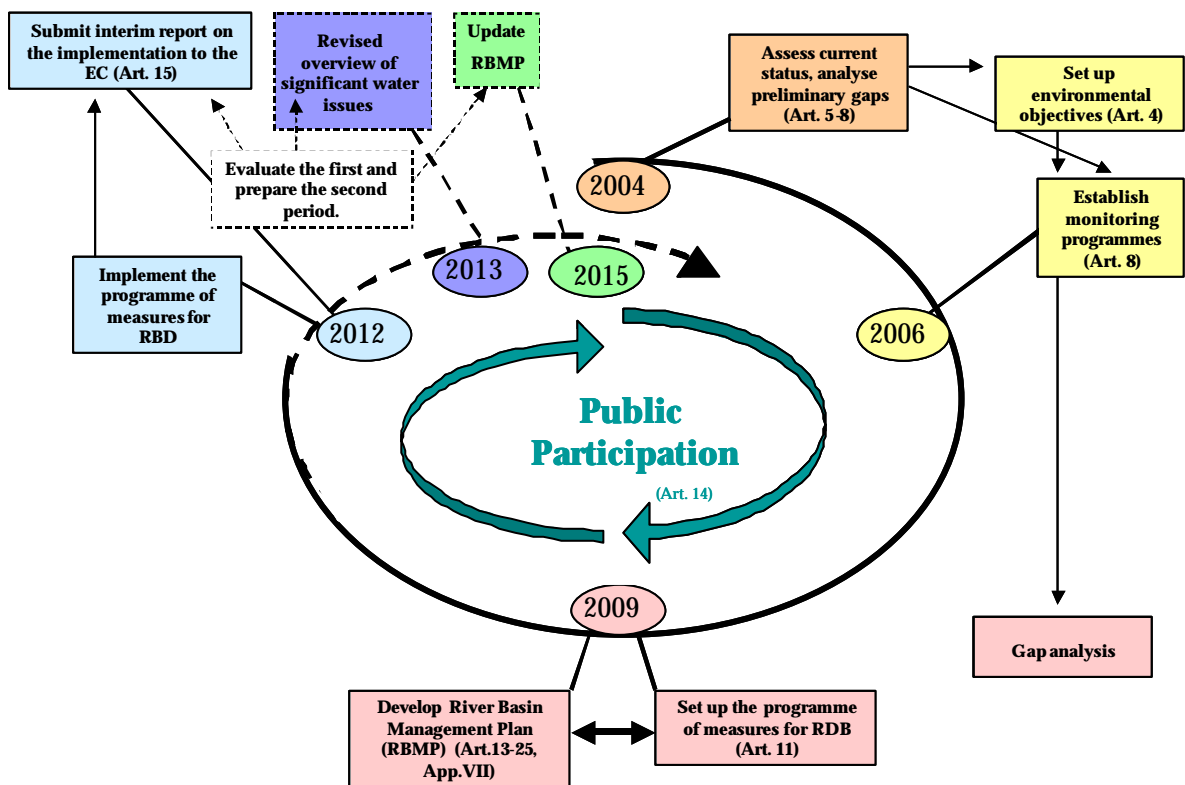




Common Strategy on the Implementation of the Water Framework Directive

Best practices in river basin planning

Work Package 2 Guidance on the planning process



Version 4.3

(This final draft was agreed by the Water Directors in written procedure in May 2003. The text will undergo a linguistic review and formatting and consistency check before its final publication.)

May 2003

Foreword

The EU Member States, Norway and the European Commission have jointly developed a common strategy for supporting the implementation of the Directive 2000/60/EC establishing a framework for Community action in the field of water policy (the Water Framework Directive). The main aim of this strategy is to allow a coherent and harmonious implementation of this Directive. Focus is on methodological questions related to a common understanding of the technical and scientific implications of the Water Framework Directive.

One of the main short-term objectives of the strategy is the development of non-legally binding and practical guidance documents on various technical issues of the Directive. These guidance documents are targeted to those experts who are directly or indirectly implementing the Water Framework Directive in river basins. The structure, presentation and terminology is therefore adapted to the needs of these experts and formal, legalistic language is avoided wherever possible.

In the context of this strategy, an informal working group dedicated to best practices in river basin planning issues of the Directive has been set up. The main objective of this working group, launched in July 2001, is the development of a non-legally binding and practical guidance documents on four elements of the Water Framework Directive: Identification of river basin districts, planning process, public participation and integrated river basin management planning. Spain and the Commission have the responsibility of the secretariat and animation of the working group that is composed of technical experts from governmental and non-governmental organisations.

The present document is the final version of the guidance on planning process. It presents a general overview of the whole planning cycle and provides some recommendations for its successful implementation. It builds on the input and feedback from a wide range of experts and stakeholders from both EU Member States and candidate countries.

“We, the water directors of the European Union, Norway, Switzerland and the countries applying for accession to the European Union have examined and endorsed this guidance by means of a written procedure in April 2003. We would like to thank the participants of the Working Group and, in particular, the leaders for preparing this high quality document

We strongly believe this and other guidance documents developed under the common implementation strategy will play a key role in the process of implementing the Water Framework Directive.

This guidance document is a living document that will need continuous input and improvements as application and experience build up in all countries of the European Union and beyond. We agree, however, that this document will be made publicly available in its current form in order to present it to a wider public as a basis for carrying forward ongoing implementation work.

Moreover, we welcome that several volunteers have committed themselves to test and validate this and other documents in the so-called pilot river basins across Europe during 2003 and 2004 in order to ensure that the guidance is applicable in practice.

We also commit ourselves to assess and decide upon the necessity for reviewing this document following the pilot testing exercises and the first experiences gained in the initial stages of the implementation.”

Table of contents

1. Introduction. A guidance document: What for?
2. Implementing the Water Framework Directive: Setting the Scene.
3. Principles relevant for the water planning and needs for the decision making process.
 - 3.1. Introduction
 - 3.2. General scope, functions and types of planning processes
 - 3.3. Planning of water management and links with other planning processes
4. Some considerations for a sound planning process
 - 4.1. Long term vision for the RBD
 - 4.2. Knowledge and information management. The need of capacity building
 - 4.3. Integration at the operational level. Links with other planning policies
 - 4.4. The right timing
 - 4.5. The appropriate toolbox
5. Specific requirements of the WFD with regards to the planning processes.
 - 5.1. General considerations
 - 5.2. First component: Assessment of current status and preliminary gap analysis
 - 5.3. Second component: Setting up the environmental objectives
 - 5.4. Third component: Establishment of monitoring programmes
 - 5.5. Fourth component: Gap analysis
 - 5.6. Fifth component: Setting up of the programme of measures
 - 5.7. Sixth component: Development of the river basin management plan
 - 5.8. Seventh and eighth components: Implementation of the programme of measures and evaluation
 - 5.9. Ninth component: Information and consultation to the public, active involvement of interested parties
6. General overview and overall flowchart of the planning process
 - 6.1. Introduction: Why and how to use flowcharts in the planning process?
 - 6.2. The legally binding timetable of the Water Framework Directive
 - 6.3. The planning cycle
 - 6.4. Overall flowchart for the planning process
 - 6.5. Bottlenecks in the planning process

Annexes

- Annex 1 - Glossary
- Annex 2 - Preambles and articles of the Water Framework Directive relevant for this guidance
- Annex 3 - Members of the Drafting Group of this guidance and list of experts of Working Group 2.9

1. Introduction - A Guidance Document: What For?

This document aims at guiding the competent authorities entrusted with the implementation of the Directive 2000/60/EC establishing a framework for Community action in the field of water policy (the Water Framework Directive – “WFD”). The document focuses on the interactions and scheduling activities and tasks to accomplish WFD requirements. This guidance claim to be a management tool to WFD implementation at national level.

To whom is this Guidance Document addressed?

It addresses in particular the competent authorities responsible for implementing the Directive at the level of River Basin Districts although it also includes information at other planning scales: subbasin, national and international.

The document may also help governments in taking decisions concerning the allocation of responsibilities and resources to the implementing authorities. It can further be interesting for stakeholders and non governmental organisations with a view to a better understanding of the planning process.

What are the objectives of this Guidance Document?

The objective of this guidance document is to inform practitioners on the issues and activities to be organised and coordinated during the planning process and to provide procedural guidance on the production and development of River Basin Management Plans. This will ensure consistency in approach and efficiency in their preparation. These guidelines are not intended to be overly prescriptive and detailed, but to provide for a conceptual framework which can and has to be tailored to the character and needs of individual river basins.

The guidance document is trying:

- To create a common understanding with regard to planning process in the Directive.
- To provide guidelines by explaining the requirements of the Directive with regard to the implementation steps and stages of river basin management planning and by analysing the possibilities the Directive offers,
- To provide recommendations and experiences of how to make the planning process operational.
- To explain how to organise the planning process, providing information on what, who and when.

The guidance document is not about:

- Providing guidance on the specific technical elements of the planning process. Other Working Groups have produced this (See final guidance documents availability of web page of DG Environment).

What can you find in this Guidance Document?

This guidance is mainly divided in four sections:

- Section 3 that introduces the **concept** of Water Planning
- Section 4 that proposes **good practices** in Water Planning
- Section 5 that describes the **requirements of the Directive** on the Planning Process and
- Section 6 that provides flowcharts that summarise the **main tasks to be done** in the process

Therefore, the guidance is answering the following questions:

The concept of planning process

- *What does planning mean?*
- *Which are the main types of planning processes?*
- *Relation to other planning concepts and links to other planning processes*
- *What is the spatial scope of the planning process?*

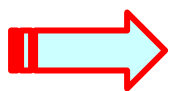
Good practices on water planning

- *What are the key elements for a sound planning process?*
- *How do these elements fit with the Directive's overall river basin planning process?*
- *Recommendations for a successful planning*

Requirements of the Directive and main tasks to be done

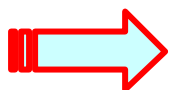
- *Which are the main activities and when do they have to be developed in the planning process?*
- *Where in the Directive are these activities made explicit or referred to?*
- *Which are the links between main activities?*
- *Which are the main preparatory constraints and bottlenecks?*
- *Which are the objectives and functions of the river basin management plan?*
- *From planning to plan; What has to be taken into consideration during the planning process to meet the requirements set by the Directive for the River Basin Plan*
- *How should the different results of the planning process be reported through the Plan?*

...and Where are the main contents of the guidance?



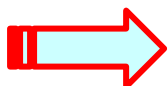
The concept of planning process

Section 3 : Principles relevant for the water planning and needs for the decision making process – 3.1 Introduction – 3.2 General scope, functions and types of planning processes – 3.3 Planning of water management and links with other planning processes



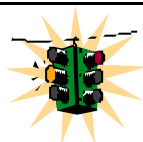
Good practices in water planning

Section 4 **Some considerations for a sound planning process** - 4.1 Long term vision for the RBD – 4.2 Knowledge and information management. The need of building capacity – 4.3 Integration at the operational level. Links with other planning policies – 4.4 the right timing– 4.5 The appropriate toolbox



Requirements of the Directive and main tasks to be done

Section 5 : Specific requirements in the WFD with regards to the planning process – 5.1 General considerations - 5.2 to 5.9 Main components in the planning process
Section 6 : General overview and overall flowchart of the planning process – 6.1 Introduction: Why and how to use flowcharts in the planning process? – 6.2 The legally binding timetable of the WFD– 6.3The planning levels and the planning cycle –6.4 Overall flowchart for the planning process – 6.5 Main bottlenecks in the planning process – 6.6 Recommendations for the preparation and use of flowcharts .



Look out! The methodology from this Guidance Document need to be adapted to regional and national circumstances within the frame of the Directive.

The Guidance Document proposes an overall methodological approach. It describes principles and the processes in the management circle. Because of the diversity of circumstances within the European Union, the way to deal with the logical approach to and answer to questions will vary from one river basin to the other. This proposed methodology will therefore need to be tailored to specific circumstances.

What you will not find in this Guidance Document?

The guidance does not focus on:

- Specific methodologies for the planning process: hydrologic modelling, decision support systems, etc.
- The establishment of the programmes of measures. There will be a specific guidance document.

Section 2 – Implementing the Directive: Setting the Scene

This Section introduces you to the overall context for the implementation of the Water Framework Directive and informs you of the initiatives that led to the production of this Guidance Document.

December 2000: A Milestone For Water Policy

A long negotiation process

December 22, 2000, will remain a milestone in the history of water policies in Europe: on that date, the Water Framework Directive (or the Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy) was published in the Official Journal of the European Communities and thereby entered into force!

This Directive is the result of a process of more than five years of discussions and negotiations between a wide range of experts, stakeholders and policy makers. This process has stressed the widespread agreement on key principles of modern water management that form today the foundation of the Water Framework Directive.

The Water Framework Directive: new challenges in EU water policy

What is the purpose of the Directive?

The Directive establishes a framework for the protection of all waters (including inland surface waters, transitional waters, coastal waters and groundwater) which:

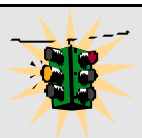
- Prevents further deterioration of, protect and enhance the status of water resources;
- Promotes sustainable water use based on long-term protection of water resources;
- Aims at enhancing protection and improvement of the aquatic environment through specific measures for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing-out of discharges, emissions and losses of the priority hazardous substances;
- Ensures the progressive reduction of pollution of groundwater and prevents its further pollution; and
- Contributes to mitigating the effects of floods and droughts.

...and what is the key objective?

Overall, the Directive aims at achieving good water status for all waters by 2015.

What are the key actions that Member States need to take?

- To identify the individual river basins lying within their national territory and assign them to individual River Basin Districts (RBDs) and identify competent authorities by 2003 (Article 3, Article 24);
- To characterise river basin districts in terms of pressures, impacts and economics of water uses, including a register of protected areas lying within the river basin district, by 2004 (Article 5, Article 6, Annex II, Annex III);
- To carry out, jointly and together with the European Commission, the intercalibration of the ecological status classification systems by 2006 (Article 2 (22), Annex V);
- To make operational the monitoring networks by 2006 (Article 8)
- Based on sound monitoring and the analysis of the characteristics of the river basin, to identify by 2009 a programme of measures for achieving the environmental objectives of the Water Framework Directive cost-effectively (Article 11, Annex III);
- To produce and publish River Basin Management Plans (RBMPs) for each RBDm including the designation of heavily modified water bodies, by 2009 (Article 13, Article 4.3);
- To implement water pricing policies that enhance the sustainability of water resources by 2010 (Article 9);
- To make the measures of the programme operational by 2012 (Article 11);
- To implement the programmes of measures and achieve the environmental objectives by 2015 (Article 4)



Look out!

Member States may not always reach good water status for all water bodies of a river basin district by 2015, for reasons of technical feasibility, disproportionate costs or natural conditions. Under such conditions that will be specifically explained in the RBMPs, the Water Framework Directive offers the possibility to Member States to engage into two further six- year cycles of planning and implementation of measures.

Changing the management process – information, consultation and participation

Article 14 of the Directive specifies that Member States shall encourage the active involvement of all interested parties in the implementation of the Directive and development of river basin management plans. Also, Member States will inform and consult the public, including users, in particular about:

- The timetable and work programme for the production of river basin management plans and the role of consultation at the latest by 2006;
- The overview of the significant water management issues in the river basin at the latest by 2007;
- The draft river basin management plan, at the latest by 2008.

Integration: a key concept underlying the Water Framework Directive

The central concept to the Water Framework Directive is the concept of integration that is seen as key to the management of water protection within the river basin district:

- **Integration of environmental objectives**, combining quality, ecological and quantity objectives for protecting highly valuable aquatic ecosystems and ensuring a general good status of other waters;
- **Integration of all water resources**, combining fresh surface water and groundwater bodies, wetlands, coastal water resources **at the river basin scale**;
- **Integration of all water uses, functions and values** into a common policy framework, i.e. investigating water for the environment, water for health and human consumption, water for economic sectors, transport, leisure, water as a social good;
- **Integration of disciplines, analyses and expertise**, combining hydrology, hydraulics, ecology, chemistry, soil sciences, technology engineering and economics to assess current pressures and impacts on water resources and identify measures for achieving the environmental objectives of the Directive in the most cost-effective manner;
- **Integration of water legislation into a common and coherent framework**. The requirements of some old water legislation (e.g. the Fishwater Directive) have been reformulated in the Water Framework Directive to meet modern ecological thinking. After a transitional period, these old Directives will be repealed. Other pieces of legislation (e.g. the Nitrates Directive and the Urban Wastewater Treatment Directive) must be co-ordinated in river basin management plans where they form the basis of the programmes of measures;
- **Integration of all significant management and ecological aspects** relevant to sustainable river basin planning including those which are beyond the scope of the Water Framework Directive such as flood protection and prevention;
- **Integration of a wide range of measures, including pricing and economic and financial instruments, in a common management approach** for achieving the environmental objectives of the Directive. Programmes of measures are defined in **River Basin Management Plans** developed for each river basin district;
- **Integration of stakeholders and the civil society in decision making**, by promoting transparency and information to the public, and by offering an unique opportunity for involving stakeholders in the development of river basin management plans;
- **Integration of different decision-making levels that influence water resources and water status**, be local, regional or national, for an effective management of all waters;
- **Integration of water management from different Member States**, for river basins shared by several countries, existing and/or future Member States of the European Union.

