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The EU Water Framework Directive (WFD)

Members' Research Service
Gwasanaeth Ymchwil yr Aelodau

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The EU Water Framework Directive (WFD)

1 Introduction

This research paper provides an introduction to the EU Water Framework Directive (WFD), an outline of its aims and implications for the management of water resources in Wales and across the EU.

It provides some background information on the water environment of Wales to set the context within which the WFD will operate before looking at the Directive itself, how it will work and the timetable for implementation.

The paper briefly explores some of the implications the WFD will have on industry and residential customers and then looks at the approach taken to the implementation of the Directive in England & Wales and Scotland. Finally, the financial costs and benefits of the Directive are presented.

2 The Water Environment in Wales

Water provides vital habitat, drinking water, a source of irrigation for farming and horticulture and a medium for recreation and enjoyment. Wales' water environment incorporates a coastline almost 1,200 km long, over 24,000 km of rivers, more than 400 natural lakes and over 90 reservoirs¹. There are also numerous small ponds that form important habitat for many species.

The water environment is managed and monitored primarily by the Environment Agency but several other organisations also play a role in the management and provision of advice on the water environment in Wales, including:

- ◆ Defra and the National Assembly – responsible for water policy
- ◆ British Waterways – manages canals and rivers throughout Britain. Responsibilities include navigation, conservation, heritage, water management and supply.
- ◆ Countryside Council for Wales (CCW) – the national wildlife conservation authority and the statutory adviser on wildlife in Wales and its inshore waters
- ◆ Offwat – the economic regulator of the water industry
- ◆ WaterVoice – represents customers of water companies

3 Background to the Directive

The EU Water Framework Directive is an ambitious and complex piece of European legislation that aims to standardise and co-ordinate the management and monitoring of water resources across Europe. It recognises the importance of the water cycle and the connections between land use, lakes, rivers, estuaries, coastal waters and underground water resources in the sustainable management of water. This holistic approach to European water management is both novel and challenging.

¹ Reference Wales

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The need for EU legislation covering the ecological quality of water resources was highlighted as long ago as 1988 at an EU Ministerial Seminar in Frankfurt. Since this time, the European Commission has been gradually working towards the development of legislation to ensure the sustainable management and protection of water resources. It is the first EU Directive that has been formulated in collaboration between the Commission and the Member States. This culminated in the development of the Water Framework Directive, under the UK Presidency of the EU in 1998. The WFD entered into force on 22 December 2000.

4 The Aims of the Directive

The purpose of the WFD, as set out in Article 1, is to:

"establish a framework for the protection of inland surface waters², transitional waters³, coastal waters⁴ and groundwater⁵..."

The WFD is the first EU Directive to recognise and make allowances for the differences between Member States – the water environment of northern Scotland differs greatly from that of southern Spain – and the framework of the Directive allows for this, whilst retaining standard measures for assessing the quality of waters within and between Member States.

Within the framework of the Directive, there are five main aims:

- ◆ Prevent further deterioration, protect and enhance aquatic ecosystems. This includes having regard for terrestrial ecosystems and wetlands directly dependent on the aquatic ecosystems.
- ◆ Promote sustainable water use, based on long-term protection of the resource.
- ◆ Provide better protection for and improvement of the aquatic environment by progressively reducing discharges of "priority substances"⁶ and phasing out the discharge of "priority hazardous substances"⁷.
- ◆ Progressively reduce pollution of groundwater.
- ◆ Mitigate the effects of floods and droughts.

These aims will contribute to the provision of a sustainable supply of water, the protection of water resources and to achieving the objectives of international agreements relating to the protection of marine waters from pollution, which the EU has signed up to (e.g. OSPAR Convention⁸).

The Directive recognises that these aims and their implementation impact on a wide range of industries and people. As such, the WFD needs to be integrated into other

² Inland waters, coastal waters and transitional waters e.g. rivers, estuaries, ponds, lakes, reservoirs, streams, canals, etc. Does not include groundwater.

³ Surface waters that are influenced by both freshwater and salt waters because they are near to coastal areas e.g. estuaries.

⁴ Defined in the Directive as those waters within one nautical mile (nm) of the coast.

⁵ Underground water sitting in the spaces between rock particles in layers of rock known as aquifers. Often supply wells and springs.

⁶ List of substances identified in Annex X of the WFD

⁷ List of substances identified in Annex X of the WFD. A subset of the list of Priority Substances.

⁸ The Convention for the Protection of the Marine Environment of the North East Atlantic

policy areas (e.g. farming, planning, transport, etc.) and that policy in these areas should take account of the requirements of the WFD in order that its aims are not undermined.

The WFD is based on the principles of the "polluter pays" and cost recovery, so that those causing damage or harm to the water environment pay for its remediation and that all the administrative costs of regulating the Directive are recovered from those being regulated (e.g. by licence fees).

The WFD is also the first Directive to specifically require consultation as part of the implementation plan, both in establishing the Directive in each Member State and throughout the ongoing implementation process (Article 14).

The central goal in the achievement of these aims is for all water bodies to achieve "good" status by 2015 (although some derogations are allowed for) (See Section 6 – Achieving "Good" Status).

