as business, industry, agriculture, the environment.



SOURCES OF INFORMATION

A good starting point with links to other sources:

www.wfdireland.ie is a website set up by the Department of the Environment, Heritage and Local Government.

An Taisce

Tailors Hall, Back Lane, Dublin 8

T: 01-454 1786, **E:** info@antaisce.org, **F:** 01-453 3255,

W: www.antaisce.org

Central Fisheries Board

Balnagowan House, Mobhi Boreen, Mobhi Road, Dublin 9

T: 01-884 2600, **E:** info@cfb.ie, **F:** 01-836 0060,

W: www.cfb.ie

Coomhola Salmon Trust/Streamscapes

Coomhola, Bantry, Co. Cork

T & F: 027-51990, **E:** streamscapes@eircom.net,

W: www.streamscapes.org

Department of Agriculture and Food

Kildare St, Dublin 2

T: 1890-200 510 or 01-607 2000,

E: info@agriculture.gov.ie, **F:** 01-661 6263, **W:** www.gov.ie/daff

Department of the Environment, Heritage and Local Government, The Custom House, Dublin 1

T: 1890-202 021 or 01-888 2000,

E: press-office@environ.irlgov.ie, **F:** 01-888-2888,

W: www.environ.ie. The department deals with water under two headings: water services (under 'Development and planning') and water quality (under 'Environment').

Department of Communications, Marine and Natural Resources, Leeson Lane, Dublin 2

T: 1890-449 900 or 01-678 2000, **E:** contact@dcmnr.gov.ie,

F: 01-661 8214, **W:** www.marine.gov.ie

Eastern River Basin Project

87/89 Morehampton Road, Dublin 4

W: www.erbd.ie

Environment and Heritage Service

Northern Ireland, Water Quality Unit, Calvert House,

23 Castle Place, Belfast BT1 1FY, Northern Ireland

T: 048-9025 4754, **E:** EP@doeni.gov.uk, **F:** 048-9025-4865,

W: www.ehsni.gov.uk

Environmental Protection Agency

PO Box 3000, Johnstown Castle Estate, Co. Wexford

T: 053-60600, **E:** info@epa.ie, **F:** 053-60699, **W:** www.epa.ie

EU in Ireland

European House, Dawson Street, Dublin 2

T: 01-662 5113, **E:** frank.meates@cec.eu.int, **F:** 01-662 5118,

W: www.euireland.ie/home.htm

European Environment Agency

Kgs Nytorv 6, DK-1050 Copenhagen K, Denmark

T: 00-45-3336-7100, **E:** eea@eea.eu.int, **F:** 00-45-3336 7199,

W: www.eea.eu.int

Marine Institute

Galway Technology Park, Parkmore, Galway

T: 091-730 400,

E: institute.mail@marine.ie,

F: 091-730 470, **W:** www.marine.ie

National Parks and Wildlife Service

7 Ely Place, Dublin 2

T: 01-647 3000,

W: http://www.heritageireland.ie

Northern River Basin Project

c/o Donegal County Council, Lifford, Co. Donegal

T: 074-914 1066

Shannon River Basin Project

Mulkear House, Newtown Centre,

Annacotty, Co. Limerick

W: www.shannonrbd.com

South Eastern River Basin Project

Unit 1 Liddiard House,

Burrin Road, Carlow

W: www.serbd.com

South Western River Basin Project

c/o Cork County Council,

County Hall,

Carrigrohane Road, Cork

T: 021-276891

Teagasc

19 Sandymount Avenue,

Ballsbridge, Dublin 4

T: 01-637 6000, **E:** pr@hq.teagasc.ie,

F: 01-668 8023, **W:** www.teagasc.ie

VOICE

7 Upper Camden Street, Dublin 2

T: 01-475 0467, **E:** avoice@iol.ie, **F:** 01-476 2042,

W: www.voice.buz.org

VOICE coordinated the production of a joint statement on the WFD by eighteen non-governmental organisations.

Waterways Ireland

5-7 Belmore St, Enniskillen, BT74 6AA,

Co. Fermanagh, Northern Ireland

T: 048-6632 3004, **E:** info@waterwaysireland.org,

F: 048-6634 6257, **W:** www.waterwaysireland.org

Western River Basin Project

c/o Galway County Council, Prospect Hill, Galway

T: 091-509000



Underway © Brian J. Goggin

Holy Well

*Water returns, hard and bright,
out of the faulted hills.*

*Rain that flowed
down through the limestone's pores
until dark streams hit bedrock
now finds a way back,
past the roots of the ash,
to a hillside pen
of stones and statues.*

*Images of old fertilities
testify to nothing more, perhaps,
than the necessary miracle
of water trapped and stored
in a valley where water is fugitive.*

*A chipped and tilted Mary
grows green among rags and sticks.
her trade dwindles –
bad chests, rheumatic pains
the supplications, mostly, and the confidences of old age.*

*Yet sometimes.
swimming out in waters
that were blessed in the hill's labyrinthine heart,
the eel flashes past.*

Moya Cannon

From the collection *Oar*
published by Galley Press 1990

The Heritage Council
An Chomhairle Oidhreachta



T: 056-70 777, **F:** 056-70 788, **E:** mail@heritagecouncil.ie
W: www.heritagecouncil.ie/mainpage.html

ISBN 1 901137 67 8

This leaflet is also available in Irish from the Heritage Council