WHAT IS BEING DONE TO SUPPORT IMPLEMENTATION?

Activities to support the implementation of the Water Framework Directive are under way in both Member States and in countries candidate for accession to the European Union. Examples of activities include consultation of the public, development of national guidance, pilot activities for testing specific elements of the Directive or the overall planning process, discussions on the institutional framework or launching of research programmes dedicated to the Water Framework Directive.

May 2001 – Sweden: Member States, Norway and the European Commission agreed a Common Implementation Strategy

The main objective of this strategy is to provide support to the implementation of the Water Framework Directive by developing coherent and common understanding and guidance on key elements of this Directive. Key principles in this common strategy include sharing information and experiences, developing common methodologies and approaches, involving experts from candidate countries and involving stakeholders from the water community.

In the context of this common implementation strategy, a series of working groups and joint activities have been launched for the development and testing of non-legally binding guidance. A strategic co-ordination group oversees these working groups and reports directly to the water directors of the European Union and Commission that play the role of overall decision body for the Common Implementation Strategy.

The Working Group on Best Practices in River Basin Planning

A working group has been created under the common strategy for the implementation of the Water Framework Directive for dealing specifically with river basin planning issues. The main short-term objective of this working group is the development of a legally non-binding and practical guidance for supporting the implementation of the planning process as it is foreseen in the Water Framework Directive. The members of the group are experts and stakeholders from European Union Member States and from a limited number of candidate countries to the European Union (see Annex 3).

The main work packages involved in the group are as follows:

Work Package 1. Guidance on the identification of river basin districts.

Work Package 2. Guidance on the planning process.

Work Package 3. Guidance on public participation.

Work Package 4. Manual on how to produce an integrated river basin management plan and a program of measures.

This document is the final version of the Work Package 2, “Guidance on the planning process”.

The Working Group and Drafting Group meetings held and the timetable followed for the completion of Work Package 2, “Guidance on planning process” were as follows:

Date	Activity
16 April 2002	First meeting of the drafting group of the so called Work Package 2 (WP 2), “Guidance on planning process” in Madrid.
25 June 2002	Terms of reference and draft of document on preliminary steps available.
4-5 July 2002	Working Group Meeting. Discussion of terms of reference and draft on preliminary steps. Re-elaboration of the table of contents and timetable of WP 2.
14-15 October 2002	Drafting group and working group meeting in Brussels.
25 October	Version of the guidance in CIRCA, considering conclusions from working group meeting and new comments.
7-8 November 2002	Presentation of first version of “Guidance on planning process” and new work programme to Strategic Coordination Group.
21-22 November 2002	Presentation of first version of “Guidance on planning process” and new work programme to Water Directors’ meeting in Copenhagen.
2 December 2002	Drafting groups meeting (text).
9 December 2002	Drafting groups meeting (flowcharts).
20 December 2002	Revised version in CIRCA.
20-21 January 2003	Workshop with other Working Groups and water planners in Madrid.
21 February 2003	Final version of the guidance on planning process to be presented to Strategic and Coordination Group.
March 2003	Final version of the guidance to be endorsed by Water Directors by means of a written procedure.

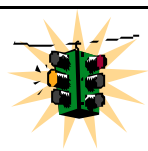
In the Meeting of Water Directors held in Copenhagen (21-22 November 2002) four themes in the follow-up of the Common Implementation Strategy were identified. Among them, the so called in the conclusions of the meeting WG 2B “Integrated River Basin Management” will continue the work already made by the former WG 2.9. A detailed mandate for the new WG is in preparation but it is expected to include as key working areas the development of the pilot river basin exercise and the elaboration of new guidance documents as “Preparation of river basin management plans and programmes of measures including the integration of different river basin management plans”.

Section 3. Principles relevant for the water planning and needs for the decision making process .

3.1 Introduction

This section discusses some backgrounds of planning processes. It does not treat the details of the Directive (this is done in the following sections), but gives insights in the theories of planning itself. The system of planning introduced with the Directive is not the only possible one, yet the deadlines and objectives from the Directive are compulsory. In planning, decisions are made on who is doing what and when. There is no a single best approach to make this decision. This has led to the development of different types of planning process. A flexible use of different planning styles can be useful for competent authorities in order to achieve the requirements from the Directive. This section gives the information to make that flexibility possible. It presents general principles of planning processes, and the different aspects that must be taken into account when making a choice for a certain type of planning during the implementation of the Directive in a Member or Accession State.

The primary purpose of planning is to provide a Plan as an instrument for making decisions in order to influence the future. Planning is a systematic, integrative and iterative process that is comprised of a number of steps executed over a specified time schedule.



Look out! Water planning is a mean to improve and support a sound management of water resources. In this sense, water planning has to be regarded as a process and not as an objective of the Directive in itself.

Planning culminates when all the relevant information has been considered and a course of action has been selected. The plan is then produced and implemented in order to achieve the goals and objectives.

The Directive introduces environmental objectives for water bodies in the river basins. The planning process adopted in the Directive is best characterised by the term 'end result planning'; from the start of the process it is clear what the final outcome will be, in this case 'good water status' (or 'good potential').

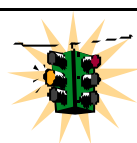
There are certain factors that have to be taken into account in the planning process, so they do not prevent the achievement of the objectives of the Directive:

- In the river basins concerned, not only the planning process of the Directive is ongoing, but also other initiatives exist, e.g. the development of regional industrial zones, the building of houses, extension of infrastructure,

restructuring the agriculture, construction of recreational areas, etc., from which conflicts with the objectives of the WFD can arise. The planning process has to be flexible, dynamic, cyclic and prospective, so it can anticipate and take into account events such as flooding or droughts.

- The different Member States have their own planning traditions, which means they all have their own long-established manners of adjusting developments in society, with corresponding division of roles and allocation of tasks between public and private actors. In order to implement the Directive in a socially acceptable manner, every Member State should be able to inform, capacitate and promote the active involvement of stakeholders and the public which may mean that the current planning can be improved and revised.

The Directive provides a framework; the actual operational implementation must take place at Member State level. Within this framework there are opportunities to act in different scales: per Member State, per (sub-)basin or per water theme, as long as the prospect of 'good status' stays the leading principle, and the different prescribed steps of the Directive are followed.



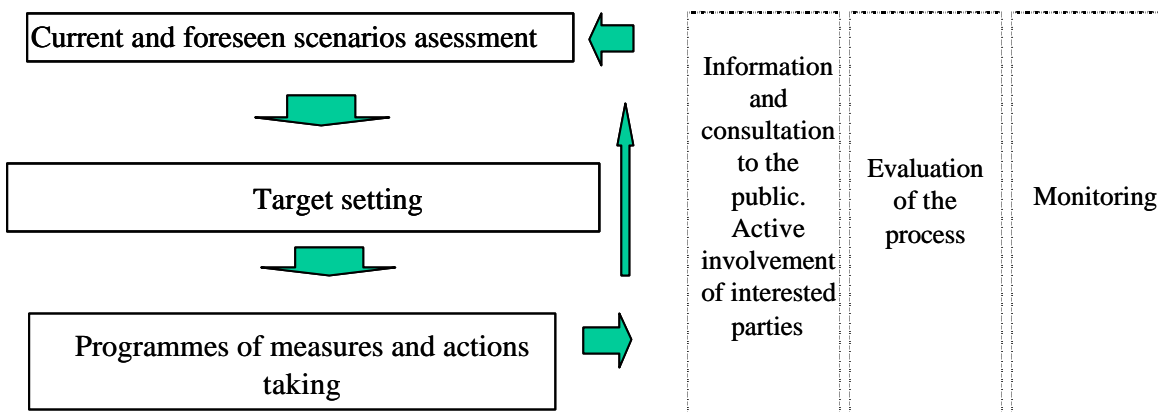
Look out! Needs for the decision making process.

Examples of questions relevant for decision making (and therefore for planning process):

- *When to make the particular decision?*
- *Who will be in response of it?*
- *How "independently" is it possible to make the particular decision in the member states? What kind of co-ordination is needed in a Community level?*
- *Is it a decision, which will be specified later? (iterative process)*
- *What kind of consequences does the decision have?*
- *In which way will the decision limit range of choices in the further steps of implementation of the WFD?*

3.2 General scope, functions and types of planning processes

The classical approach for planning usually includes three main stages: current and foreseen scenarios assessment, target setting and development of alternative programmes of measures including actions taking. These stages are part of a cyclical and iterative process in which it is possible to define three additional elements (public participation, monitoring and evaluation of the process) that will be developed in a continuous way in parallel, serving as a link between the others. The process is shown in the figure below.



As it will be described in Sections 5.1 and 6.3, the planning process to be followed in accordance with the WFD comprises ten main components that can be identified with the stages shown in the above figure as follows:

Main Stage	Components according to WFD
Current and foreseen scenarios assessment	<ul style="list-style-type: none"> ▪ Setting the scene ▪ Assessment of the current status and analysis of preliminary gaps
Target setting	<ul style="list-style-type: none"> ▪ Gap analysis ▪ Setting up of the environmental objectives
Alternative programmes of measures and actions taking	<ul style="list-style-type: none"> ▪ Setting up of the programme of measures ▪ Development of river basin management plans ▪ Implementation of the programme of measures and preparation of the interim report.
Linking stages	<ul style="list-style-type: none"> ▪ Establishment of monitoring programmes ▪ Evaluation of the first and second period ▪ Information and consultation of the public, active involvement of interested parties

Effective water planning will provide a way of anticipating a water issue, analysing the alternatives management options and proposing policies and specific measures while making the optimum use of resources.

However, water planning provides not only a strategic approach. Although the role of the water planning in the Directive is aimed to the implementation of programmes of measures to improve and to maintain the current water status, other additional functions can be identified¹:

¹ Note that some of these functions are Directive requirements indeed.

To provide a framework for developing institutional arrangements and coordination with other planning schemes (See next section).

To increase the legitimacy and transparency for water management

Planning has the capacity to increase legitimacy of decisions to be taken by enabling open and wide dialogue between the public, interest groups and authorities. Its crucial for the legitimacy of a planning process to start dialogue as early as the phases of problem defining and setting the agenda. Better understanding of interest of those involved arisen during the planning process and chance to influence on planning will rise willingness to co-operate in problem solving.

To facilitate the interaction and discussion among managers and stakeholders providing tools for conflicts resolution

Some issues can create conflicts in water resources planning that are not necessarily the result of wrong or illicit approaches. As different people have different goals, perspectives, and values, water resources planning should take into account multiple users, multiple purposes, and multiple objectives. Planning for maximum net economic benefits is not sufficient. Issues of equity, risk, redistribution of national wealth, environmental quality, and social welfare can be as important as economic efficiency. It is clearly impossible to develop a single objective that satisfies all interests and all political and social viewpoints.

In consequence, the water planning process should develop a number of reasonable alternatives to consider; evaluating from each one its economic, environmental, political, and social impacts.

However, achieving environmental, social and economic goals simultaneously can be impossible. Therefore, it will be necessary to develop a balance between environmental functioning and users with conflicting aims. Planning can help practitioners to approach complex problems, to organise thinking, and to form the understanding necessary to strike that appropriate balance. Only in that way, crucial issues can be identified and sometimes difficult choices made on the basis of adequate information and a full review of the options.

To report on water management policy

The Directive explicitly requires Member and Accession States to produce a management plan for each RBD. The River Basin Management Plan (RBMP) is intended to record the current status of water bodies within the RBD, set out, in summary, what measures are planned to meet the objectives, and act as the main reporting mechanism to the Commission and the public.

There are a number of outputs of this process, in the form of reports, that Member and Accession States are required to submit to the Commission by prescribed deadlines in order to confirm progress. The river basin planning process is followed by the implementation of the management plan.

The actual planning process may vary significantly because of different traditions in policy making and implementing of policy. Distinguishing factors that characterize the different planning types are:

- the way (public and private) stakeholders are involved;
- the way the objectives are set, and
- the types of operational plans that form the outcome of the process.

The variation in these factors reflects the vision on planning of the initiating authority. Among the different types of planning, the table below describes four visions on planning that are internationally distinguished.

Vision on planning	Policy making means:	Participants	Type of plans
1a. plain rational-instrumental	achieving targets with certain means within a certain time	the problem is defined by the initiating authority; public actors are responsible for the preparation of the plans, private actors can participate during implementation	spatial-technical imagination of the desired state; implementation following target-means-rationality
1b. rational-instrumental with an open eye for the complexity of the political, administrative and social context	identifying of sets of related targets and measures, on the basis of an analysis of the actions possible	the problem is defined by the initiating authority; the analysis of the situation and the preparation of the plans is done in cooperation with several public actors; private actors can participate during implementation	framework of agreements (who will do what when, what has when to be geared to each other, in which cases must the plan be adjusted); the plan may be incremental (= periodically review of targets and measures, in the light of the target)
2a. plain interactive	policies are the outcome of a process (of learning and negotiating) between interdependent public actors (among themselves) and private actors, each using their own resources.	the definition of the problem is stable if the network of participants is stable; public and private actors both contribute to preparation and implementation of the plans	picture of the agreed desired target status, in which public as well as private targets are achieved; programme with in any case everybody's tasks and financial inputs.
2b. interactive with an open eye for the power of fundamental debate	on the basis of a powerful discourse, regrouping of actors and means with the aim of achieving	the problem is defined by a coalition of public and private actors; a broader audience (public and private) is invited to	review of the activities of public and private actors, in the setting of the discourse; plan with sub-plans for the adjustment of

Vision on planning	Policy making means:	Participants	Type of plans
	certain targets (e.g. 'water service')	preparation and implementation of the plans	everybody's activities, tasks, responsibilities and financial consequences.

1a In the *rational-instrumental* type of planning (top-down), the initiating authority defines the problem, the solution to the problem, and the means and time schedule for achieving that solution. Other stakeholders are not involved during this process, although they might be informed once the solution is set. Private actors may be involved in the implementation of the plans.

E.g. the planning of the (re)construction of dikes, after the authorities decided that the problem of flooding has to be solved by enlarging the hydraulic capacity of the river. The actual work on the dikes can be carried out by private actors.

1b In the *rational-instrumental planning 'with an open eye'*, the authority recognizes the complexity of the social structure in which policy making takes place. Yet the problem is defined by the initiating authority. In the phase of problem analysis and preparation of solutions, other public stakeholders (= other authorities) can cooperate. As in the first type, private actors may be involved in the implementation of the plans.

E.g. the drafting of a programme, initiated by a water authority, of several upstream measures in municipalities a region, in order to reduce risks of flooding downstream by decreasing the peak flow in a certain river.

2a In the *interactive* planning form, the initiating authority starts a process of learning and negotiation between interdependent public actors and private actors, each with their own resources. The definition of the problem is an outcome of that process, and stays stable as long as the network of participants is stable. Public and private actors both contribute to the preparation and implementation of the plans. Shortly said, the initiating authority sets the objectives, while other stakeholders have a say in the means employed.

E.g. an overall plan against flooding in a certain district, with measures agreed on by all different actors involved, concerning the hydraulic capacity of the river, the rainwater sewer system in municipalities, reduction of rainwater runoff from roofs, fields and car parks of private persons, and the retention of water in agriculture and nature grounds.

2b In the *interactive planning 'with an open eye'*, the initiative may come from the authority, but also from other actors. Nevertheless, the authority facilitates the process of problem definition. The discussion in this type of planning is structured by new viewpoints on a problem, that are recognized by several

actors. On the basis of these viewpoints, strong coalitions can be formed, pursued by the adjustment of ongoing activities.

E.g. the understanding that the available space for water cannot be tightened endlessly without consequences, and that in spatial planning the water flow must be taken into consideration. This brings a reversal in the thinking on planning, from water management rendering services to spatial planning, to water management being prescriptive on the possibilities for spatial planning.

In the order of the four visions on planning, the uncertainties present in planning processes are judged of an increasing importance. Although an historical development is recognizable in the planning types, all forms are applicable at present. More than that, the different planning types can occur at the same time in a certain region!

For example, in several countries as in the Netherlands and in policies on certain forms of non-point sources of water pollution, the interactive planning style is predominant. At the same time, after large flooding, in some cases, the tackling of high water levels became so urgent, that for that particular issue, the rational-instrumental planning style was used. At present, since the memories of the impressive water masses have faded, the call for more participation is growing louder, which results in a shift in planning style to a more interactive one.

This example shows that the predominant planning style can vary, not only in a geographical scale, but also in a time scale.

As has been substantiated in other guidance documents (e.g. Wateco, Public Participation), for the competent authority it is a matter of the utmost importance to know the social context of an issue, starting with a stakeholder analysis. By knowing the positions of stakeholders – by this is meant public and private stakeholders – a competent authority can choose which type of planning best suits the given situation. It brings the opportunity to flexible shift between the different planning styles, resulting in the best results.