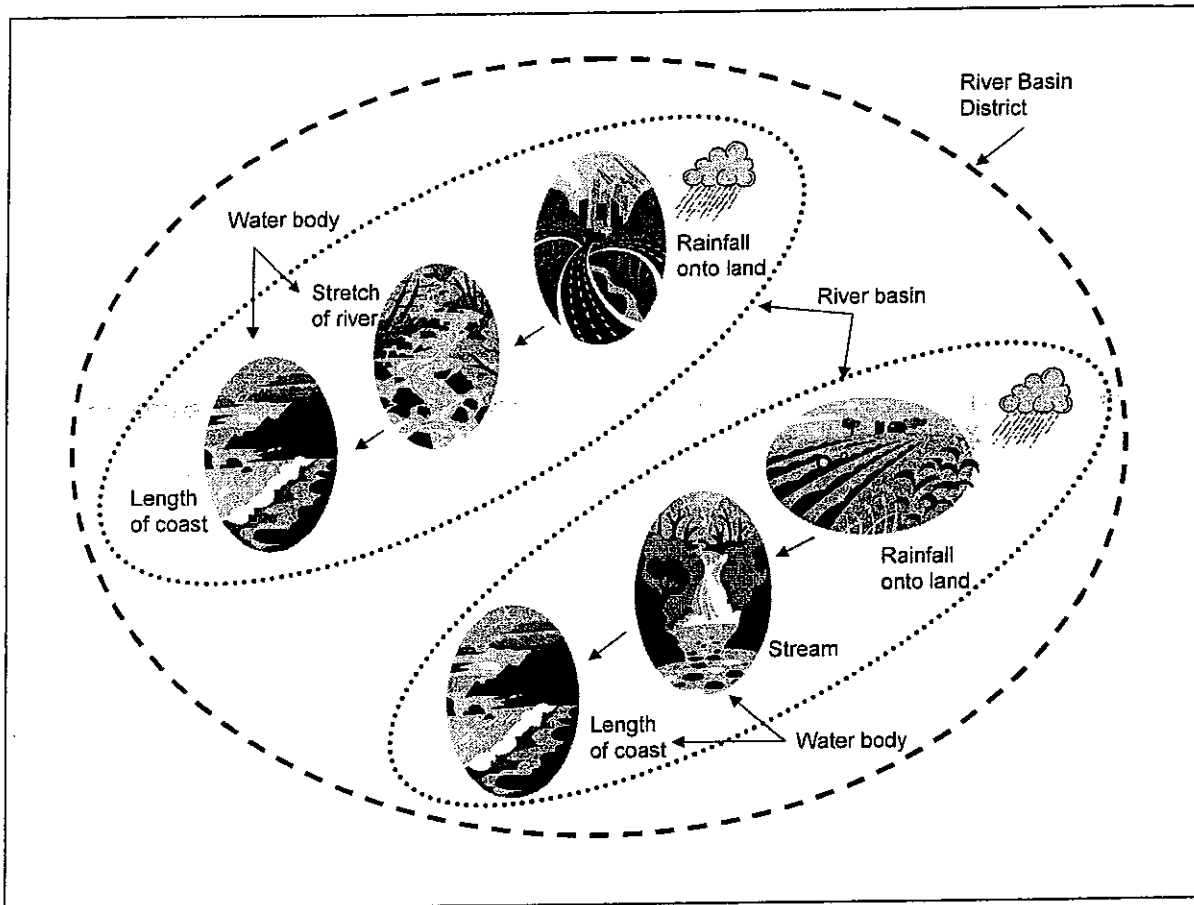
5 How will the WFD Work?

The main management unit of the WFD is the "water body". Under the Directive, a water body is a discrete quantity of water such as a lake, reservoir, river, or part of a river, length of coast or estuary. It is up to the Member State to identify and describe its water bodies and to decide what constitutes a "water body" based on the physical and chemical characteristics of the stretch of water and the pressures exerted on it (Article 5 and Annex II).

A number of water bodies and the surrounding land collectively make up a "river basin" - also known as a "catchment area". This is the area of land from which all surface water runs off, flowing through streams, rivers, lakes and estuaries to the sea. One river basin, or several river basins combined form a River Basin District (RBD). Figure 1 shows a schematic of how water bodies, river basins and RBDs are related.

A plan for the management of waters within each RBD – a River Basin Management Plan (RBMP) - must be formulated and submitted to the European Commission. This must include public consultation and each RBMP must be revisited, reviewed and updated, where necessary, on a regular basis (see Section 9 - timetable for implementation). Sub-basin plans may be developed by the Member State if they are thought necessary to address particular issues within a RBD but these do not have to be submitted to the Commission and are not a requirement of the WFD. The goal for each RBMP is to achieve good status for all water bodies.

Figure 1. Schematic of a River Basin District



6 Achieving "Good" Status

Under the WFD, the status of waters is determined not only by chemical characteristics, as in the majority of previous legislation relating to water quality, but by ecological characteristics (plant and animal assemblages), water quantity and how the management of water resources affects the surrounding environment.

It is here that much of the difficulty in implementing the WFD is to be found. It is recognised that the water environment in different Member States differs, and also that the water environment in different parts of the same Member State differs. How is it possible to compare the ecological status of a fast flowing upland stream with a deep lake, when they naturally have different biological, physical and chemical characteristics? The WFD provides a framework for management that allows such comparison to take place.

The WFD defines good status in general terms for surface waters, groundwater and for Heavily Modified Water Bodies (HMWBs)⁹ and Artificial Water Bodies (AWBs)¹⁰, as presented in Table 1.

⁹ A Heavily Modified Water Body (HMWB) is one that has substantially physically modified by human intervention for a specific purpose e.g. a river that has been dammed, a coastal area that has been dredged and built on to form a harbour.

¹⁰ An Artificial Water Body (AWB) is an artificially constructed surface water body built for a specific purpose e.g. an artificial lake, a canal.