3.3 Planning of water management and links with other planning processes

One of the most significant characteristics of planning is that it is a dynamic process and therefore can be characterized in terms of a set of activities that take place over time and that interact through the transmission and feedback of information. It is the function of these activities to convert that information into forms from which a set of decisions (i.e., plans) can be produced. At all stages of this process, coordination with other relevant planning processes should be ensured. In fact, water resources must be planned and managed in an integrated and holistic way. This is likely to involve the coordination of river basin planning with the planning processes of other relevant sectors in order to ensure that the objectives of the Directive are met.

For example, many land use activities depend on water. Therefore, a sound water management is crucial to avoid undesirable side effects. Vice versa, land use also affects determinants of water flow and can alter its characteristics, for example, by introducing pollutants along water pathways. Land use regulations can be needed for water protection purposes.

Although WFD contains no explicit provisions in relation to land-use planning, the arrangements for implementation will need to ensure that bodies responsible for land use planning take account of the objectives which it creates. Therefore, it will be advisable to ensure that the land use and water planning processes support one each other as far as possible. Regarding this issue, the requirements of the Directive on Strategic Environmental Assessment (2001/42/EC) will also need to be taken into account.

Although, as it has been stressed above, there are a lot of links with other planning processes, water management planning has some characteristics that cause significantly differences from other planning fields (as for example spatial or economic planning).

In the first place water – on the one hand – is something we use, what makes that in water management those functions are planned and facilitated (e.g. shipping, water for industry and drinking, etc.). Yet at the same time – on the other hand – policies are carried out to preserve water from deterioration, in order to guarantee the preconditions for those functions. The Directive especially deals with the care for the functioning of water systems, and only in a derived manner with the interests associated with it (e.g. via the concept of water services).

Another characteristic that makes water a special good to manage, are the two types of functions existing at the same time: first the territorial functions; water being the imperative basis for other activities that highly depend on the water system (e.g. agriculture, shipping, spatial planning), and second the utility functions; water being materially used in processes (e.g. drinking water, industrial water).

These characteristics make water planning pre-conditional for other types of planning. Yet not an easy precondition to deal with, since the natural dynamics of water systems bring permanent uncertainty. If, for example, the spatial planning is neglected for a certain period, the landscape won't suddenly change by itself. If the same is done with the planning of water systems, dangerous situations can occur with respect to risks of flooding, droughts and health.

Planning is not 100% accurate

Uncertainty can be defined as the occurrence of events that are beyond our control. Uncertainty is always an element in the planning process. It arises because the complexity of the many factors involved. In fact, meteorological, demographic, social, technical, and political conditions which will determine the planning

process have behaviour patterns not always known with sufficient accuracy. Uncertainty arises mainly due to the stochastic nature of some key elements affecting these processes.

The programme of measures can be a tool to deal with this uncertainty since it can be revised according to the circumstances (article 11(5) and Annex VII.B)

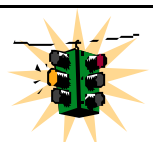
Finally water is not stationary, but a flowing substance, not constrained by administrative or political boundaries, but following physical and hydromorphological limits. This spatial context is commonly known as the catchment.

The Directive – in reflection of the natural water cycle – prescribes the management activities to take place within geographical areas called River Basin Districts (RBDs). These are based largely on surface water catchments, together with the boundaries of associated groundwater and coastal water bodies. In the case of small river basins, adjacent to larger ones, or of several neighbouring small basins, the Directive allows the competent authority to combine or join them in order to make water management in the River Basin District more efficient.

For coastal waters the planning process should consider the influence of other plans that may affect the coastal water beyond the Water Framework Directive controlled one nautical mile coastal strip. Water exchange with more offshore waters may influence the coastal, or even transitional waters, and to not account for this could lead to incorrect assumptions about quality downgrades and the programme of measures required to improve the situation

By creating a spatial unit for water management, based on river basin, it is likely that spatial conflicts will occur with other policy sectors that have a significant impact on water, but are structured along administrative and political boundaries.

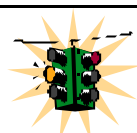
This point also brings the scale-issue into the picture. The complexity of the planning process of water management depends for a great deal on the characteristics of the catchment of the water system considered; in a small scale water system, the planning is easier done than in very large scale systems, as the Danube or the Rhine, with many countries involved. The Directive requires coordination across administrative and political borders.



Look out! Directive requires that spatial context for integrated and coordinated water management has to be the river basin district level

Section 4. Some considerations for a sound planning process

Planning is a tool or working methodology for preparing decision making with the objective of improving the use of resources available to achieve certain goals. It requires knowledge of the reality on which it operates and capacity to evaluate both the expected outcome and the process through which it can be attained.



Look out! Think globally, act locally.

As a matter of "good practice", river basin planners and managers need to build some cross-cutting principles into all components of their work, to ensure that coordination and coherence required for effective results is actually achieved.

The following preconditions for a sound planning process according to the relevant aspects of the WFD can be underlined:

- Long-term vision for the RBD.
- Knowledge and information management. The need of building capacity.
- Integration on the operational level. Links with other planning policies.
- The right timing.
- Appropriate toolbox.

4.1 Long-term vision for the RBD

Having a vision of what the RBD will be in the future can help to determine what measures have to be taken in the perspective of a sustainable development and thus to leave water resources in sufficient quantity and quality for the future generations. Article 1 of the Directive stresses on the necessity to promote sustainable water use based on a long-term protection of available water resources.

Working on a long-term vision for the RBD is an essential tool :

- to reach an agreement between authorities and stakeholders on objectives ;
- and then, to plan the necessary actions to reach progressively these objectives.

A stable long-term planning is also important to have a reference during the whole implementation process. At the end of the period covered, the progress made can be compared with the initial vision so to revise the measures if necessary.

Long-term vision for the river basin district is mentioned several times in the Water Framework Directive :

- Baseline scenario.

Annex III asks the Member States to take account of long term forecasts of supply and demand for water in the River Basin District. The guidance document on water economics (WATECO) explains why and how the establishment of a baseline scenario for the district is necessary;

- Surveillance monitoring.
According to Annex V, surveillance monitoring programmes must provide information for the assessment of long term changes in natural conditions and the assessment of long term changes resulting from widespread anthropogenic activity;
- Taking into account the natural time-lag for the pollution transfers and renewal of resources.
Such time-lag should be taken into account in timetables when establishing measures for the achievement of good status of groundwater and reversing any significant and sustained upward trend in the concentration of any pollutant in groundwater.

4.2 Knowledge and information management. The need of building capacity.

The foundation for effective management is good scientific information. In particular, an understanding of freshwater ecosystems and key hydrological and ecological processes is essential and should be used to decide on all aspects of integrated river basin management. "Good practice" means that for any river basin management process, the ecological components should be based on a freshwater ecoregional assessment to establish a scientifically based, shared vision on how to conserve the freshwater plants and animals in each river basin.

Similarly, socio-economic analyses are key to understand the drivers behind water uses. Information base must be regularly updated through effective programmes. This does not mean measuring everything all the time, but rather carrying out a strategic, targeted and integrated programme, the results of which can be used to inform and adjust management decisions. In many cases, socio economic data is mainly collected at other than river basin spatial scale by central statistical offices. In that case, the implementation of coordination mechanisms between them and RBDs can be needed

Sound information management and analysis needs capacity. Capacity is generally defined as the availability of instruments to take actions. Given the complex and challenging nature of the WFD, it is vitally important that capacity for actual implementation is maximised among all relevant actors. General elements of a capacity-building programme might include raising public awareness (e.g. to help secure broad support for the river basin management objectives), informal transfer of "know how" (e.g. through the exchange of experience between river basin managers), and formal training (e.g. in specialised monitoring techniques), both internal and external. However, the exact needs will

vary from country to country and from river basin to river basin, *inter alia* according to different socio-economic conditions, or the concrete water management issues identified. The relevant aspects are:

- The need to build capacity (starting with awareness raising) among economic sectors and NGOs, as well as among officials, planners and administrators.
- The need to enhance sharing of information and experience between countries and regions sharing river basins, with the internet providing valuable new opportunities.
- The need to allocate adequate human and financial resources for capacity building activities in each RBD as part of overall WFD implementation.

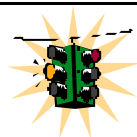
4.3 Integration at the operational level. Links with other planning policies

The WFD sets out a coherent framework for the sustainable management of the water environment (article 1, recitals 3, 5 and 16). This sustainable view is more integrative and places water within the fabric of a larger environmental system. For example, the management of the water environment is directly and indirectly influenced by many different activities. These activities can be attributed to sectors other than water e.g. transport, agriculture and land-use planning etc.

Clearly, for effective water management, it is essential for activities that impact the water environment, but that fall within the competence of other sectors, to be co-ordinated with the objectives of water management and protection. Failure to take such a holistic approach to water management is recognised as one of the main deficiencies of the existing aquatic legislative framework and has contributed to its inadequate implementation across Europe.

The approach taken by the WFD recognises the need for co-ordination across sectors and proposes a system of planning and management to accommodate it. The river basin planning process will be the central tool for the co-ordination of policies for the purpose of water management.

This does not necessarily mean that the policy objectives of other sectors will be constrained by those of water management. However, it will mean achieving economic and social goals in ways that safeguard, and wherever enhance, the status of the water environment.



Look out! The WFD can only contribute to environmental sustainability if it co-ordinates policy in other relevant sectors for the purposes of water management.

MS will need to establish a planning framework with a clear and explicit purpose and clear national policies, including a set of objectives for protecting and improving the environment in relation to other sectors.

Better overall coordination at the river basin level is a pre-requisite for implementing the WFD effectively. This, in turn, needs more integration at the operational level, especially:

- Among bodies involved directly with water management (e.g. those responsible for water storage and supply, flood management and treatment of waste water).
- Between water managers and other sectors, such as land-use planning, agriculture, forestry, flood management, industry and tourism/recreation.
- Integration of surface- and ground-water management (at present often dealt with separately).
- Integration of "inland" and coastal waters, for example by applying the approach and principles of Integrated Coastal Zone Management (ICZM).
- In the case of international river basins, establishing cooperation (where not already in place) between countries and seeking consistency between WFD implementation and any existing bilateral or multilateral agreements that affect water management.

The scale is a very relevant aspect for a good integration. In this sense, sometimes integration needs to happen at the river basin scale, e.g. between flood management, water supply and environmental protection measures; sometimes at the national scale, e.g. between water resource legislation and environmental protection legislation; and some other times at the European scale, e.g. between WFD, Common Agricultural Policy (CAP) and Structural Funds. In this sense, it is important to recognise that the great variation in the size of river basins within and between countries, means that approaches suitable for one location are not automatically transferable elsewhere. Good integration on the planning scale implies also the need to coordinate "top-down" and "bottom-up" approaches (i.e. to ensure that many physically separate actions at local scale are sufficiently coordinated to reach, in combination, the objective of "good status" at the river basin scale). As a matter of "good practice", river basin planners and managers need to build some cross-cutting principles into all components of their work, to ensure that the coordination and coherence required for effective results is actually achieved.

Therefore, the planning process in general and the drafting of a RBMP in particular, will depend on contributions from various administrations and institutions. In larger basins and in particular in international basins, the input for the draft RBMP will most probably have to pass different levels of co-ordination and decision-making.

In order to make the drafting of the RBMP easier and to ensure coherence and compatibility of the contributions, it is necessary to define as early as possible the overall structure of the RBMP. Furthermore, the requirements in terms of scale,

level of detail, etc. should be clarified at an early stage to set the framework for all being involved in the production of the RBMP. It might be a good idea to already test the basic structure with the preparation of the report on the analysis required by article 5 of the WFD.

4.4 The right timing

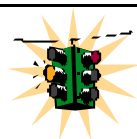
The deadlines for achieving the objectives of the WFD are extremely challenging. It is therefore better to begin implementation "early and imperfectly" than to wait for "perfect conditions" (e.g. when all possible data have been collected and analysed). Consequently, the deadlines in the WFD text must not be seen as a step-by-step timetable for implementation. Result-oriented "good practice" will require many elements to be run simultaneously. Furthermore:

- Timing of preparatory work by Member States should recognise that achievement of WFD deadlines and "good practice" approaches will require immediate action. Primary or secondary legislative changes may be necessary though the appropriate organisational arrangements may not be in place and the required skills and resources may not be available or adequately developed.
- Time can be saved by using existing structures, processes and tools wherever possible. However, this should be subject to the outcomes of a review, checking the suitability and capacity of these structures for delivering WFD requirements. In many cases, a certain degree of adaptation will be needed.
- Monitoring and planning are tools to facilitate management actions in the WFD context. However, management action should not be delayed until all possible planning and monitoring has been completed. For example, if monitoring is not operational until the final deadline of 2006, there will be a severe "bottleneck" in preparing an effective programme of measures by the corresponding final deadline of 2009.
- It is especially important that strategies for public participation and stakeholder involvement are developed and implemented from the beginning, though recognising that different groups will need to be engaged at different stages of the process (see also Work Package 3 of Working Group 2.9, Guidance on public participation).
- Timing of initiatives in related policy areas (e.g. land-use planning policy, capital investment in infrastructure) may impact significantly on the timetable for achieving WFD objectives if the links are not considered at an early stage.

4.5 The appropriate toolbox

Knowledge and information management, capacity building and integration on the operational level needs appropriate tools. Tools are needed for e.g.

- collecting appropriate data (data bases, GIS),
- picking up relevant data and information on data bases,
- analysing and describing the content and planning process of the WFD (flowcharts and GIS-based maps directed to the authorities and the public),
- facilitating administrative requirements
- public participation (actor analysis, workshops, logical framework etc.).
- decision support tools able to make right priorities concerning the program of measures.



Look out! Under the Common Implementation Strategy a specific guidance document have been developed on the GIS elements of the WFD (WG 3.1)

However, those who are involved in the development of water resources systems methodology know that the use of the appropriate tools cannot guarantee by itself the development of optimal plans for water resources and management. In fact, given the competing and changing objectives and priorities of different interest groups, it is unclear how useful the concept of an “optimal plan” really is. What system methodology can do, however, is to help define and evaluate, in a rather detailed manner, numerous alternatives that represent various possible compromises among conflicting groups, values, and management objectives. In particular, a rigorous and objective analyses should help to identify the possible trade-offs between quantifiable objectives so that further debate and analysis can be more informed. The art of systems analysis is to identify those issues and concerns which are important and significant and to structure the analysis to shed light on these issues.

Although the systems approach to water resources planning is not restricted to mathematical modelling, models do exemplify the approach. They can represent in a fairly structured and ordered manner the important interdependencies and interactions among the various control structures and users of a water resources system. Models permit an evaluation of the economic and physical consequences of alternative engineering structures, of various operating and allocating policies, and of different assumptions regarding future flows, technology, costs, and social and legal requirements. Although this systems methodology cannot define the best objectives or assumptions, it can identify good decisions, given those objectives and assumptions.

To engage in a successful water resource systems study, the systems analyst must possess not only the requisite mathematical and systems methodology skills, but

also an understanding of the environmental engineering, economic, political, cultural, and social aspects of water resources planning problems.

Thus, the role models may be viewed as that of tools from which to derive answers to well-posed questions about the performance or behaviour of the system that is being planned. However, because of the dynamics of the planning process, it may happen that the answers derived from the models will suggest that the original questions were not well conceived and need to be reformulated. Hence, the role of models is iterative. They are used to produce information that may be fed forward to aid in decision-making (i.e., plan formulation). With equal value, they may produce information that is fed back to aid in redefining the problem.

Section 5. Specific requirements in the Water Framework Directive with regards to the planning process

5.1 General considerations

The publishing of the Water Framework Directive forms a legal obligation for the competent authorities to organise the management of water within River Basin Districts. Understanding the planning and management requirements of the Directive is the basis on which these guidelines on the planning process are considered and established. The planning process is aimed to improve the establishment of river basin management plans and the programmes of measures and hence contribute to the establishment of the overall environmental goals of the Directive: that of achieving “good water status”(recital 25), prevent “further deterioration” , “promote sustainable water use” and enhance protection and improvement of the aquatic environment through measures “for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing-out of discharges, emissions and losses of the priority hazardous substances”(Article 1).

Common understanding

There are a number of different planning concepts related to the WFD that are often used interchangeably and require some clarification – these relate to river basin planning, river basin management, river basin management plan, programme of measures and the appraisal process.

The River Basin Management Plan

The WFD requires MS to produce a management plan for each river basin district. This requirement is described in Article 13 and 15. The RBMP will act as the central focal point for the outcome of river basin planning. It will record the current status of water bodies within the River Basin District, set out, in summary, what measures are planned to meet the objectives, and act as the main reporting mechanism to the Commission and the public. The full contents of the plan are specified in Annex VII.

River basin planning and river basin management

River basin planning is the process of collecting and analysing river basin data and evaluating management measures in order to achieve the objectives of the WFD within prescribed timescales.

The river basin planning process is followed by implementation of the programme of measures. The planning process together with the implementation of the programme of measures is often referred to as river basin management.

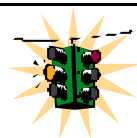
As the name implies, the WFD establishes an outline framework for the planning and management of the water environment. The framework includes a series of key tasks to be completed by prescribed deadlines. In order to confirm progress against these tasks, MS are required to submit a number of outputs from this process, in the form of reports, to the Commission.

Although the key tasks represent milestones in a planning process, the WFD does not specify the procedural detail necessary to support the development of the river basin management plans. The specific nature of river basin planning process is at the discretion of MS.

In the Directive there is no specific article on the planning process. The preambles of the Directive deal with the planning process in an explicit way only to stress the needs of considering different solutions for different conditions and to note that water planning is a long term process (Preambles 13 and 28, see Annex 2).

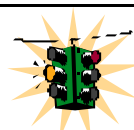
However, several articles deal with tasks that are linked with the planning process as has been summarized in Section 3 and it is shown in more detail in Section 6 of this guidance. In fact, according the Directive, the general approach for water planning can be seen as based in the following main components :

- Setting the scene.
- Assessment of the current status and analyse preliminary gaps.
- Setting up of the environmental objectives.
- Establishment of monitoring programmes.
- Gap analysis.
- Setting up of the programme of measures.
- Development river basin management plans.
- Implementation of the programmes of measures and prepare the interim report on the implementation.
- Evaluation the first and the second period.
- Information and consultation of the public, active involvement of interested parties.

**Look out!**

The Directive includes specific requirements for non deterioration and the implementation of extra measures to comply with previously existing water related community legislation. The Commission is leading the production of a horizontal paper that will shed light on the requirement to “prevent deterioration”.

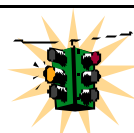
There is a tendency to view the planning process based in the above mentioned components as a clearly defined linear sequence. In reality these components are unlikely to be followed in rigid succession, but involve non-linear iterative processes.



Look out! River basin planning process will not run in a linear sequence

The planning includes a number of components that depend on each other, and ideally should be developed as soon as possible. The planning flowchart in section 6 gives a clear image of workplans that overlap on the time scale.

Each component in the process will consist of numerous activities. Detail on these activities is given later in this section and in section 6. Additional technical detail is provided in the other guidance documents.



Look out! This guidance on planning is focused specifically in the general approach of the process.

The technical aspects and tools to be used in planning will be dealt with in a comprehensive Manual on integrated river basin management planning to be prepared at a later stage. On the other hand, specific and detailed information of every step of the planning process mentioned in this guidance can be found in the guidance documents developed by the working groups involved in the Common Implementation Strategy.

5.2 First component: Assessment of current status and preliminary gap analysis

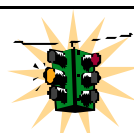
The initial stage in the process of implementing the Water Framework Directive can be called as “Setting the scene” and includes the identification of the River Basin Districts, establishment of the appropriate administrative arrangements for co-ordination of activities, and designation of competent authorities

Following this, the **first component of the planning process** is to describe the characteristics of each River Basin District. This requirement is outlined in Article 5 (see Annex 2).

Hence, the assessment on current water status is based in the four following tasks:

- General description of the river basin district that should include the establishment of reference conditions for surface waters.
- Register of protected areas
- Identification of significant pressures and assessment of their impacts.
- Economic analysis of water uses

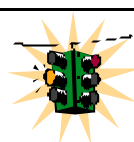
These tasks should be completed by 22 December 2004, and reported to the Commission by the 22 March 2005.



Look out! The general description of the RBDs is important because it will serve as the foundation of the subsequent process

The general description of the RBD includes assigning coastal water bodies to districts. Article 2(7) of WFD defines coastal waters as extending for a nautical mile from the territorial baseline.

Shared groundwaters must only be assigned to one RBD. This is an outstanding difference with respect to coastal waters, where the Directive allows them to be assigned to more than one RBD.



Look out! Under the Common Implementation Strategy the following specific documents have been developed on:

- **Guidance document on the Definition of water bodies (Horizontal guidance)**
- **Information document on the Identification of River Basin Districts (WG 2.9)**
- **Establishing reference conditions and ecological status class boundaries for inland surface waters (WG 2.3)**
- **Typology, reference conditions and classification systems for transitional and coastal waters (WG 2.4)**

Moreover a specific guidance document in Wetlands is expected to be finished in 2003.

For all water bodies, good status must be achieved unless a derogation is applied. Each water body has to be characterised according to ecoregion types (System A) or to the differentiation of water bodies into types using the different obligatory and optional factors (System B). This work will provide the foundation for further activities to establish what “good status” will mean for each “type”.

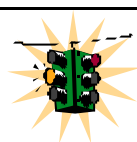
According to the Directive, it is necessary to identify what the relevant aspects of a waterbody's characteristics would be like if there were “no or only very minor alterations” to the body resulting from human activities. In the Directive these nearly undisturbed conditions are called as reference conditions.

Reference conditions also have to be included in the general description of the RBD and they should be selected according to chemical and hydro-morphological characteristics and evaluated more specifically in quantitative terms on the basis of biological parameters. Reference conditions must be defined for each quality element and each water body type in order to allow an ecological quality ratio to be calculated and a class determined for each surface water body. Also have to be included in the general description of the RBD and they should be selected according to chemical and hydro-morphological characteristics and evaluated more specifically in quantitative terms on the basis of biological parameters. The characterisation of surface waters requires that Member States develop a reference network for each surface water body type. If no reference waters are

available, reference conditions could be based on modelling or on expert judgement.

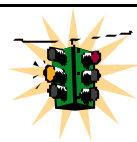
Sometimes it will not be possible to achieve a “nearly undisturbed condition” of a water body because of substantial physical alterations made to it to permit activities as irrigation, drinking water supply, power generation, navigation and so on. The Directive recognises that in some cases the benefits of such uses need to be retained and if a series of criteria are fulfilled, allows their designation as artificial or heavily modified water bodies.

The reference conditions for artificial or heavily modified water bodies of surface water is the “maximum ecological potential”, that has to be derived from the water body type that is most similar to the uninfluenced body of surface water.



Look out! First characterisation of water bodies may also include a provisional identification of artificial and heavily modified water bodies.

The designation of artificial or heavily modified water bodies can be also considered as an exemption from the “good ecological status objective” but this task is required in the river basin management plan in which the final designation shall be made before December 2009. In any case, a provisional identification of artificial and heavily modified water bodies may be undertaken by 2004 and the formal designation by 2009.



Look out! Under the Common Implementation Strategy a specific guidance document have been developed on the identification and designation of heavily modified and artificial water bodies (WG 2.2)

The Directive provides protection to higher standards through the *designation and registration of protected areas*. Protected areas are those that have been designated as requiring special protection under EU legislation, either to protect their surface water or groundwater or to conserve habitats and species that directly depend on those waters. A register of protected areas within the district shall also be published by the end of 2004 (article 6 and Annex IV).

Under Article 4 of the Directive, for individual protected areas, any standards and objectives that have been set for them must be complied with within 15 years of the Directive entering into force unless otherwise specified in the Community legislation under which they have been designated.

The register of protected areas required under article 6 must include the following types of protected areas:

- areas designated for the abstraction of water intended for human consumption;
- areas designated for the protection of economically significant aquatic species;
- bodies of water designated as recreational waters;
- nutrient sensitive areas; and,
- areas indicated for the protection of habitats or species where the maintenance or improvement or the status of water is an important factor in their protection.

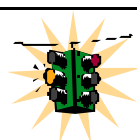
The following table shows the Community legislation more relevant for each type.

Protected areas	Community legislation
Abstraction of water intended for human consumption.	Surface Water Abstraction Directive (75/440/EEC)
Protection of economically significant aquatic species	Shellfish waters designated under the Shellfish Waters Directive (79/923/EEC)
Recreational waters	Bathing waters designated under the Bathing Waters Directive (76/160/ECC)
Nutrient sensitive areas	NVZs designated under the Nitrates Directive (91/676/EEC) and sensitive areas designated under the Urban Waste Water Treatment Directive (91/272/EEC)
Protection of habitats or species	Natura 2000 sites designated under the Habitats

Generally, protected areas derive their status from the specific Community legislation under which those areas are identified or defined. Consequently, it is considered that no specific power to “designate” new categories of protected areas will be needed, although a power is needed to specify the protected areas to which the article 6 (and then article 4) obligations will apply.

An exception to this general rule concerns article 7 (water used for the abstraction of drinking water) , which provides a new obligation to identify all bodies of water used for the abstraction of drinking water and those bodies intended for such future use.

The identification of significant anthropogenic current and foreseen pressures and the assessment of their impacts are based on Annex II (1.4) of the WFD. Once the main pressures have been identified, an assessment shall be made and predict how they can impact on the water bodies, i.e. how they influence the achievement of the environmental quality objectives. The susceptibility of the surface water bodies status to the pressures can be obtained using both monitoring data and modelling techniques.

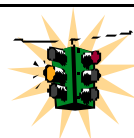


Look out! Under the Common Implementation Strategy a specific guidance document have been developed on the analysis of pressures and impacts in accordance with the WFD (WG 2.1)

For both surface and groundwaters, although the requirements are phrased slightly differently, the approach is essentially the same. That is, to gather available information about pressures on water bodies, and to assess the impact of those pressures on water bodies and the risk of them failing to meet the environmental status objectives set for the water bodies.

In fact, what the Directive requires from the identification is an assessment of which water bodies are at risk of failing to meet the environmental objectives. This information will be used to define the programmes of measures and the design of monitoring programmes.

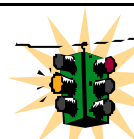
The risk assessment for groundwater considers that groundwater can take a long time to recover once it is polluted. If achieving good status by 2015 is technically unfeasible or disproportionately expensive, lower objectives can be established. Groundwater bodies which will have these lower objectives have to be identified and requires an evaluation of the feasibility of natural or artificially assisted restoration. The use of derogations is subject to a number of tests that must be reported to the Commission in the RBMPs.



Look out! Under the Common Implementation Strategy a specific guidance document have been developed on the Statistical aspects of the identification of groundwater pollution trends, and aggregation of monitoring results (WG 2.8). A so-called daughter directive on Groundwater is expected to be finished during 2003.

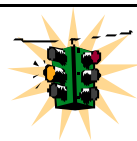
For 2004, a provisional identification of HMWB is needed on the basis of significant hydromorphological alterations. The risk assessment for surface water bodies will determine whether the effects of hydromorphological alterations to a surface body are likely to prevent the achievement of good ecological status.

If the achievement of good ecological status is considered as uncertain, a further assessment will be required after 2004 to determine what improvements to the hydromorphological conditions would be needed to achieve good ecological status and whether such improvements would have significant adverse effects on the activity related to the alteration (derogation on the basis of disproportionate costs). The result of this assessment of the risk to fail to meet the objectives is the identification of HMWB. At this stage, a third assessment will be required to determine the risk of the HMWB to fail to achieve the good ecological potential.



Look out! For 2004, only a first assessment of risk of failing to meet the objectives is required.

Results of monitoring will precise this risk in 2005-2006 (confirmation of the risk or not). Monitoring is a task that is greatly related to the risk assessment. Specific requirements for monitoring can be found in Article 8 (see Annex 2 of this document). Results of monitoring are necessary in order to decide if it is necessary to make further assessment.



Look out! Risk assessment is one of the main tool of the river basin planning process.

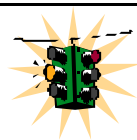
If every pressure could be reliably identified and its effects accurately predicted, monitoring would be redundant. However, risk assessments can never be perfect. They always need to be tested. The risk assessments completed by the end of 2004 will provide an estimate of which water bodies could be at risk of failing to achieve environmental objectives. The monitoring programmes must provide the information needed to supplement and validate these assessments and to establish the status of the bodies confirmed at risk.

Wetland ecosystems are ecologically and functionally significant parts elements of the water environment, with potentially an important role to play in helping to achieve sustainable river basin management. The Water Framework Directive does not set environmental objectives for wetlands. However, wetlands that are dependent on groundwater bodies, form part of a surface water body, or are Protected Areas, will benefit from WFD obligations to protect and restore the status of water. Relevant definitions are developed in CIS horizontal guidance documents water bodies and further considered in guidance on wetlands.

Pressures on wetlands (for example physical modification or pollution) can result in impacts on the ecological status of water bodies. Measures to manage such pressures may therefore need to be considered as part of river basin management plans, where they are necessary to meet the environmental objectives of the Directive.

Wetland creation and enhancement can in appropriate circumstances offer sustainable, cost-effective and socially acceptable mechanisms for helping to achieve the environmental objectives of the Directive. In particular, wetlands can help to abate pollution impacts, contribute to mitigating the effects of droughts and floods, help to achieve sustainable coastal management and to promote groundwater recharge. The relevance of wetlands within programmes of measures is examined further in a separate horizontal guidance paper on wetlands.

The economic analysis of water uses is mainly described in the Article 9 and Annex III of the WFD (see Annex 2).

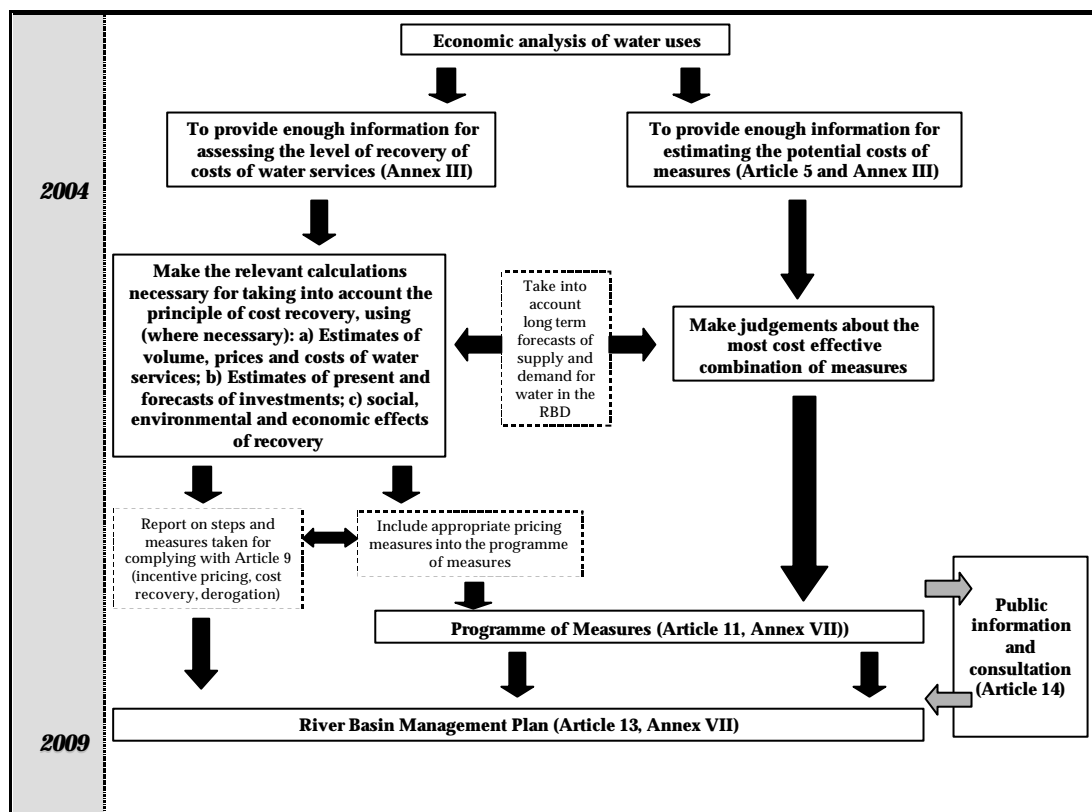


Look out! Under the Common Implementation Strategy a specific guidance document have been developed on Economics and the environment. The implementation challenges of the WFD (WG 2.6).

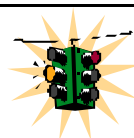
The comparison between the economic elements of the Directive reviewed and the content of Annex III of the WFD shows that not all components of the economic analysis required to support the implementation of the economic elements of the Directive are specifically spelt out in Annex III.

A difference is made between the explicit and implicit functions of the economic analysis, the term explicit referring to the economic components that are specifically outlined in Article 5 and Annex III (see Figure 1), and the term 'implicit' referring to references made to economic issues in other parts of the text of the Directive that will also require some economic analysis which has not been mentioned in Article 5 and Annex III (see following figures).

The *explicit* economic functions of the economic analysis



Source: WATECO Guidance.