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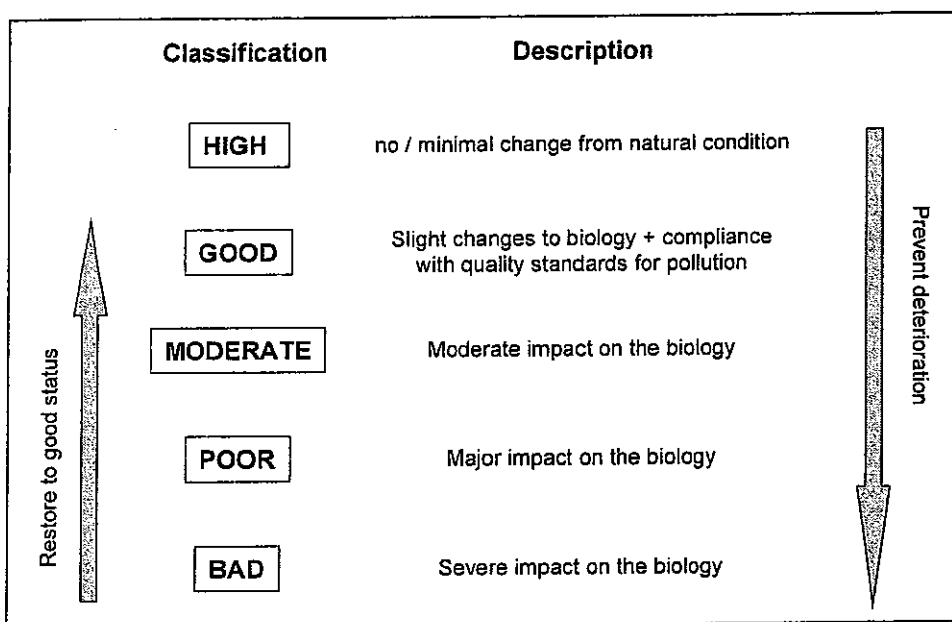
Table 1: Good status for different water body types

Water body type	Good status
Surface waters	Good chemical status + good ecological status
Groundwater	Good chemical status + good quantity status
HMWB / AWB	Good ecological potential

The overall status of the water body is determined by the lower of the two classifications e.g. if a surface water's chemical status is "good" and its ecological status is "high", the overall status is "good". The different classifications set out in the table are explained below.

Figure 2 shows a schematic for the overall environmental objectives for surface water i.e. achieving good status and preventing any deterioration in status.

Figure 2: Environmental objectives for surface waters¹¹



6.1 Chemical status for surface waters and groundwater

Good chemical status is achieved when none of the environmental quality standards established by the Commission are exceeded. This sub-component of water quality is defined in much the same way as previous water quality standards – setting of limits for different chemicals and substances, which should not be exceeded. This includes standards set under the WFD itself (e.g. for priority substances) and under other Directives to which the WFD refers. Different chemical status standards are set for surface waters and groundwater, although standards for groundwater are yet to be decided¹².

¹¹ Environmental objectives incorporate an environmental status and chemical status component. A water body cannot achieve good status unless it also complies with all the water pollution chemical status limits.

¹² Groundwater standards and management issues will be set out in a groundwater Daughter Directive, due from the European Commission later in 2003.

6.2 Ecological status for surface waters

There are five status classes for surface waters, based on the degree to which the ecology of the water body differs from a natural state (High, Good, Moderate, Poor and Bad). These classifications relate to the biological, hydromorphological and physico-chemical elements of the water body.

- ◆ biological elements – population status of phytoplankton, aquatic plant, invertebrate and fish communities
- ◆ hydromorphological elements – flow, bed structure and composition, currents, etc.
- ◆ physico-chemical elements – transparency, pH, temperature, nutrient conditions, etc.

6.3 Quantity status for groundwater

As groundwater is often abstracted for drinking water or other uses, the quantitative status for groundwater requires that abstractions do not exceed the ability of the groundwater reserves to be replenished naturally. Achieving good quantity status also requires that abstractions do not compromise the needs of the environments that depend on the groundwater.

Unlike ecological status and ecological potential, there are only two standards describing the quantitative status of groundwater resources – good and poor. The WFD requires that good status is achieved by 2015 and that the status of groundwaters should not be allowed to deteriorate.

The European Commission is due to publish a Daughter Directive later in 2003, which is expected to include specific measures to prevent and control the pollution of groundwater and standardise criteria for groundwater protection across the EU.

6.4 Ecological potential for HMWBs / AWBs

For some waters, it will not be possible to achieve good ecological status because they have been so greatly modified or have been created artificially. The WFD does not require these water bodies to be restored because they may serve an important socio-economic purpose (e.g. a dammed river providing hydroelectric power) or because they cannot be compared to a natural state because of their artificial nature (e.g. a canal).

For such water bodies, the WFD sets a different classification system based on "ecological potential" – the ecological status it could reach, given the modifications that it has undergone (e.g. the maximum ecological potential of a dammed river would be similar to the ecological status of a lake, rather than a river).

The ecological classification system for HMWBs and AWBs also has five classes (High, Good, Moderate, Poor and Bad) based on the degree to which a water body differs from its maximum ecological potential. The aim is that all waters also reach good status by 2015, although derogations are allowed for.

6.5 Reference conditions

In setting ecological status and ecological potential for different water bodies, the WFD establishes the use of reference conditions. These will set standards to help water resource managers decide how far a water body differs from its natural state and, therefore, which ecological classification it falls into.

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Reference conditions need to be identified throughout the EU for the different types of water body, so that reference conditions for fast flowing rivers can be used to determine the ecological classification for other fast flowing rivers, while brackish-water estuaries can be used to determine the ecological classification for other brackish-water estuaries, and so on. This system allows the natural variation between the water environments in different Member States to be monitored and managed on a standardised and comparable scale.

Ideally, the WFD envisages a network of reference locations being used as reference conditions, although it allows for the use of other methods, such as modelling, where it is not possible to identify suitable reference locations. These reference conditions will be referred to by Member States to decide which category (high, good, moderate, poor or bad) a water falls into, depending on how much it differs from the reference condition.