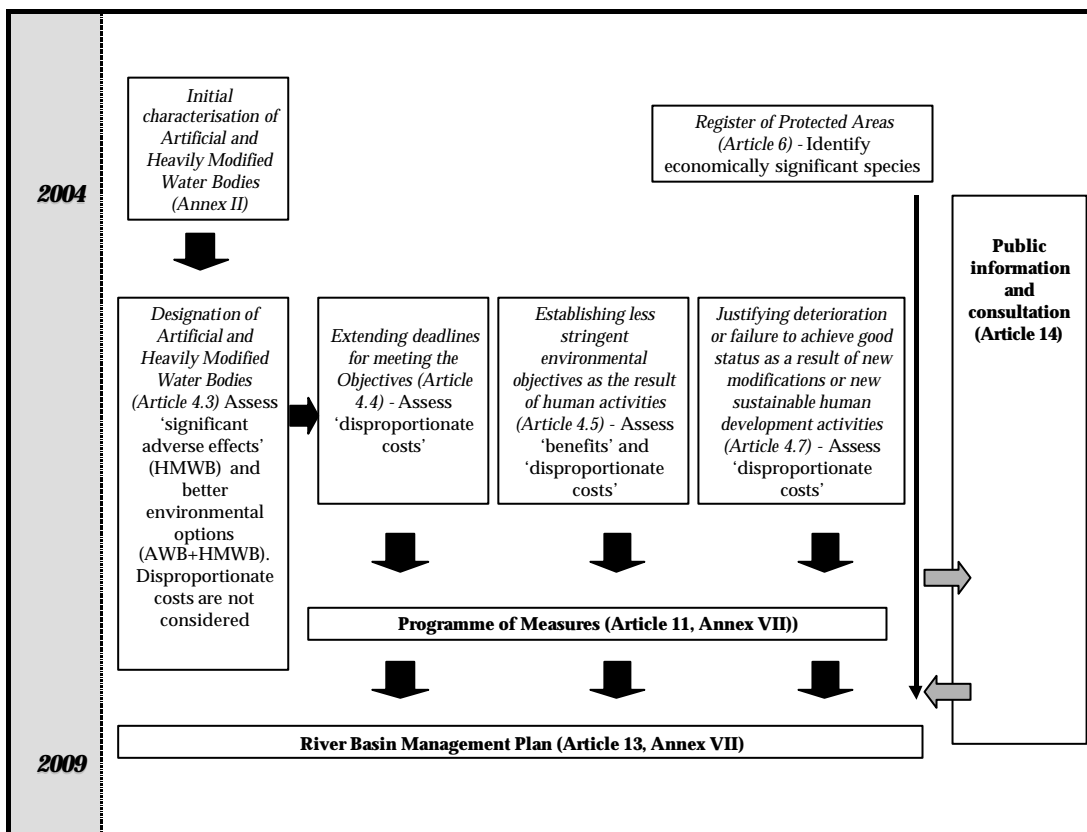
Look out! The economic analysis undertaken by 2004.

2004 is the first major deadline aimed at characterising river basin districts as referred to primarily in Article 5 and relevant annexes of the Directive. Therefore, 2004 is also the first milestone for the economic analysis that requires for each river basin district to:

- Undertake **the economic analysis of water uses** – the main objective is to assess how important water is for the economy and socio-economic development of the river basin district. The analysis needs to pave the way for the identification of significant water issues to be reported to the public by 2007;
- Investigate the dynamics of the river basin and providing economic input into the **development of a baseline scenario** – The economic analysis will assess forecasts in key economic drivers likely to influence pressures and thus water status,

- Assess **current levels of recovery of the costs of water services**, in accordance to Article 9 of the Water Framework Directive – The main elements to be investigated include the status of water services, the extent of the recovery of the costs (financial, environmental and resource costs) of these services, the institutional set-up for cost-recovery and the contribution of key water uses to the costs of water services;
- Prepare for the **cost-effectiveness analysis** – It is suggested that data are collated on costs for the key measures that will be considered, after 2004, in the development of the river basin management plans.
- Propose activities **for enhancing the information and knowledge base** - Practical steps and measures will be identified for filling key economic-related information and knowledge gaps, both identified during the characterisation of the river basin and likely to arise when undertaking the cost-effectiveness analysis.

The implicit economic functions of the economic analysis



Source: WATECO Guidance.

5.3 Second component: Setting up of the environmental objectives

The second component in the implementation of the planning process includes the setting up of the **environmental objectives** mainly based in Article 4 of the WFD (see Annex 2).

The Directive specifies the following principal environmental objectives for surface water bodies:

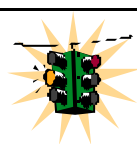
- to prevent deterioration in their status ;
- to restore to good surface water status (or good ecological potential for heavily modified and artificial water bodies) by 2015; and
- to implement the necessary measures with the aim on progressively reducing pollution from priority substances and ceasing or phasing out emissions, discharges and losses of priority hazardous substances.

For groundwater:

- to implement the measures necessary to prevent or limit the input of pollutants into groundwater and to prevent the deterioration of the status of all bodies of groundwater;
- to protect, enhance and restore all bodies of groundwater, ensure a balance between abstraction and recharge of groundwater, with the aim of achieving good groundwater status on December 2015 at the latest; and
- to implement the measures necessary to reserve any significant and sustained upward trend in the concentration of any pollutant resulting from the impact of human activity in order to reduce pollution of groundwater progressively.

For protected areas:

- to achieve compliance, by December 2015 at the latest, with specific standards and objectives specified in the Community legislation under which the individual protected areas have been established
- to achieve compliance with good status objectives by December 2015, unless delay or less stringent objective if all the necessary improvements in the water status cannot reasonably be achieved within 2015.



Look out! Classification schemes.

Ultimate aim of the WFD is the achievement of “good water status”.

*The status of **surface water bodies** will be determined by the poorer of its chemical or ecological status.*

Chemical status describes whether or not the concentration of any pollutant exceeds standards that have been set at the European level

Ecological status is principally a measure of the effects of human activities to water.

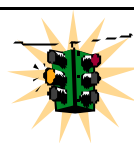
*The status of **groundwater bodies** will be determined by the poorer of its chemical and quantitative status.*

Quantitative status is an expression of the degree to which a body of groundwater is affected by direct and indirect abstractions.

The main aim of the definition of environmental objectives is to set goals and targets and then serve as the foundation of the decision on programme of

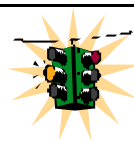
measures. Goals and targets should fix into a long-term vision for the RBD, and be seen as steps to achieve the vision via a concrete planning process.

In certain circumstances, different objectives may be specified through the river basin planning process, e.g. for water bodies for which the restoration of good status would be technically unfeasible or disproportionately expensive. For surface waters designated as heavily modified or artificial, the status objectives that must be achieved by 2015 are good ecological potential and good surface water chemical status.



Look out! Boundaries have to be defined for every ecological region.

The intercalibration process developed by the European Commission will be the key element to define high ecological status and boundaries between high and good, as well as good and moderate. There is a specific guidance document on the basis to create the intercalibration network developed by WG 2.5.



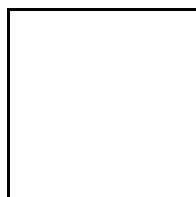
Look out! Classification for heavily modified and artificial surface water bodies.

Despite being designated as heavily modified, water bodies still have to achieve good chemical status and good ecological potential.

Maximum Ecological potential defines the reference conditions considering all mitigation measures which do not have a significant adverse effect on specified uses or the wider environment.

Good ecological potential is defined as a “slight” shortfall from the maximum ecological potential these bodies can achieve.

The setting of the environmental objectives can be considered as one of the core components of the implementation of the WFD and also of its planning process. As explained before, setting the objectives in the context of the WFD means taking decisions on using the different options of Article 4. The definition of environmental objectives is not only a question of what exactly the status of a certain water body (and not that of an entire basin) should be but also a question of when this status should be achieved. Thus, the expression of setting of objectives is used in order to make a distinction between what is defined as objectives in the WFD itself and what is at the discretion of the river basin authorities. As the process required by Article 4 is very complex, it was felt useful to provide in this guidance a more detailed explanation of the implementation tasks to be carried out and the steps to be taken in the form of a sketch included below.



5.4 Third component: Establishment of monitoring programmes

Monitoring is a task that is greatly related to the risk assessment and to the evaluation of the effectiveness of the measures taken to achieve the environmental objectives in the planning process. Specific requirements for monitoring can be found in Article 8 (see Annex 2).

The Directive, in its Annex V, describes three types of monitoring programmes with different information purposes:

- **Surveillance monitoring** that is mainly devoted to improve the assessment of which bodies are at risk of failing to meet the Directive's objectives and which are not. It includes monitoring of surface water bodies and the chemical status and pollutant trends of groundwater bodies.
- **Operational monitoring** that is exclusively focused on those water bodies that, on the basis of the risk assessments and the surveillance monitoring programmes, are at risk of failing to meet the Directive's environmental objectives. Operational monitoring has to be based on indicators that are sensitive to the identified pressures. This program should also include monitoring of groundwater levels to assess groundwater at risk according to their quantitative status.
- **Investigative monitoring** is to be used to ascertain the response why a water body is at risk and it should help to design the appropriate management measures.

Look out! Under the Common Implementation Strategy a specific guidance document have been developed on monitoring for the WFD (WG 2.7

By the end of 2006, the Directive requires the implementation of the monitoring programme (article 8) for surface and groundwater. The monitoring of the water status is to be operational in 2006. It particularly includes the definition of reference sites and water status evaluation grids and the performance of comparative analyses on the European level (intercalibration). The monitoring systems shall be made to comply with the requirements of the Directive and the monitoring programme shall be operational by 2006.

5.5 Fourth component: Gap analysis

Gap analysis has to take account of the results carried out in the assessment of the current status (first step) comparing them with the environmental objectives (defined in the second step).

Look out! Gap analysis must be developed having in mind that the Directive is broader and more ambitious than the former European water legislation.

Previous European water legislation set objectives to protect particular uses of the water environment from the effects of pollution and to protect water environment from specially dangerous substances. The Directive introduces broader ecological objectives, designed to protect and where necessary, restore the aquatic ecosystems.

Effective gap analysis requires sound data, information and knowledge. To increase the effectiveness of the activity this information usually has to be aggregated for example in the form of indicators and systems for benchmarking. In fact, existing information is often sufficient to get started, but difficult to assemble and integrate. One key element is to assess what is available versus what information is really needed.

Look out! RBD characterisation is mainly to support gap analysis

Gap analysis tools should be considered at early stage to design the current status assessment Tools as GIS, expert systems, mathematical models, etc are useless for gap analysis if accurate data is not available.

Different analytical tools can support the analysis but it must not be forgotten that gap analysis can not rely on quantitative information only. Moreover, these methods should be transparent and flexible, promoting public participation and facilitating negotiation processes

Look out! The results from gap analysis will give elements to elaborate the overview of main significant issues for water management in the district (required by Article 14(1)).

5.6 Fifth component: Setting up of the programme of measures

The fifth component in the implementation of the planning process is the establishment and implementation of the programmes of measures. The Directive requirements are in Article 11 (See Annex 2 of this Guidance document).

WFD requires river basin plans to integrate the management of water quality and water resources and surface and groundwater management in order to meet the environmental objectives.

The programme of measures to be established by the end of 2009 will consist in defining, for each district, the regulatory provisions or *basic measures* to be implemented in order to achieve the objectives defined for 2015 by the

management plan in accordance with Community and/or national laws (e.g. extension of sensitive or vulnerable areas, reporting and authorization system, definition of resource protection areas, discharge control etc.). These measures also include pricing measures taken to provide users with incentives to manage water more efficiently. Measures may be decided on the national level.

If the aforementioned provisions do not suffice to achieve the set objectives, *supplementary measures* shall be taken. The Directive provides a non-exclusive list of such measures, which are aimed at either reinforcing the previous provisions or setting up new provisions such as good practices codes, voluntary agreements, economic and tax instruments etc. *Additional measures* have also been defined. They particularly relate to the implementation of international agreements.

In international RBDs the implementation of the programmes of measures should be coordinated for the whole of the river basin district for the significant water management issues identified. For river basins extending beyond the boundaries of the Community, Member States should endeavour to ensure the appropriate coordination with the relevant non-member states.

Look out! Coordination must be ensured from the very beginning of the planning process.

IT IS NOT POSSIBLE TO COORDINATE PROGRAMMES OF MEASURES OF RIVER BASIN MANAGEMENT PLANS WITHOUT A COORDINATED ANALYSIS AND REVIEW OF THE STATUS, COORDINATED MONITORING PROGRAMMES, COORDINATED ASSESSMENT AND COORDINATED APPROACHES FOR THE INVOLVEMENT OF THE PUBLIC. THEREFORE, COORDINATION MUST BE ENSURED FROM THE VERY BEGINNING OF THE PLANNING PROCESS. ONE POSSIBLE APPROACH THAT COMPETENT AUTHORITIES COULD TAKE IS TO DEVELOP A COORDINATION NETWORK, WORK PLAN AND A TIME TABLE INDICATING THE VARIOUS COORDINATION STEPS WITHIN THE PLANNING PROCESS.

Basic measures include the so called combined approach (Article 10). This means that water policy should be based on using control of pollution at source through the setting of emission limit values and of environmental quality standards. For example, for point source discharges liable to cause pollution, basic measures can be a requirement for prior regulation (i.e. a prohibition on the entry of pollutants) or a requirement of authorisation or registration laying down emission controls for the pollutants concerned. For diffuse sources liable to cause pollution, basic measures are to prevent or control the input of pollutants or prior regulation, authorisation or registration in a similar way to point source discharges. Prohibition of direct discharges of pollutants into groundwater is a basic measure subject to some provisions – use for geothermal purposes, injection for mining activities, construction, civil engineering and so on – that are listed in Article 11 (j).

Article 10(1) (combined approach for point and diffuse sources) refer to a range of directives such as Integrated Pollution Prevention and Control (IPPC) (96/61/EC), Cadmium Discharges (85/513/EEC), Mercury Discharges (82/176/EEC) and nitrates, and any future relevant directives. Controls required by these directives must be established by 2012 at the latest (the same date that programmes of measures must be operational), unless otherwise specified in the legislation concerned. These parts of article 10 therefore have no additional effect to what is required by the directives to which they refer.

Article 10(3) specifies that where different quality objectives or quality standards have been established according to the different directives referred to in article 10, and they require stricter conditions than those which result from the application of article 10, the emission controls must be tightened. Therefore, if the application of the environmental quality standard approach required tighter controls on emissions than would otherwise be the case, those controls would need to be tightened.

As it is mentioned in preamble 38, the principle of recovery of the costs of water services, including environmental and resource costs associated with damage or negative impact on the aquatic environment should be taken into account in accordance with, in particular, the polluter-pays principle. An economic analysis of water services based on long term forecast of supply and demand for water in the river basin district will be necessary for this purpose.

The Directive aims to ensure that pricing policies improve the sustainability of water resources. Within this broad framework, water charging policy already meets the water charging provisions in WFD, which require water pricing policies to perform the following functions by Dec 2010:

- take account of the principle of the recovery of costs of water services, including environmental and resource costs;
- embody the “polluter pays” principle;
- provide adequate incentives to use water resources efficiently;
- ensure that water use groups (separated into at least industry, households and agriculture) make an adequate contribution to the recovery of the cost of water services.

WFD requires the “principle of recovery of the costs of water services” to be taken into account. It also requires that an adequate contribution of the different water uses be made to the recovery of the costs of water services.

Very often, water users, as customers of the companies who supply water and sewerage services, already in aggregate meet the financial costs of their services. The industry not subsidised, and all costs placed on the water and sewerage companies have to be recovered from the customers.

As well as meeting in full the aggregate costs of water services, the breakdown of the aggregate costs among water customers broadly reflects both a division between sectors of water users and the polluter pays principle.

Basic measures must ensure good water quality in the supply for the population including the identification of waters used for the abstraction of drinking water. Drinking water quality must be safeguarded in order to reduce the level of purification treatment.

The obligation in the Directive requires the adoption of a programme of measures to meet the requirements of article 7 and additionally to safeguard water quality in order to reduce the level of water treatment required for the production of drinking water.

The general requirement of article 7 is the identification, within the river basin districts proposed, of water bodies that are used or are intended to be used for human consumption. The requirement applies to both surface waters and groundwaters where the rate of abstraction exceeds 10 m³/d and will therefore apply to public water sources and some private water sources. Article 7 also requires monitoring of water sources where the rate of abstraction exceeds 100 m³/d.

Article 7 also requires that all waters intended for human consumption meet the objectives of article 4 for surface waters and groundwaters. In addition surface waters must meet additional quality standards prescribed in article 16. Member States are required to ensure that under the treatment regimes applied, drinking water produced meets the requirements of the Directive on the Quality of Water Intended for Human Consumption (80/778/EEC) as amended (98/83/EC).

The final provision of article 7 is the requirement to ensure that the necessary protection for the water bodies identified is provided, with the aim of avoiding deterioration in their water quality, in order to reduce the level of water treatment required. Article 11 requires that the measures to be taken for the protection of each river basin district are specified within a programme.

Basic measures must deal also with controls over relevant abstractions of fresh surface water or groundwater and impoundment of fresh surface water and artificial recharge or augmentation of groundwater bodies. For water quantity, overall principles should be laid down for control on abstraction and impoundment in order to ensure the environmental sustainability of the affected water systems.

The obligation in WFD in respect of the abstraction of fresh surface water and groundwater has four parts to it:

- there must be controls over abstraction of fresh surface water and groundwater;

- a register of abstractions (but not impoundments) must be maintained;
- abstraction must have prior authorisation;
- controls must be periodically reviewed and, where necessary, updated.

The philosophy of the approach in WFD to regulating abstraction is “risk-based”. Consequently, in the case of abstraction, the Directive does not provide for generic exemptions from controls on the basis of purpose, location, source or size of the abstraction. Rather, following the “risk-based” principle and according Article 11(3)(e), abstractions that have no significant impact of water status can be exempted from control.

Look out! The programme of measures can be phased in order to spread the costs of implementation.

The Directive includes a number of provisions that allow for derogation from the environmental objectives for legitimate economic and technical reasons. This will help Member States to strike a balance between environmental, economic and social goals. Justification for the use the derogation must, in all cases, be included with the RBMP.

5.7 Sixth component: Development of the River Basin Management Plans

A management plan must be produced for each river basin district. The milestone of the river basin planning process (analysis, monitoring, objective setting, consideration of measures to maintain or improve water status) is the RBMP which will summarise the relevant planning information for its river basin district.

Indeed the outcome of the planning process is not the RBMP : the planning process continues after the elaboration of the RBMP. After the publication of the RBMP the planning process enters in a concrete phase in which the RBMP is followed and the programme of measures is applied. In this phase, the role of the planning process is to guide the implementation of measures in a appropriate way so to reach the objectives. Besides the first RBMP will be followed by updated RBMP in the next management cycles.

One way of thinking about the first generation RBMPs is to regard them as representing the transition between initial analysis and implementation, i.e. they are to be adopted after having worked out what the current situation is (both terms of the state of the environment and the pressures on it), and having determined where the Member States is aiming to get to (what the objectives should be for specific water bodies) and having decided how the Member State is going to get to there (a summary of the programme of measures).

The plans are not the principal mechanism for implementing measures to achieve the environmental obligations imposed by the Directive. Those measures are to be set out in the programme of measures required by article 11 that is to be adopted for each river basin district. Programmes of measures will then be summarised in the relevant RBMP. The role of RBMPs is rather broader than this. For example, they are to be the primary vehicle for consulting the public and stakeholders on plans for managing the water environment within the river basin district.

The plans will also be, ultimately, the main reporting mechanism to the Commission and to the public. The plan will be a summary of how the objectives set for the river basin (ecological status, quantitative status, chemical status and protected area objectives) are to be reached within the timescale required.

The plan will include a summary of the results of the analyses; the characteristics of the river basin; a review of the impact of human activity on the status of waters in the basin; estimation of the effect of existing measures and the remaining “gap” to meeting those objectives; and, what more is required.

The plans must include the information detailed in annex VII of WFD. This is split into 12 parts, which are summarised in the box below.

Contents of the RBMP

- General description of the characteristics of the river basin district, including a map showing the location and boundaries of surface water bodies and groundwater bodies and a map showing the different surface water body types within the river basin.
- Summary of significant pressures and impact of human activity on the status of surface water and groundwater, including estimations of point source pollution, diffuse source pollution (including a summary of land-use) and pressures on the quantitative status of water including abstractions, and an analysis of other impacts of human activity on the status of water.
- Map identifying protected areas
- Map of the monitoring network
- Presentation in map of the results of the monitoring programmes showing the ecological and chemical status of surface water, the chemical and quantitative status of groundwater and the status of protected areas.
- List of the environmental objectives established for surface waters, groundwaters and protected areas, including where use has been made of the derogations
- Summary of the economic analysis of water use

- Summary of the programme or programmes of measures.
- Register of any more detailed programmes and management plans and a summary of their contents
- Summary of the public information and consultation measures taken, their results and the changes to the plan as a consequence
- List of competent authorities
- Contact points and procedures for obtaining background documentation and information, including actual monitoring data.

Look out! The River Basin Management Plan summarises the results of the planning process.

A RBMP is a strategic planning document and an operational guide to implement programmes of measures that will form the basis for integrated, technically, environmentally and economically sound and sustainable water management within a River Basin District for a period of six years. It will be developed in consultation with the public.

In conclusion, the plan has a number of functions, but primarily it is intended to record the current status of water bodies within the river basin district and to set out, in broad terms, what measures are planned to meet environmental objectives.

The functions of the plan are to:

- serve as a fundamental inventory and documentation mechanism for information gathered according to the directive including, e.g.:
 - environmental objectives for surface waters and ground waters,
 - information on quality and quantity of waters,
 - information on main impact of human activity on the status of surface water and ground water bodies,
- co-ordinate programmes of measures and other relevant programs concerning the area of river basin district,
- serve as main reporting mechanism of river basin district authorities to EC.

The plan, to be published by 22 December 2009, shall finalize the quality and quantity objectives to be achieved by 2015. The objective of good water status being the rule, the management plan must justify any derogation from that objective, particularly on the basis of an economic analysis. Derogations shall first be studied from the viewpoint of postponing the deadline, followed by a change in the objective if necessary. The plan shall define the provisions and action

priorities (or measures in the terminology of the Directive) to be implemented in order to achieve the set objectives.

With regards to the preparation of the management plan, the Directive provides for consultation with the public at three stages – the first time before the end of 2006, as regards the planned work programme, the second time before the end of 2007, as regards the significant issues and the third before the end of 2008, as regards the draft management plan.

	Look out! <i>The Directive only requires a summary of programmes of measures to be included in RBMPs.</i>
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Article 13 paragraphs 1 to 3 of the WFD require one RBMP for each river basin district. Annex VII lists the information to be included in the RBMP. According to Article 13 paragraph 5, the RBMP can be supplemented by producing more detailed programmes or management plans for sub-basins, sectors, issues, or water types.

Planning levels

Member States need to set out how river basin planning can be effectively co-ordinated at all levels (sub basin, basin, District and international District) to ensure that the plans are

- coherent and consistent at each level and
- compatible between levels.

Although river basin planning should be organised (and reported) at a River Basin District level, the detail required for management decisions will mean that planning will need to be carried out at a lower spatial scale. For example, it may be necessary to collate and review data at a basin/sub-basin level in order to make planning decisions. The data, information and decision making should be capable of aggregation and disaggregation. This will facilitate the straightforward production of the Characterisation Report and River Basin Plan at District level. It will also help to ensure transparency. For example, users of the River Basin Plan – government, industry, public etc - may want to examine and compare plans at the same level and between levels.

The Directive contains a definition for “sub-basin” (article 2(14)). These are distinct parts of a basin (sometimes referred to as “sub-catchments”). WFD does not require sub-basins to be identified and plans to be produced for them, but where they are identified and plans are produced for the purposes of the Directive, then

their existence has to be recorded on a register (as required in annex VII, paragraph 8), together with a summary of their contents.

In consequence, plans can be made for individual basins where a river basin district comprise more than one river basin. Article 13(5) of WFD is not absolutely clear on this point, but it would be impossible to prepare a district plan where more than one basin is involved, without building up the district plan based on basins.

But what does it mean to produce one RBMP?. In fact, there are various options and the choice among these options will to a large extent be influenced by the size and characteristics of the basin, the number of political entities (states, provinces, regions etc) involved, the way how co-ordination and the involvement of the public is organised in the River Basin District. For large River Basin Districts, but probably also for medium sized River Basin Districts with a decentralised administrative and political structure, sub-dividing the River Basin District into manageable sub-units could be necessary.

Regarding other planning instruments it is too soon to say what additional plans would be necessary, but they could have a valuable role in overall plan preparation, including consultative processes. On the other hand, they could come to represent an unwelcome administrative burden.

Look out! The target is a single River Basin Management Plan for international RBDs.

The directive requires the Member States to ensure coordination with the aim of producing a single international river basin management plan, with support from existing structures stemming from international agreements.

The Directive does not explicitly require of specify the process of developing the management plans. The nature of the river basin planning process is something that is at the discretion of Member and Accession States. This brings the opportunity to the Member and Accession States, to apply the appropriate planning type for the physical and social circumstances in River Basin District concerned, as long as the outcome of the process stays in line with the objective of the Directive (to achieve good water status).

5.8 Seventh and eighth components: Implementation of the programmes of measures and evaluation

The implementation of the programmes of measures has to be linked with a continuous process of evaluation. This evaluation has quite often been seen as a last - more or less additional - box in a planning process. However, evaluation has usually been done after the planning process to get feedback about what has actually been planned or even carried through already. This means that evaluation has not been used as a tool of continuous development and making choices or in other words as an ordinary part of a planning process.

Look out!

After implementing the programme of measures, the evaluation of the first planning period (to be made from 2012 to 2015) is the key element for the preparation of the second period.

The planning process according to WFD is iterative by nature and offers various steps and decisions which need to be evaluated: e.g. identification of water bodies, discrimination into types, analysis of the impact on the status of waters, setting environmental objectives etc.

5.9 Ninth component: Information and consultation of the public, active involvement of interested parties

Public Participation is not only another step in the process. Best practices in the implementation of the WFD can be only reached if public participation is taken in mind in every component. A more detailed guidance on public participation has been produced as the so called “Work package 3” under the same working group that has developed this guidance on planning process

That guidance document on Public Participation:

- explains why stakeholders should engage in river basin management planning and what can be expected by them and the general public: to voice opinions and concerns about future decisions and to ensure that relevant locally-held knowledge finds its way to the right decision platform,
- outlines practical opportunities and approaches for engaging at different levels and at different stages of planning,
- clarifies, that this is a new process and a new form of partnership which requires patience and mutual trust.

Public consultation and involvement are crucial for successful planning, and must therefore be highlighted in this chapter. The potential benefits of greater stakeholder can be summarised as follows:

- RBMPs are likely to be more successful through achievement of “buy-in” to their objectives and delivery by promoting “ownership”, acceptability and the co-operation of relevant stakeholders.
- Decision making is likely to be more efficient through earlier identification and, where possible, resolution of conflicts.
- Solutions are likely to be more sustainable and equitable through the input of a wider range of knowledge and perspectives.
- In the longer term, relationships between competent authorities and stakeholders are likely to be strengthened.

In order to achieve best practice in the planning process, high priority must be given to establishing effective mechanisms for public participation (consultation and active involvement) in planning and decision-making, right from the start of the IRBM process.

Provision of genuine opportunities for participation means far more than simply distributing information or setting up a consultation exercise, and needs to be carefully adapted to the appropriate scale, target group(s) and issue(s). Participation initiatives must be managed carefully to ensure that they are transparent and accessible, that all opinions are respected and that expectations from all sides are clear at the beginning.

Coordination and public participation

It is necessary to distinguish between administrative co-ordination and public participation. Administrative co-ordination should be treated as a managerial process, and public participation as an integral part of the planning process.

Effective river basin planning will require the Competent Authority to establish the appropriate management structures with other relevant authorities and organisations. These relationships will help to provide the Competent Authority with information for characterisation, input to planning and delivery of the Programme of Measures with organisations responsible for other sectors that have an impact on water status e.g. agriculture and land-use development. Administrative co-ordination should be organised between the Competent Authority and relevant bodies at the appropriate scale (sub-basin, basin, district and international district).

Section 6. General overview and overall flowchart on the planning process

6.1 Introduction: Why and how to use flowcharts in the planning process?

The role of flowcharts in the definition of a planning process for the WFD implementation

Defining a precise planning process with flowcharts for the implementation of the WFD is necessary on account of :

- the complexity of the WFD and its implementation
- the necessity to anticipate the obligatory deadlines and determine the deadlines which are necessary in practice to meet the obligatory deadlines
- numerous interdependent tasks
- urgency regarding the first deadlines (2004)
- involvement of numerous working groups, numerous institutions, numerous stakeholders
- integration of several levels : European , national and districts working groups
- the necessity to have a common reference among stakeholders, among institutions
- the necessity to check during the process if we are late or not according to the deadlines which were defined.

Objectives of the flowcharts

The purpose of the definition of flowcharts describing the planning process is to

- identify the different tasks, their duration and links between them
- identify the different key products and key steps
- identify the actions or sub-tasks required to meet the requirements for the obligatory deadlines
- assess the organisational level at which they should be carried out
- build up a sequencing plan of these tasks and stages, compatible with both the technical preparatory constraints & the requirements of the directive
- identify the critical path for project scheduling and resources allocation.

Recommendations for the preparation and use of flowcharts

The overall flowchart presented in Section 6.4 below can be used as a starting point for developing a more detailed management project for the implementation of the Water Framework Directive in the River Basin Districts or part of them. It is ***strongly recommended*** to set up such a management project and to establish a controlling of its implementation. Such a management project can help to check

the coherence between River Basin Districts at national level and re-adjust the process if there is a gap between the forecast timing and the practical state of play.

At River Basin District level a more detailed breakdown of the level III task will be necessary taking into account the recommendations of the respective CIS Guidance Documents. Each single task has to be assigned to a responsible organisational entity or more than one organisational entity with a strong coordination between them. Deadlines have to be set for delivering the expected results taking into account the time needed for aggregation and co-ordination.

Example: The district review (Art. 5 and 6) has to be completed for December 2004 according to the deadline defined by the Water Framework Directive. In practice the draft district review has to be finished several months before to take into account the time needed for potential consultation and validation procedures.

Be aware that according to the reporting deadlines as defined by the Water Framework Directive information on the results of accomplishing certain tasks is required rather late in the process, mainly as part of the River Basin Management Plan. However, in most cases the task itself has to be implemented earlier in the process because the results are necessary for further steps.

Example: A first report on the results of the monitoring programmes has to be delivered as part of the River Basin Management Plan only in 2009. However, at River Basin level monitoring results will *inter alia* be necessary for the identification of the water bodies at risk of failing to meet the objectives which has to be done before defining the programme of measures by the end of 2004.

Be aware that implementing certain tasks will at a starting point require decisions on the approach to be followed by all organisations involved. To prepare such decisions will take time and resources. Furthermore these decisions usually will be taken at another organisational level than the operational one. This is a particular problem for international River Basin Districts where a co-ordination or even harmonisation of national approaches will have to be achieved.

Be aware that, although theoretically some activities cannot begin until others are finished, it will be necessary to begin these activities as early as possible and in parallel to meet the obligatory deadlines. As a consequence, an **iterative process** has to be put in place between such interlinked activities.

In other terms, in some cases, a “parallel” scheduling of tasks will have to be implemented rather than a sequential one.

Examples : Evaluation of the risk of failure to meet the environmental objectives (defined in terms of good status) and definition of what good status is: the first evaluation of the risk of failing to meet the objectives (line

33 of the flowchart) has to be made by using provisional classifications before the reference conditions and the class boundaries of the classification schemes are established; then the results of the first evaluation of water bodies can have an influence on refining the classification scheme.

Iterative elaboration of management plans and programmes of measures: the management plan should set the guidelines and priorities for the programme of measures; the measures will be detailed in the programmes of measures themselves which have to be developed in parallel with the preparation of the management plan.

The flowcharts can also be used as a starting point for developing national or River Basin District specific guidelines for implementing the tasks. For each of the listed tasks such guidelines could contain:

- a reference to the respective provisions in the Water Framework Directive and the national legislation;
- a description of the approach taken at national/district level to address the task, including recommendations concerning methods and tools to be used and reference to the CIS Guidance Documents;
- a list and description of materials and data already available and accessible (for example GIS-data sets, maps, monitoring data) and information on how to get access to the material and data;
- a description of the specific activities to be carried out by the respective responsible organisational entity;
- requirements concerning the documentation and presentation of results (text, spread sheets, maps, data format).

Such guidelines should provide all actors involved with the information necessary to understand the overall organisational setting (who is responsible for what?) and their specific role in the process.

The advantage of developing such guidelines are inter alia:

- It requires stock taking of what is already available.
- It helps to make the available information accessible to all actors involved.
- It helps to ensure coherence.
- It helps to assign responsibilities and to avoid double or parallel work.

Ensure a general coherence between tasks and between scales and levels

It is essential to ensure a general coherence of the general process, beyond the own objective of the specific tasks. The right succession of the tasks must be found in order to succeed in the elaboration of the final products. It is also necessary to ensure consistency of timetables between district, national and international levels.

Set up an iterative process

In theory, some activities cannot begin until others are finished. However, to meet the obligatory deadlines, it will be necessary to begin these activities as early as possible. As a consequence, an iterative process has to be put in place between both activities. In other terms, in some cases, a “parallel” scheduling of subtasks will be implemented rather than a sequential basis.

Examples :

- Evaluation of the risk of failure to meet the environmental objectives (defined in terms of good status) and definition of what good status is.
- The evaluation of the risk to fail to the objectives has to be made with draft evaluation grids of the good water status ; then these grids can be precised according to the results of the first evaluation of water bodies at risk
- Iterative elaboration of management plans and programmes of measures
- The management plan should set the guidelines and priorities of the programme of measures. The measures will be detailed in the programmes of measures itself.

Ensure follow up and coordination

The flowcharts need to be followed and updated all along the process and a coordination must be ensured

- between the national districts
- between the national and international districts
- between the national parts of international districts.

In the particular case of international districts, a specific coordination between the national parts of international districts must be ensured concerning timetables and succession of tasks, taking into account the time needed for the exchange of information and the consultation between the competent authorities of the national parts of international districts.

6.2 The legally binding timetable of the Water Framework Directive

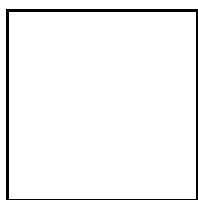
As explained above, one of the main interests for defining a precise planning process with flowcharts for the implementation of the WFD is the necessity to anticipate the obligatory deadlines and determine the deadlines which are necessary in practice to meet the obligatory deadlines. In principle, deviation from this timetable is not allowed and deadlines cannot be postponed, except for the derogations mentioned in Article 4.