It is important that the setting of reference conditions takes into account the natural variation that occurs between different water bodies and within the same water body over time to ensure that waters are not classified at a lower level than is necessary.

In order to assist Member States with the development of a network of reference conditions and the other technical challenges posed by the WFD, a number of Common Implementation Strategy (CIS) projects are underway to provide guidance on good practice in the implementation of the WFD. This includes an "Intercalibration exercise" – a benchmarking process will ensure that one Member States' definition of "good" does not differ markedly from that of another Member State. This will aid in the equitable application of the Directive across all Member States.

Under the CIS a web forum has been set up to allow communication and information exchange between Member States – the WFD CIRCA. The aim of the CIS is to reach agreement on the technical issues posed by the WFD, such as setting reference conditions, monitoring techniques, etc., so that all Member States are working towards a common standard. If one Member State set lower reference conditions than the others, it would be much easier to obtain good status with this lower target. The CIS will help Member States and the European Commission agree on common standards and practices in the implementation of the WFD and a level playing field across all Member States.

7 Protected Areas

The WFD provides additional protection to certain areas to protect the water resources themselves, or the habitats or species that depend on them. There are five different types of protected area, including those identified under existing EU Directives:

- ◆ areas used for (or that may be used for) the supply of drinking water.
- ◆ areas designated to protect economically significant aquatic species (mainly areas where shellfish are commercially harvested and / or grown).
- ◆ areas designated as recreational waters (this includes waters designated under the *Bathing Waters Directive*).
- ◆ nutrient sensitive areas, including those designated under the *Nitrates Directive* and the *Urban Waste Water Treatment Directive*.
- ◆ areas designated for the protection of habitats or species, including those designated under the *Habitats Directive*, the *Birds Directive* and Natura 2000 sites.

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Water bodies in or part of protected areas must be managed in such a way as to achieve the objectives for the protected area (which may be specified under another EU Directive) by 2015.

A list of protected areas must be identified in each Member State and sent to the Commission by December 2004 (see Section 9 – timetable for implementation).

8 Derogations

Article 4 of the WFD allows for derogations in the achievement of objectives by the deadline of 2015 and for the setting of lower target objectives in some cases.

Deadlines may be extended for up to 12 years if:

- ◆ The scale of works required is such that it can only be achieved over a longer timescale
- ◆ Undertaking the improvements within the timescale would be disproportionately expensive
- ◆ Natural conditions do not allow improvements to take place within the timescale

Lower targets may be set for water bodies if:

- ◆ Restoring the water body would remove the purpose the water body currently serves and that the same purpose cannot be achieved in another cost-effective way (e.g. restoring a dammed river to its original state would remove the electricity generating purpose of the hydro-electric dam).
- ◆ The highest possible status is achieved
- ◆ No further deterioration takes place

Any extensions to deadlines or the setting of lower targets for some water bodies must be identified and updated in each RBMP.

9 Timetable for Implementation

The timetable for the implementation of the Directive is staged, with deadlines for different aspects of the Directive set over the next 13 years. Most deadlines fall on 22 December of a given year, as they are timetabled for implementation a set number of years after the Directive came into force.

The Directive also requires that the European Commission report on the implementation of the Directive by 2012 and every six years thereafter. An interim report must also be produced by the European Commission three years after every main report. The Directive is due to be reviewed in 2019.

Table 2 outlines the timetable for implementation for the WFD between 2000 and 2015.

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Table 2: Timetable for the implementation of the WFD

Deadline	Action	Section
22 Dec 2003	Directive must be transposed into national legislation	Article 24
22 June 2004	Commission must be provided with a list of competent authorities and their details (as set out in Annex I).	Article 3
22 Dec 2004	For each RBD, an analysis of its characteristics, assessment of impacts and an economic analysis of water use must be completed. This includes preliminary identification of HMWBs and AWBs.	Article 5
22 Dec 2004	Areas requiring special protection must be identified and a register of protected areas sent to the Commission (as set out in Annex IV)	Article 6
22 Dec 2006	Monitoring programmes for surface waters, groundwaters and protected areas must be operational.	Article 8
22 Dec 2006	Timetable and work programme for RBMPs must be published (allow six months consultation).	Article 14
22 Dec 2007	Interim overview of significant management issues must be published (allow six months consultation).	Article 14
22 Dec 2008	Draft RBMPs must be published (allow six months consultation).	Article 14
22 Dec 2009	RBMPs must be produced for each RBD (as set out in Annex VII) and sent to the Commission with three months of publication.	Article 13
22 Dec 2009	A programme of measures for each RBS must be in place. They must include "basic measures" and any "supplementary measures" deemed necessary. They must take account of the River Basin District analysis (Article 5)	Article 11
22 Dec 2010	Water pricing policies to provide incentives to use water sustainably must be in operation. Pricing must ensure that industry, agriculture and households contribute adequately (i.e. no cross subsidisation of one sector by another) and must be based on the economic analysis (Annex III) ¹³ .	Article 9
22 Dec 2012	The programme of measures must be operational	Article 11
22 Dec 2012	Emission controls and emission limit values for point source pollution and controls of diffuse pollution must be in place	Article 10
22 Dec 2013	River Basin District analysis, assessment of impact and economic analysis must be updated (and every six years hereafter)	Article 5
22 Dec 2015	"Good" status must be achieved for surface water and groundwater. Standards and objectives for protected areas must be achieved. ¹⁴	Article 4
22 Dec 2015	RBMP must be reviewed and updated (and every six years hereafter).	Article 13
22 Dec 2015	Programme of measures must be reviewed and updated (and every six years hereafter). New measures must be operational within three years.	Article 11
Source	Based on SPICe Briefing – Water Environment and Water Services (Scotland) Bill - Overview	