As the WFD and its implementation are very complex, it was felt necessary to include in this guidance a readily understandable and exhaustive enumeration of all deadlines and dates mentioned in the WFD.

This is done in a schematic and graphical form as follows:

- In the first place, an exhaustive chart for Member States, which contains all deadlines and dates mentioned in the WFD regarding obligations for Member States. The flow-chart contains a reference to the specific WFD article in which the date is mentioned. Reporting dates are also explicitly indicated.
- Secondly, an exhaustive chart for the European Commission, which contains all deadlines and dates mentioned in the WFD regarding obligations for the European Commission.

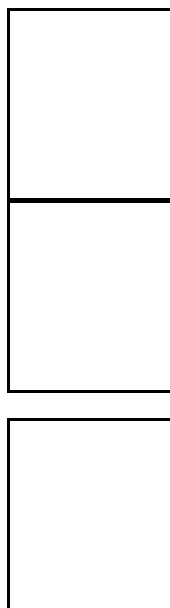
Legally binding deadlines for Member States

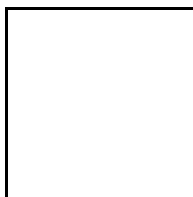


LEGEND

Deadline in the WFD

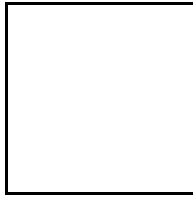
Reporting to the EC and date



Legally binding deadlines for Member States (2)

Note: For priority substances and according to Article 16.6, the Commission shall submit proposals of controls for the cessation or phasing out of discharges, emissions and bsses. Tentatively, the Commission is going to do that at the end of 2003, so, the European Parliament and the Council could adopt them in 2004 or 2005 that will be the starting date for operational purposes. The Directive establishes that from that date, the timetable shall not exceed the duration of 20 years.

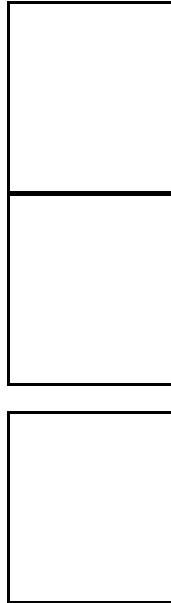
Legally binding deadlines for the European Commission



LEGEND

Deadline in the WFD

Reporting and date



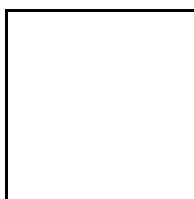
6.3 The planning cycle

The overall flowchart of the planning process presented in the following Section 6.4 includes the first so-called planning cycle required in the WFD to be finalised in 2015. Accordingly, the flowcharts apply to the first period (2002-2015) and the preparation of the second one (2015-2027), this second period being managed as the first one (same tasks and time schedule). It should be also noted that the second planning cycle until 2027 needs to be developed on the basis of the experience of the first cycle outlined below.

In order to develop the flowchart the following ten components of the planning process were considered:

1. Setting the scene.
2. Assessment of the current status and analyse preliminary gaps.
3. Setting up of the environmental objectives.
4. Establishment of monitoring programmes.
5. Gap analysis.
6. Setting up of the programme of measures.
7. Development river basin management plans.
8. Implementation of the programmes of measures and prepare the interim report on the implementation.
9. Evaluation the first and the second period.
10. Information and consultation of the public, active involvement of interested parties.

The following figure shows the sequence of and the relations between these activities as well as the main deadlines and milestones of the first planning cycle.



The previous chart is the most aggregated level information on the planning process : it indicates the 10 main components which are distinguished and developed in the following flowcharts (sub-section 6.4).

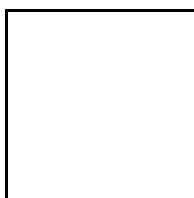
For every component, the main “steps” for the implementation of the WFD were identified and within each step, different implementation tasks could be again identified. Starting from the most aggregated level of information, three levels of details can finally be identified through components, steps and tasks.

At the scale at which these flowcharts were established, it was not possible to go into more details. However, river basin districts should develop their own flowcharts with a level of details more adapted to the scale at which they work.

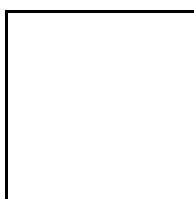
6.4 Overall flowchart for the planning process

The following overall flowchart for the WFD planning process lists the major steps to implement the Water Framework Directive, indicates linkages between the tasks, shows milestones and deadlines and includes recommendations on the overall timing for accomplishing the tasks. The chart is structured into three different levels. The first level mirrors the overall planning cycle and its main components as described in the previous section, the second level represents the main implementation steps whereas the third level indicates the specific tasks to be performed within the respective steps. The third level tasks are taken from the specific CIS Guidance Documents but not as detailed as the information provided by them. These specific tasks related to Guidance Documents are distinguished by different colours as shown in the legend below.

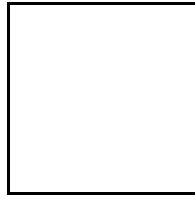
The following legend is used throughout the flowchart:



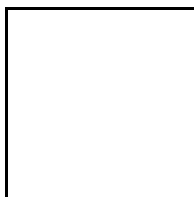
Flowchart for the first cycle of the planning process



Flowchart for the first cycle of the planning process (2)



Flowchart for the first cycle of the planning process (3)

**Notes:**

- The reporting deadline for tasks no. 22, 67, 86 and 88 is 22 March 2010, as part of the River Basin Management Plan.
- Tasks no. 59 and 60 are coordinated by the Working Group on Ecological Status and Intercalibration.
- Task no. 158 is related to the array of measures necessary to meet one of the main objectives of the WFD, which is to prevent further deterioration of the status of aquatic ecosystems (Article 1). Articles 4.3 to 4.9 have to be taken into account for the application of this principle. For the moment, in the flowchart and just for indicative purposes, an ongoing task is proposed throughout the whole first assessment and planning period until December 2009. Deadlines are subject to further consideration and they are not within the scope of this guidance. In fact, details of the time schedule of this issue will be dealt with in a Commission's specific document.
- Task n° 159. A specific guidance document has been produced on Public Participation as one of the outputs of Working Group 2.9, explaining in detail activities and deadlines.

6.5 Bottlenecks in the planning process

The analysis of the flowchart has allowed the identification of the so-called “bottlenecks” of the implementation of the Directive, i.e. the incongruities in planning that occur when comparing the official deadline requirements of the Directive with a pragmatic approach regarding the implementation. As a result of the scrutiny of the Directive by the Working Groups for preparing the guidances under the Common Implementation Strategy, several incongruities have been made explicit. This Guidance on planning has intended to bring together the activities and bottlenecks that have been identified by the different Working Groups of the Common Implementation Strategy.

All Working Groups have been confronted with the ambitious and legally binding timetable of the Directive. In principle deviation from the this timetable is not allowed and deadlines cannot be postponed, except for the derogations as mentioned in Article 4. Several Working Groups experienced on the one hand that the timetable is tight and leaves little time to go through the matter in to great depth and on the other hand that the chronological order of the deadlines is not always logical when dealing with the practical implementation. This combination often results in bottlenecks. The scope of this document is on the bottlenecks that primarily identify *timing-related* implementation problems. These are common for all Member States dealing with the implementation. Bottlenecks that occur due to lacking financial or technical means or institutional arrangements are often specific for a Member State or river basin due to priority-setting, habits and traditions and not covered explicitly by this document. However it is recognized that these “local” bottlenecks can be of interest to a wider public and can be added to this document at a later stage. During the preparation of the guidances so called “open issues” were identified by the Working Groups. Not all of these issues are related to planning and therefore not always mentioned here.

Some of the bottlenecks are indicated in the flowchart and are identified for the period until the first River Basin Management Plan in 2009. For each bottleneck identified an information sheet has been prepared which clarifies the bottleneck. For the moment the list is not exhaustive or finalized and will be completed later on in the Manual for Integrated River Basin Management to be developed by the "cluster group" as well as during the testing of Pilot River Basins which will be a part of the manual.

As a result of the above-mentioned preliminary analyses, the following bottlenecks have been identified :

- The lack of data for the first district review : need for existing information and data on pressures and impacts, need for a definition for the significant pressures, need for a translation between pressures and impacts, need for the baseline scenario before estimating the forecasted impacts, need to know the 2015 objectives to assess the risk to fail.

- Data on RC prerequisite for assigning ecologically relevant typology.
- Need to start monitoring potential RC sites before monitoring programmes are operational.
- Need for monitoring data from intercalibration sites for calculating EQRs.
- Evaluation of the testing and review of guidances is too late for the reporting on the status in 2005.
- Typology, reference conditions and class boundaries not available. Draft register based on expert judgement and (little available data).
- Finishing intercalibration exercise before monitoring programmes are operational.
- Pressed time schedule for assessing comments and reviewing document concerning the draft management plan.
- Simultaneously elaboration of the programme of measures and the management plan, with a summary of the programme within the plan.
- The 2004 review of the districts should be done with data and tools currently available, but these have to be used in a pragmatic manner in order to meet the requirements of the directive. Making the 2004 review is an opportunity to assess the lacking data and shortcomings to be resolved.

It can be observed that most bottlenecks can be reduced to a few basic issues or deadlines within the Directive:

1. Objectives to be achieved in 2015 are unclear. The Directive refers to the achievement of “good water status” in 2015 which can be defined by the help of Annex II and V. Still this information is general and needs to be elaborated and made operational for the several water types and/or water bodies which takes time and is planned to finish by 2004. This has as a consequence that it is hard to tell if a water body is at risk of failing the environmental quality objectives before 2004 (gap analysis) and which measures need to be taken.
2. Data availability: the monitoring programme does not have to be in place until 2006. This means that recent and complete information (measured values) on parameters that are of importance to the pressure and impact analysis, reference conditions, ecological class boundaries, intercalibration sites, and indirectly to the designation of heavily modified water bodies, will be available earliest in 2007. In combination with a low monitoring frequency the availability of this data is not optimal. As a consequence assumptions will be made about missing data which increases the uncertainties in the analyses and affects the validity of the assessments.
3. The publication of the *draft* River Basin Management Plan (RBMP) in 2008 in order to allow for comments of the public. This means that the RBMP (which officially has to be published in 2009) should be ready in quite an advanced state by the end of 2008 in order to give a realistic and truthful impression of the RBMP as it will be in 2009. Consequently it implies that activities for producing the contents of the plan should be wrapped up by 2008 which shortens the available time.

Some solutions for the bottlenecks are recommended in this document and can be divided into 3 principal types of solutions:

a. Anticipated deadlines

It is recommended to adopt a pragmatic approach for the setting up of intermediary and informal or anticipated deadlines for certain tasks if necessary so as to be able to meet in practice the obligatory deadlines required in the WFD.

The advancing of activities might help to meet the deadlines but also confronts the actors with an even tighter planning scheme. Member States might have different priorities and can shift or delete the informal deadlines accordingly. However for the international level good coordination on informal deadlines is recommended.

b. Use of existing information.

As existing information can be considered a range from expert judgement to existing monitoring data resulting from existing legislation. Also when using existing data, the collection and collation of data will require good coordination and a good deal of time. The information is usually neither readily available in one place nor in the right format.

In this context, a consultation to stakeholders and the scientific community can improve the existing data and/or help advance where gaps have been identified.

c. Preliminary exercises

It is recommended to perform preliminary exercises that are checked, refined and finalized later when more information will be available.

The combination of unclear objectives, missing data and the first major deadline in 2004 (Article 5) makes it nearly impossible to give a very exact assessment of the current water status and the risk of failing to meet the objectives. Therefore several Working Groups already considered the process being iterative and to do *preliminary* analyses and assessments, based on available data (if necessary assumptions) by 2004 and to check these assessments at a later stage when monitoring data become available. It is important to estimate the uncertainty of these preliminary exercises.

Note that this is a preliminary identification of the possible bottlenecks in the planning process. Testing in Pilot River Basins (PRB) will deal more deeply and at a more local scale with bottlenecks, since one of the main objectives is to check for inconsistencies between guidance documents. The results of testing will probably help to identify other bottlenecks and provide more information on the possible solutions. This new information could be integrated in further updated version of this Guidance on Planning Process, as it is considered as a “living” document.

From the bottlenecks listed above, the following have been developed into information sheets:

Number	Title
1	Gap analysis*
2	Intercalibration*
3	Public participation*
4	River basin management plan and programme of measures**

* Sheets provided in this guidance.

** Topic to be dealt with in more detail in the Manual for Integrated River Basin Management to be developed by the future "cluster group".

Bottleneck 1: Gap analysis: assessment of the likelihood that water bodies will fail to meet the environmental objectives

Related to	Data availability, objectives of the Directive	
Scale	General	
Sources	<ul style="list-style-type: none"> • WFD Annex II 1.4-2.5, (Annex V) • Guidance for the analysis of Pressures and Impacts in accordance with the WFD 	
Pilot River Basin testing	Yes	
Flow chart		
Explanatory text	<p>The role of the gap analysis (making use of the pressure and impact analysis and the baseline scenario) is to assess the likelihood that water bodies will fail to meet the environmental objectives of the Directive. It tells if there is a gap (and how big) between the current status of the water body and the good status that is to be achieved by 2015 This analysis is a central issue in the implementation of the Directive but not mentioned very explicitly in the main text (only Annex II 1.5).</p> <p>The bottleneck lies in the fact that the first pressures and impacts analysis must be complete by the end of 2004 while the environmental objectives of the Directive are not established yet. The objectives depend on issues such as the definition of ecological class boundaries and reference conditions (scheduled 2004) which in their turn need to be verified by the monitoring programme that won't be in place until 2006.</p>	
Recommendations	<p>Carry out a preliminary gap analysis by 2004, which gives a first insight in the water bodies at risk. A start can be made with the development of the Programme of Measures. Along the line, when more and more precise information becomes available this gap analysis shall be refined and measures adapted accordingly. While performing the preliminary gap analysis, one should be aware and take account of the uncertainties in the environmental conditions required to meet the Directive's objectives and the uncertainties in the estimated impact.</p>	

Bottleneck 2: Intercalibration

Related to	Data availability, objectives of the Directive	
Scale	General	
Sources	<ul style="list-style-type: none"> • WFD Annex V 1.4.1 • Guidance on establishment of the intercalibration network and on the process of the intercalibration exercise 	
Pilot River Basin testing	No	
Flow chart		
Explanatory text	<p>The aim of the intercalibration exercise is to compare between Member States types of water bodies which represent the ecological quality boundaries for high-good and good-moderate status. The result shall be expressed in ecological quality ratios (EQR).</p> <p>The intercalibration timetable does not match the implementation timetable of the Directive in the Member States. Crucial information for the intercalibration will be available during the progress in implementation. The major bottlenecks are:</p> <p>2.1) Water body types selected for intercalibration networks (2003) may not be compliant with water body types differentiated by Member States, because sites for the draft register are selected before the typology in Member States needs to be ready (2004); moreover the choice for parameters used for establishing the sites depends on choices made for reference conditions and ecological quality elements (ready earliest 2004);</p> <p>2.2) At present (2002) there is not sufficient data available to carry out a scientifically sound site selection, since not all parameters necessary for site selection have been monitored by Member States until now. The monitoring programme for the Directive will start in 2006, after the finalization of the intercalibration exercise.</p> <p>The objectives of the intercalibration exercise - agreement on class boundaries and harmonised classification systems - can be only partially met in the single intercalibration exercise that is required by the Directive. The intercalibration network established will not reflect the impacts of all pressures and all biological quality elements.</p>	
Recommendations	<ul style="list-style-type: none"> • Site selection targeted to water body types where most data is available. • Establish a review mechanism at a time when more data with better quality and compatible with the requirements of the Directive will be available (after 2006). • Clarify the legal possibilities and practical implications for such a revision. 	

Bottleneck 3.1: Public Participation

Related to	Publication of draft River Basin Management Plan (RBMP)	
Scale	General	
Sources	<ul style="list-style-type: none"> • WFD Article 14, Annex VII.9 • Guidance on Public Participation in relation to the WFD: active involvement, consultation and public access to information (para 2.6, 4.7) 	
Pilot River Basin testing	No	
Flow chart		
Explanatory text	<p>At the end of 2008 a draft copy of the RBMP shall be published and made available to the public. The public shall be given half a year (June 2009) to comment on this draft. Then the comments of the public shall be considered, when relevant incorporated in the plan, and the plan itself shall be finalized and published by 22 December 2009. In the plan it shall be indicated what consultation measures have been taken and what their results and changes to the plan as a consequence of the consultation have been made.</p> <p>3.1) Since there is scarcely time between June and December 2009 to change the RBMP (and strategy) based on the comments of the public, there is a risk that these comments will not be taken into account due to lack of time which is against the spirit and requirements of the Directive. This comment is to a lesser degree also valid for the consultation on the timetable and work programme and the overview of significant water management issues.</p>	
Recommendations	<ul style="list-style-type: none"> • Consult and inform (if even possible: to involve) the public more intensively at an earlier stage, this will help to overcome surprises and can prevent a too large adaptation of the RBMP at a later stage. • Publication of the draft RBMP at an earlier stage, this however will often be difficult since it shortens the duration of other activities. • Another possibility would be to organize the two first public consultations before the obligatory deadlines (respectively 2006 and 2007 at the latest). This would allow more time to prepare and organize the third public consultation on the draft RBMP and then, to take account of the comments, which will be probably more numerous than for the two previous consultations. 	