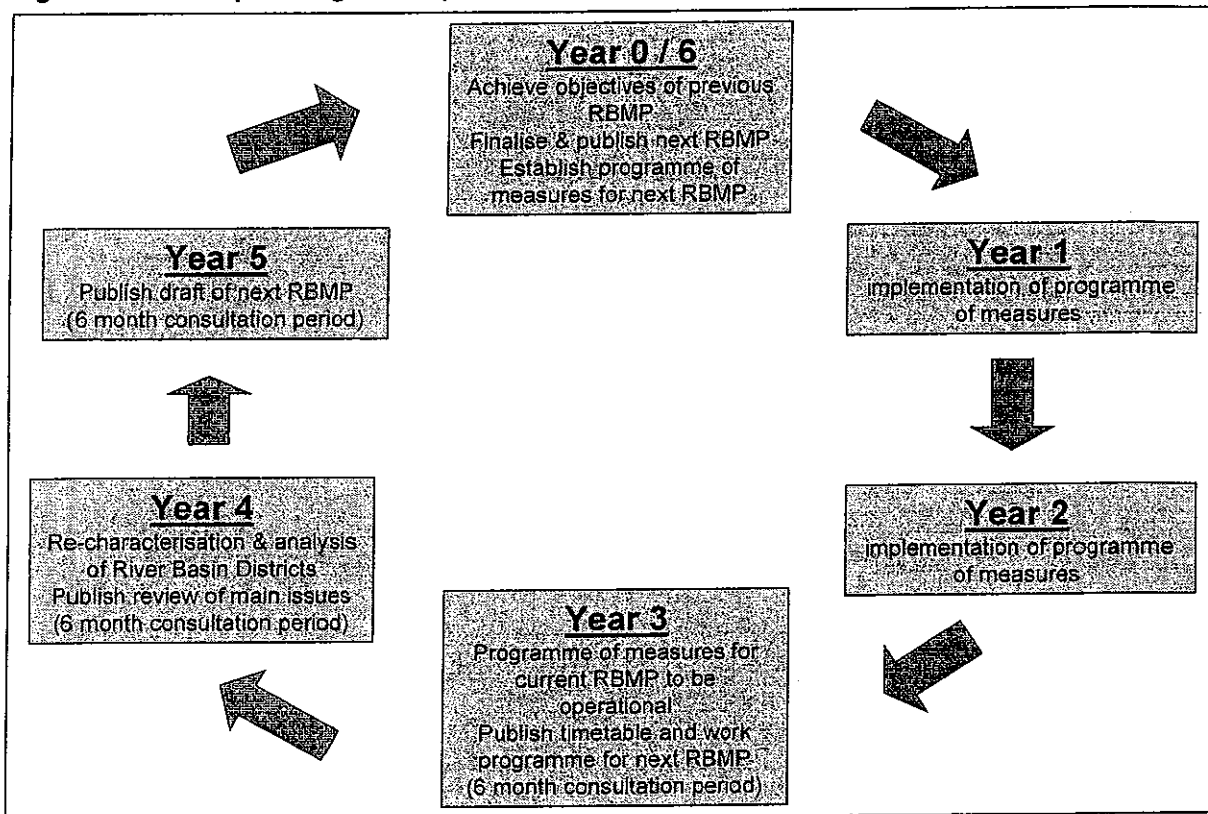
¹³ A derogation from this requirement is allowed if it can be shown that it does not compromise the aims of the Directive and is presented and explained in the RBMP.

¹⁴ Extensions of up to 12 years to these deadlines are permitted in certain circumstances.

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From 2015, ongoing implementation of the Directive will take place on a six-yearly cycle, as set out in Figure 3.

Figure 3: WFD planning and implementation cycle



10 Implementation of the WFD in England and Wales

The Westminster Government (firstly as the DETR¹⁵ and then as Defra¹⁶) and the National Assembly are working together on the implementation of the WFD in England and Wales. They have released two joint consultations on the way in which they envisage the WFD being implemented, which can be accessed on the [Defra website](#). A third consultation is due to be released later this year.

The consultations put forward the number of proposed River Basin Districts, how the WFD will be transposed, the competent authorities and where new powers to implement the Directive will be needed. Some of the main proposals for the implementation of the WFD in England and Wales are:

- ◆ The Directive will be transposed using secondary legislation
- ◆ There is no need to alter the charging system for water users as the current water pricing policy complies with the requirements of the Directive.
- ◆ There will be 11 River Basin Districts.¹⁷
- ◆ The WFD will cover coastal waters out to one nautical mile (nm).

¹⁵ Department of the Environment, Transport and the Regions

¹⁶ Department for Environment, Food and Rural Affairs

¹⁷ five districts for the catchment areas of the rivers Severn, Trent, Thames, Dee and Tees, four basins in England covering East Anglia, the south east, the south west and the north west, one district wholly in Wales and one England-Scotland cross-border district containing the catchments of the Tweed and Esk

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- ◆ The Environment Agency will be the sole competent authority and will be responsible for producing RBMPs.
- ◆ The Secretary of State will be responsible for producing the economic analysis of water use using information collected by the Environment Agency and Offwat.
- ◆ New powers will be required to establish the ecological classification system required under the WFD (see section 6 – Achieving Good Status).

The Environment Agency, which has been nominated as the competent authority for England and Wales already manages surface waters on a catchment area basis, so the concept of river basin management is not unfamiliar. Indeed the England and Wales model formed the basis for the development of the river basin management method that became the WFD.

The Environment Agency has issued a consultation document on its interpretation of the technical annexes of the WFD. This can be accessed on the [Environment Agency website](#) and was developed in partnership with the Scottish Environment Protection Agency (SEPA) and the Environment and Heritage Service of Northern Ireland.

10.1 The Water Bill

This piece of primary legislation is not intended to implement the WFD in England and Wales, although some of the provisions of the Bill will provide the legal basis for some of the WFD requirements. The Bill is instead concerned mainly with regulation and competition within the water industry.

The Bill received its second reading in the House of Lords on 6 March 2003, where it was criticised for not paying enough heed to the needs and implications of the WFD. The timing of the Bill has been questioned when it is clear that it does not address the needs of the WFD, which must be transposed by the end of 2003¹⁸.

10.2 The House of Commons Environment, Food and Rural Affairs Committee Report¹⁹

The House of Commons Environment, Food and Rural Affairs Committee undertook an enquiry into the plans for the implementation of the WFD in England and Wales in 2002 / 2003. The Committee received written and oral evidence from a range of individuals and organisations including water supply companies, the National Farmers Union (NFU) and fisheries and wildlife organisations.

The report concluded that the Government is mistaken in its belief that the WFD is just another piece of EU environmental legislation that can be implemented with "the minimum of fuss." There is a feeling that although the Government supports the WFD, its actions in implementing the Directive are such that they convey "a palpable lack of urgency...even complacency" about the magnitude of the tasks involved.

The Committee made 31 conclusions and recommendations. The main points are given below:

- ◆ **Lack of knowledge** – gaps in knowledge about the water environment were identified in relation to lakes, estuaries and coastal waters. In addition, a general lack of

¹⁸ Water Bill set for rough passage over abstraction, competition, ENDS Report 338

¹⁹ House of Commons Environment, Food and Rural Affairs Committee, (2003), The Water Framework Directive, Fourth Report of Session 2002-03, The Stationary Office

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knowledge about the ecological status of all waters was identified and seen as problematic.

- ◆ **Classification of waters** - the Biology General Quality Assessment (GQA) carried out by the Environment Agency does not equate to the ecological assessments required by the WFD. As such, favourable results from the GQA do not imply that these waters will meet "good" or "high" classification standards under the WFD. Defra and the Environment Agency's optimism in this issue is misplaced.
- ◆ **Diffuse pollution** - controlling the impacts of diffuse pollution will be a significant challenge. There is little knowledge of the extent of the problem. The main industry contributing to diffuse pollution is agriculture. It is likely that resolving the problem will be expensive and require wholesale changes in farming practices, placing the farming industry under severe administrative, operational and financial pressure. If diffuse pollution cannot be tackled effectively, it will require more treatment before water is used, leading to higher costs for water companies and customers. This is contrary to the "polluter pays" approach set out in the WFD.
- ◆ **The role of the Environment Agency** – the appropriateness of the Environment Agency as competent authority was questioned by some as it would require the Environment Agency to both advise on the implementation of the WFD and regulate and prosecute those failing to comply with the Directive. It would also have to regulate its own activities in respect of navigation and flood defence. The Committee did not see this as too great a problem, but recommended that the Government address the concerns of others.
- ◆ **Lack of resources** – the Environment Agency conceded that its monitoring programmes are not designed to meet the needs of the WFD and that to perform its role as competent authority, it would require additional resources of over £6 million and more than 100 extra staff. Defra has indicated that this request would not be met. A failure to adequately resource the Environment Agency would seriously compromise its ability as competent authority.
- ◆ **Working in partnership / integration** – the WFD necessitates that many organisations and sectors work together and are considered in the management of water resources. It is not clear that strong enough arrangements have been made to allow the Environment Agency to require other organisations to assist it in carrying out its duties as competent authority. It is not clear whether the aims of the WFD would take precedence over other issues e.g. planning.
- ◆ **The use of primary legislation** – the implementation of the WFD will be via secondary legislation in England and Wales. The dismissal of the use of primary legislation was criticised. The Committee recommends that the Government keep an open mind as to whether primary legislation is required²⁰.
- ◆ **Lack of publicity** – the WFD has been poorly publicised, particularly to local government (who will be impacted in terms of land use and planning issues) and the general public. The Committee recommends that information about the WFD and its implications be more widely publicised and that more involvement in the consultation process is encouraged.

²⁰ The use of secondary legislation alone has also been criticised in the House of Lords, due to the potential lack of scrutiny - Baroness Miller of Chilthorne Domer, Water Bill (HL) Second Reading Debate, 02/03 645 c976, http://www.publications.parliament.uk/pa/ld199900/ldhansrd/pdvn/lds03/text/30327-33.htm#30327-33_head2

- ◆ **Gold plating** – the government has a well-stated presumption against gold plating EU Directives. In the case of the WFD, this presumption has been interpreted as not introducing any measures prior to the deadlines set in the Directive. The Committee sees this decision as contrary to the spirit of the WFD and unhelpful to the water industry and others that will be impacted by the Directive. Leaving implementation until the last moment does not allow long-term planning, or implementation costs to be spread over a longer time period. It also reduces the length of time measures have to take effect. The government's attitude in this respect also seems contrary to the stance taken in *Directing the Flow – Priorities for Future Water Policy*, which recognises that water resource management should take a long-term view and that to change requires a long time period to take effect.

11 Implementation of the WFD in Scotland

The Scottish Executive has also consulted on the implementation of the WFD in Scotland. The first consultation – *Rivers, Lochs, Coasts: The Future for Scotland's Waters* - was released in early 2001 with a second consultation on proposed legislation published in February 2002. The consultations and the responses can be accessed on the [Scottish Executive website](#).