Bottleneck 3.2: Public Participation

Related to	Institutional aspects
Scale	International River Basin Districts (RBD), Member States
Sources	<ul style="list-style-type: none"> • WFD Article 14, Annex VII.9, Article 13.2 • Guidance on Public Participation in relation to the WFD: active involvement, consultation and public access to information (Section 4)
Pilot River Basin testing	Yes (?)
Flow chart	-
Explanatory text	Several documents shall be presented to the public for information and consultation. Also background information shall be available on request at the contact points listed in the RBMP. Member States need to plan in advance how to reach the public, where to collect the comments, how to process the comments and at what level these activities will take place. Especially international River Basin Districts, which are often dealing with several languages and with local public which is confronted with international/transboundary matters, should think twice about how to organize this.
Recommendations	<p>The solution is different for every Member State or RBD. The following questions might help to orientate:</p> <ul style="list-style-type: none"> • Should the public be confronted with (detailed) information of the whole area to which the RBMP refers? Or should tailor-made information be prepared, targeted to that part of the area where the public is affected and most likely interested in? Recognize that measures taken in one area can have an effect somewhere else. • Will there be one central contact point to obtain background information for the whole area where the plan refers to, or several local ones? How are these points communicated to the public? • Shall the comments of the different consultation rounds be collected and processed locally or at a central point? How will feedback to the public be organized? • Will Member States in an international RBD report one single plan for this RBD to the Commission (Article 13.2) or separately for each Member State?

Bottleneck 4: River basin management plan and programme of measures

Related to	Timing problems between the river basin management plan and the programme of measures
Scale	International River Basin Districts (RBD), Member States
Sources	<ul style="list-style-type: none"> • WFD Articles 11 and 13, Annex VII • Flowcharts for the planning process
Pilot River Basin testing	Yes
Flow chart	-
Explanatory text	<p>Necessity to have the programme of measures finished before the RBMP so to include the summary into the RBMP as required by Annex VII.</p> <p>This topic will be examined within the future activities of the Working Group Integrated River Basin Management.</p>
Recommendations	-

Annexes

Annex 1

Glossary

Annex 1 - Glossary

The following abbreviations are used throughout the text of this guidance:

AWB	Artificial Water Body
BAU	Business As Usual
BESTPRACT	Working group on BEST PRACTices in river basin planning
CAP	Common Agricultural Policy
COAST	Working group on typology, classification of transitional and COASTal waters
DPSIR	Driving forces, Pressures, States, Impacts, Responses
EAF	Expert Advisory Forum
EEA	European Environment Agency
EC	European Commission
EQR	Ecological Quality Ratio
GEP	Good Ecological Potential
GES	Good Ecological Status
GIS	Geographical Information System
GROUNDWATER	Working group on tools on assessment
HMWB	Heavily Modified Water Body
ICZM	Integrated Coastal Zone Management
IMPRESS	Working Group on the analysis of PRESSures and IMPacts
INTERCALIBRATION	Working Group on a protocol for INTERCALIBRATION
IRBM	Integrated River Basin Management
MEP	Maximum Ecological Potential
MS	Member States

NGO	Non-Governmental Organisation
PRB	Pilot River Basin
RBD	River Basin District
RBMP	River Basin Management Plan
RC	Reference Conditions
REFCOND	Working group on classification and REFERENCE CONDITIONS
WD	Water Directors
WFD	Water Framework Directive
TOC	Table Of Contents
TOR	Terms Of Reference
WATECO	Working group on (WATER) ECONOMIC analysis
WG	Working Group

Annex 2

**Preambles and articles of the Water Framework Directive relevant to
this guidance**

Annex 2 - Preambles and articles of the Water Framework Directive relevant to this guidance

The planning process in the preambles

Preamble 13

There are diverse conditions and needs in the Community which require different specific solutions. This diversity should be taken into account in the planning and execution of measures to ensure protection and sustainable use of water in the framework of the river basin. Decisions should be taken as close as possible to the locations where water is affected or used. Priority should be given to action within the responsibility of Member States through the drawing up of programmes of measures adjusted to regional and local conditions.

Preamble 28

Surface waters and groundwaters are in principle renewable natural resources; in particular, the task of ensuring good status of groundwater requires early action and stable long-term planning of protective measures, owing to the natural time lag in its formation and renewal. Such time lag for improvement should be taken into account in timetables when establishing measures for the achievement of good status of groundwater and reversing any significant and sustained upward trend in the concentration of any pollutant in groundwater.

Assessment on current water status

Article 5

Each Member state shall ensure that for each river basin district or for the portion of an international river basin district falling within its territory: an analysis of its characteristics, a review of the impact of human activity on the status of surface waters and on groundwater and an economic analysis of water use, is undertaken according to the technical specifications set out in Annexes II and III and that it is completed at the latest four years after the date of entry into force of this Directive.

Monitoring

Article 8

1. Member States shall ensure the establishment of programmes for the monitoring of water status in order to establish a coherent and comprehensive overview of water status within each river basin district:

- for surface waters such programmes shall cover:

(i) the volume and level or rate of flow to the extent relevant for ecological and chemical status and ecological potential, and

(ii) the ecological and chemical status and ecological potential;

- for groundwaters such programmes shall cover monitoring of the chemical and quantitative status,

- for protected areas the above programmes shall be supplemented by those specifications contained in Community legislation under which the individual protected areas have been established.

Economic analysis and recovery of the costs of water services

Article 9

1. Member States shall take account of the principle of recovery of the costs of water services, including environmental and resource costs, having regard to the economic analysis conducted according to Annex III, and in accordance in particular with the polluter pays principle.

Member States shall ensure by 2010:

- that water-pricing policies provide adequate incentives for users to use water resources efficiently, and thereby contribute to the environmental objectives of this Directive,

- an adequate contribution of the different water uses, disaggregated into at least industry, households and agriculture, to the recovery of the costs of water services, based on the economic analysis conducted according to Annex III and taking account of the polluter pays principle.

Member States may in so doing have regard to the social, environmental and economic effects of the recovery as well as the geographic and climatic conditions of the region or regions affected.

2. Member States shall report in the river basin management plans on the planned steps towards implementing paragraph 1 which will contribute to achieving the environmental objectives of this Directive and on the contribution made by the various water uses to the recovery of the costs of water services.

3. Nothing in this Article shall prevent the funding of particular preventive or remedial measures in order to achieve the objectives of this Directive.

4. Member States shall not be in breach of this Directive if they decide in accordance with established practices not to apply the provisions of paragraph 1, second sentence, and for that purpose the relevant provisions of paragraph 2, for a given water-use activity, where this does not compromise the purposes and the achievement of the objectives of this Directive. Member States shall report the reasons for not fully applying paragraph 1, second sentence, in the river basin management plans.

Definition of environmental objectives and gap analysis

Article 4

1. In making operational the programmes of measures specified in the river basin management plans:

(a) for surface waters

(i) Member States shall implement the necessary measures to prevent deterioration of the status of all bodies of surface water, subject to the application of paragraphs 6 and 7 and without prejudice to paragraph 8;

(ii) Member States shall protect, enhance and restore all bodies of surface water, subject to the application of subparagraph (iii) for artificial and heavily modified bodies of water, with the aim of achieving good surface water status at the latest 15 years after the date of entry into force of this Directive, in accordance with the provisions laid down in Annex V, subject to the application of extensions determined in accordance with paragraph 4 and to the application of paragraphs 5, 6 and 7 without prejudice to paragraph 8;

(iii) Member States shall protect and enhance all artificial and heavily modified bodies of water, with the aim of achieving good ecological potential and good surface water chemical status at the latest 15 years from the date of entry into force of this Directive, in accordance with the provisions laid down in Annex V, subject to the application of extensions determined in accordance with paragraph 4 and to the application of paragraphs 5, 6 and 7 without prejudice to paragraph 8;

(iv) Member States shall implement the necessary measures in accordance with Article 16(1) and (8), with the aim of progressively reducing pollution from priority substances and ceasing or phasing out emissions, discharges and losses of priority hazardous substances without prejudice to the relevant international agreements referred to in Article 1 for the parties concerned;

(b) for groundwater

(i) Member States shall implement the measures necessary to prevent or limit the input of pollutants into groundwater and to prevent the deterioration of the status of all bodies of groundwater, subject to the application of paragraphs 6 and 7 and without prejudice to paragraph 8 of this Article and subject to the application of Article 11(3)(j);

(ii) Member States shall protect, enhance and restore all bodies of groundwater, ensure a balance between abstraction and recharge of groundwater, with the aim of achieving good groundwater status at the latest 15 years after the date of entry into force of this Directive, in accordance with the provisions laid down in Annex V, subject to the application of extensions determined in accordance with paragraph 4 and to the application of paragraphs 5, 6 and 7 without prejudice to paragraph 8 of this Article and subject to the application of Article 11(3)(j);

(iii) Member States shall implement the measures necessary to reverse any significant and sustained upward trend in the concentration of any pollutant resulting from the impact of human activity in order progressively to reduce pollution of groundwater.

Measures to achieve trend reversal shall be implemented in accordance with paragraphs 2, 4 and 5 of Article 17, taking into account the applicable standards set out in relevant Community legislation, subject to the application of paragraphs 6 and 7 and without prejudice to paragraph 8;

(c) for protected areas

Member States shall achieve compliance with any standards and objectives at the latest 15 years after the date of entry into force of this Directive, unless otherwise specified in the Community legislation under which the individual protected areas have been established.

2. Where more than one of the objectives under paragraph 1 relates to a given body of water, the most stringent shall apply.

Programmes of measures

Article 11

1. Each Member State shall ensure the establishment for each river basin district, or for the part of an international river basin district within its territory, of a programme of measures, taking account of the results of the analyses required under Article 5, in order to achieve the objectives established under Article 4. Such programmes of measures may make reference to measures following from legislation adopted at national level and covering the whole of the territory of a Member State. Where appropriate, a Member State may adopt measures applicable to all river basin districts and/or the portions of international river basin districts falling within its territory.

2. Each programme of measures shall include the "basic" measures specified in paragraph 3 and, where necessary, "supplementary" measures.

3. "Basic measures" are the minimum requirements to be complied with and shall consist of:

(a) those measures required to implement Community legislation for the protection of water, including measures required under the legislation specified in Article 10 and in part A of Annex VI;

(b) measures deemed appropriate for the purposes of Article 9;

(c) measures to promote an efficient and sustainable water use in order to avoid compromising the achievement of the objectives specified in Article 4;

(d) measures to meet the requirements of Article 7, including measures to safeguard water quality in order to reduce the level of purification treatment required for the production of drinking water;

(e) controls over the abstraction of fresh surface water and groundwater, and impoundment of fresh surface water, including a register or registers of water abstractions and a requirement of prior authorisation for abstraction and impoundment. These controls shall be periodically reviewed and, where necessary, updated. Member States can exempt from these controls, abstractions or impoundments which have no significant impact on water status;

(f) controls, including a requirement for prior authorisation of artificial recharge or augmentation of groundwater bodies. The water used may be derived from any surface water or groundwater, provided that the use of the source does not compromise the achievement of the environmental objectives established for the source or the recharged or augmented body of groundwater. These controls shall be periodically reviewed and, where necessary, updated;

(g) for point source discharges liable to cause pollution, a requirement for prior regulation, such as a prohibition on the entry of pollutants into water, or for prior authorisation, or registration based on general binding rules, laying down emission controls for the pollutants concerned, including controls in accordance with Articles 10 and 16. These controls shall be periodically reviewed and, where necessary, updated;

(h) for diffuse sources liable to cause pollution, measures to prevent or control the input of pollutants. Controls may take the form of a requirement for prior regulation, such as a prohibition on the entry of pollutants into water, prior authorisation or registration based on general binding rules where such a requirement is not otherwise provided for under Community legislation. These controls shall be periodically reviewed and, where necessary, updated;

(i) for any other significant adverse impacts on the status of water identified under Article 5 and Annex II, in particular measures to ensure that the hydro-morphological conditions of the bodies of water are consistent with the achievement of the required ecological status or good ecological potential for bodies of water designated as artificial or heavily modified. Controls for this purpose may take the form of a requirement for prior authorisation or registration based on general binding rules where such a requirement is not otherwise provided for under Community legislation. Such controls shall be periodically reviewed and, where necessary, updated;

(j) a prohibition of direct discharges of pollutants into groundwater subject to different provisions(.../...)

(k) in accordance with action taken pursuant to Article 16, measures to eliminate pollution of surface waters by those substances specified in the list of priority substances agreed pursuant to Article 16(2) and to progressively reduce pollution by other substances which would otherwise prevent Member States from achieving the objectives for the bodies of surface waters as set out in Article 4;

(l) any measures required to prevent significant losses of pollutants from technical installations, and to prevent and/or to reduce the impact of accidental pollution incidents for example as a result of floods, including through systems to detect or give warning of such events including, in the case of accidents which could not reasonably have been foreseen, all appropriate measures to reduce the risk to aquatic ecosystems.

4. "Supplementary" measures are those measures designed and implemented in addition to the basic measures, with the aim of achieving the objectives established pursuant to Article 4. Part B of Annex VI contains a non-exclusive list of such measures.

Member States may also adopt further supplementary measures in order to provide for additional protection or improvement of the waters covered by this Directive, including in implementation of the relevant international agreements referred to in Article 1.

5. Where monitoring or other data indicate that the objectives set under Article 4 for the body of water are unlikely to be achieved, the Member State shall ensure that:

- the causes of the possible failure are investigated,
- relevant permits and authorisations are examined and reviewed as appropriate,
- the monitoring programmes are reviewed and adjusted as appropriate, and
- additional measures as may be necessary in order to achieve those objectives are established, including, as appropriate, the establishment of stricter environmental quality standards following the procedures laid down in Annex V.

Where those causes are the result of circumstances of natural cause or force majeure which are exceptional and could not reasonably have been foreseen, in particular extreme floods and prolonged droughts, the Member State may determine that additional measures are not practicable, subject to Article 4(6).

6. In implementing measures pursuant to paragraph 3, Member States shall take all appropriate steps not to increase pollution of marine waters. Without prejudice to existing legislation, the application of measures taken pursuant to paragraph 3 may on no account lead, either directly or indirectly to increased pollution of surface waters. This requirement shall not apply where it would result in increased pollution of the environment as a whole.

7. The programmes of measures shall be established at the latest nine years after the date of entry into force of this Directive and all the measures shall be made operational at the latest 12 years after that date.

8. The programmes of measures shall be reviewed, and if necessary updated at the latest 15 years after the date of entry into force of this Directive and every six years thereafter. Any new or revised measures established under an updated programme shall be made operational within three years of their establishment.

River Basin Management Plans and their reporting

Article 13

1. Member States shall ensure that a river basin management plan is produced for each river basin district lying entirely within their territory.

2. In the case of an international river basin district falling entirely within the Community, Member States shall ensure coordination with the aim of producing a single international river basin management plan. Where such an international river basin management plan is not produced, Member States shall produce river basin management plans covering at least those parts of the international river basin district falling within their territory to achieve the objectives of this Directive.

3. In the case of an international river basin district extending beyond the boundaries of the Community, Member States shall endeavour to produce a single river basin management plan, and, where this is not possible, the plan shall at least cover the portion of the international river basin district lying within the territory of the Member State concerned.

4. The river basin management plan shall include the information detailed in Annex VII.

5. River basin management plans may be supplemented by the production of more detailed programmes and management plans for sub-basin, sector, issue, or water type, to deal with

particular aspects of water management. Implementation of these measures shall not exempt Member States from any of their obligations under the rest of this Directive.

6. River basin management plans shall be published at the latest nine years after the date of entry into force of this Directive.

7. River basin management plans shall be reviewed and updated at the latest 15 years after the date of entry into force of this Directive and every six years thereafter.

Article 15

1. Member States shall send copies of the river basin management plans and all subsequent updates to the Commission and to any other Member State concerned within three months of their publication:

(a) for river basin districts falling entirely within the territory of a Member State, all river management plans covering that national territory and published pursuant to Article 13;

(b) for international river basin districts, at least the part of the river basin management plans covering the territory of the Member State.

2. Member States shall submit summary reports of:

- the analyses required under Article 5, and

- the monitoring programmes designed under Article 8

undertaken for the purposes of the first river basin management plan within three months of their completion.

3. Member States shall, within three years of the publication of each river basin management plan or update under Article 13, submit an interim report describing progress in the implementation of the plan.

Annex 3

**Members of the Drafting Group of this guidance and list of the experts
of Working Group 2.9**

Annex 3 - Members of the Drafting Group of this guidance and list of the experts of Working Group 2.9

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