Some of the main points of the implementation of the WFD in Scotland are:

- ◆ The Directive will be transposed using enabling primary legislation²¹, supplemented by secondary regulation.
- ◆ There is no need to alter the charging system for water users as the current water pricing policy complies with the requirements of the Directive.
- ◆ There will be a single River Basin District covering the whole of Scotland, although sub-basin plans will be formulated to allow local participation and issues to be addressed fully.
- ◆ The WFD will cover coastal waters out to three nautical miles (nm). This goes two nautical miles beyond the requirements of the WFD, but matches the geographical limits of the Scottish Environmental Protection Agency's (SEPA) powers.
- ◆ The Scottish Environment Protection Agency (SEPA) will be the lead competent authority and will be responsible for producing RBMPs, although other responsible authorities (to be specified in regulations) are duty-bound to assist in complying with the Directive.
- ◆ SEPA will be given a tiered system of tools to implement the Directive – water use licences²², general binding rules (GBR)²³ and registration of activities²⁴.
- ◆ River basin plans will take precedence over land use plans insofar as achieving the objectives of the Directive are concerned.
- ◆ Timing – the Scottish Parliament intends to implement many of the measures before time in order to allow industry and customers to spread costs and become accustomed to the new regime and to iron out any difficulties in implementation.

SEPA has also issued a consultation on the WFDs technical annexes, which was developed in partnership with the Environment Agency and the Environment and Heritage

²¹ The *Water Environment and Water Services (Scotland) Act*

²² Abstraction and discharge licences that set out the conditions whereby water may be abstracted, or under what conditions discharge to water courses may be made.

²³ Specific rules setting out what operations are / are not allowed by the business / organisation in order to protect water resources.

²⁴ Registration of those activities that may exert pressure on water resources.

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Service of Northern Ireland. The consultation and responses can be accessed on the [SEPA website](#).

11.1 The *Water Environment and Water Services (Scotland) Act*

The Scottish Executive in recognising that the aims of the WFD cannot be achieved with existing legislation has decided that primary legislation is required. Although many of the powers required to implement the WFD already exist, the Scottish Parliament considers it much less administratively complex to bring together all the powers required for the WFD under one Act - the *Water Environment and Water Services (Scotland) Act* - and repeal legislation that the new Act supersedes. The Act introduces new powers to control abstraction, which have not previously existed in Scotland except for major water users²⁵, unlike in England and Wales.

The *Water Environment and Water Services (Scotland) Act* was passed in January 2003. The Act follows very closely the format of the WFD and is enabling in nature, allowing the Act to be supplemented and supported by secondary regulation and further primary legislation if necessary, as the WFD itself evolves over time.

12 The Financial Costs and Benefits of the WFD

Regulatory Impact Assessments (RIAs) for England and Wales and for Scotland were undertaken by WRc plc. The original assessment for Scotland has since been revised, also by WRc. The quantifiable costs and benefits of implementing the WFD are presented in Table 3.

Table 3: Costs and benefits of the WFD in England & Wales and Scotland (a)

£ billion

	England & Wales	Scotland (b)	Scotland (c)
Costs (d)	2.0 - 9.2	0.8 - 1.0	0.8
Benefits	1.6 - 6.2	0.2 - 0.5	1.5
Balance			0.7

(a) Calculated at 1998 prices over the implementation period to 2040

(b) Initial estimate

(c) Revised estimate

(d) One off and recurring costs

Source: First Consultation Paper on the Implementation of the EC Water Framework Directive (2000/60/EC)

Rivers, Lochs, Coasts: the Future for Scotland's Waters

Costs and Benefits of Implementation of the EC Water Framework Directive (2000/60/EC) in Scotland

It should be recognised that many of the benefits of implementation are not quantifiable in monetary terms (e.g. improved appearance of water courses) and that estimates of both costs and benefits are subject to a number of assumptions. The assumptions and methodology used by WRc are detailed in the reports.

An updated RIA for England and Wales will be published in Defra / the Welsh Assembly Government's third consultation paper, due for publication later in 2003.

²⁵ The water industry, hydro-electric industry, paper and chemical manufacturers, distillers and fish farmers

13 Implications for industry

The WFD has management and cost implications for a range of industries. The costs of improving water quality will fall mainly to water supply companies, agriculture and the public sector (in terms of flood defence and urban drainage).

The water supply industry in England and Wales is concerned with the timetable for investment that it will face if the proposed timetable for implementation remains unchanged. Offwat reviews the water industry's investment programme and pricing policies every five years. Offwat has stated that there will be no expenditure on the WFD over the next review period (2005 – 2010), which implies that all expenditure required by water suppliers will have to be compressed into the 2010 – 2012 period. The water industry is also concerned that any proposals to synchronise the five-yearly investment planning process with the six-yearly WFD planning process have been rejected²⁶.

As a large source of diffuse pollution, the agriculture industry may face large costs associated with changing land use practices such as farms within Nitrate Vulnerable Zones (NVZs) may already have encountered e.g. changes in the storage and disposal of manure, application of pesticides or fertilisers, etc. The NFU is supportive of the overall aims of the Directive but has a number of concerns including, that the potential land use changes required under the Directive may not mesh with the Common Agricultural Policy (CAP) and the scale of the potential costs involved. It is feared that unlike water supply companies, they will not be able to pass costs on to customers, but will have to bear the brunt themselves²⁷.

Other industries that abstract large quantities of water are also concerned about the implications that the WFD could have. In Scotland, the large malting and distilling industries are particularly concerned, as is the hydro-electric industry. The WFD requires that extremes of high and low flow in rivers should be reduced in order to reduce flood and drought conditions. If this requires releasing water from hydro-electric dams at times of low flow, the amount of electricity generated could be reduced. The Scottish Environment Minister, Ross Finnie has, however, stated that he sees no conflict between renewable energy and water policy²⁸.

Many of the increased costs faced by industry and the public sector will be passed onto the domestic consumer somehow, as increased water bills, increased local taxes or increased retail prices for products produced by these industries. The industries that may suffer most will be those that feel they cannot pass on increased costs to their customers because of the fear that they may turn to cheaper imports from countries that do not have to comply with such stringent legislation.

14 Potential for implementing the WFD Differently in Wales

The Welsh Assembly Government is consulting and implementing the WFD in partnership with Defra, although it is stated in both consultations that

“the National Assembly for Wales will transpose and as necessary be given powers to transpose the Directive in Wales by means of secondary legislation”.

The joint nature of the approach to the WFD does, however, mean that any problems or issues raised concerning the approach apply equally to Wales as to England. The

²⁶ Water UK evidence to House of Commons EFRA Committee

²⁷ NFU evidence to House of Commons EFRA Committee

²⁸ Scotland gets ahead on water framework Directive, ENDS Report 337

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precise way in which the WFD will be transposed in Wales is yet to be finalised and is likely to be outlined in the third consultation document, due to be published later in 2003.

The decision to implement the WFD using secondary legislation has the potential to allow Wales to tailor its implementation more specifically to the needs and pressures in Wales than primary legislation might allow. That the Environment Agency will be the sole competent authority for both England and Wales does, however, restrict the degree to which this potential could be exploited.

Most of the powers of the Environment Agency were conveyed using primary legislation and the Assembly Government does not have the power to alter these. The Assembly Government does have the power to give the Environment Agency directions, but many of the powers are concurrent between the Assembly Government and the Secretary of State for Environment, mainly because of the cross-border nature of many of the rivers in Wales. As such, it is not straightforward as to the degree of difference that the implementation of the WFD in Wales could take, as compared with that in England.

The National Assembly is a sponsor of the Environment Agency, which, as sole competent authority for the implementation of the WFD has stated that it will require additional funds and resources to carry out this duty²⁹. This may mean an increase in the amount of sponsorship that Wales gives to support the Environment Agency each year.

15 Further Information

EU Water Framework Directive

http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=en&numdoc=32000L0060&model=guichett

EU Bathing Waters Directive

http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=31976L0160&model=guichett

EU Nitrates Directive

http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=31991L0676&model=guichett

EU Urban Waste Water Treatment Directive

http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=31991L0271&model=guichett

EU Habitats Directive

http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=31992L0043&model=guichett

EU Birds Directive

http://europa.eu.int/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=31979L0409&model=guichett

European Commission website on the WFD

http://europa.eu.int/comm/environment/water/water-framework/index_en.html

EU WFD electronic forum

²⁹ The Water Framework Directive, Fourth Report of Session 2002-03, House of Commons Environment, Food and Rural Affairs Committee

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<http://forum.europa.eu.int/Public/irc/env/wfd/home>

Defra WFD website

<http://www.defra.gov.uk/environment/water/wfd/index.htm>

Defra water website

<http://www.defra.gov.uk/environment/water/index.htm#Latest>

Environment Agency WFD consultation on technical annexes II and V

<http://www.environment-agency.gov.uk/yourenv/consultations/305276/?version=1&lang=e>

SEPA WFD website

<http://www.sepa.org.uk/guidance/wfd/index.htm>

Scottish Executive WFD website

<http://www.scotland.gov.uk/library3/environment/wfl-00.asp>

Water Environment and Water Services (Scotland) Act

<http://www.scotland-legislation.hmso.gov.uk/legislation/scotland/acts2003/20030003.htm>

WFD Research Database website

(Registration is required before project information can be accessed. Registration is free)

<http://www.wfddatabase.com>

OFWAT website

[http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/content/navigation-homepage\(ofwat\)](http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/content/navigation-homepage(ofwat))

WaterVoice website

<http://www.ofwat.gov.uk/aptrix/ofwat/publish.nsf/Content/navigation-watervoice-homepage>

Water UK website

<http://www.water.org.uk/index.php>

British Waterways website

<http://www.britishwaterways.co.uk/site/Home%255F1.asp>

Countryside Council for Wales (CCW) website

<http://www.ccw.gov.uk>

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Water Bill (HL) Lords second reading debate 02/03 645 c968-1007,
http://www.publications.parliament.uk/pa/ld199900/ldhansrd/pdvn/lds03/text/30306-13.htm#30306-13_head0

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http://www.sepa.org.uk/publications/waterframework/future_for_scotlands_waters.pdf

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http://www.scottish.parliament.uk/whats_happening/research/pdf_res_brief/sb02-76.pdf

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SPICe Briefing – Water Environment and Water Services (Scotland) Bill – Wetlands (02/86), Scottish Parliament, 2002,
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Annex 2 Overview of the implementation of the WFD in England & Wales and Scotland

England & Wales	Scotland
<ul style="list-style-type: none"> ◆ Transposed using secondary legislation only ◆ 11 River Basin Districts ◆ Covers coastal waters out to 1nm ◆ Environment Agency to be the sole competent authority ◆ Unclear if the WFD takes precedence over other planning or land use policy / plans ◆ Implementation will not take place before specified EU deadlines ◆ Water pricing policy will not be altered ◆ Environment Agency will not be given the power to use General Binding Rules (GBR)³⁰ 	<ul style="list-style-type: none"> ◆ Transposed using primary and secondary legislation ◆ One River Basin District ◆ Covers coastal waters out to 3nm ◆ SEPA to be the lead competent authority, with other responsible bodies given a duty to ensure compliance with the Directive ◆ WFD will be given precedence over other plans ◆ Implementation is planned well ahead of EU deadlines ◆ Water pricing policy will not be altered ◆ SEPA to be given a tiered system of regulatory tools including licensing, GBRs and registration of activities

³⁰ Water Framework Directive forces new controls on diffuse pollution, ENDS Report 334, November 2002

