



# The WFD

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European Union CARDS

# This Presentation

- Background WFD
- WFD differs from other directives
- A River Basin Approach, RBD
- Characterisation
- Programme Measures
- Monitoring
- Economic Principle
- RBMP
- Key Requirement for Implementation of WFD.
- WFD and IWRM

**Good Decision Making**

**Good Information Flow**

**RBMP**

**Legislation**

**Characterisation  
Report**

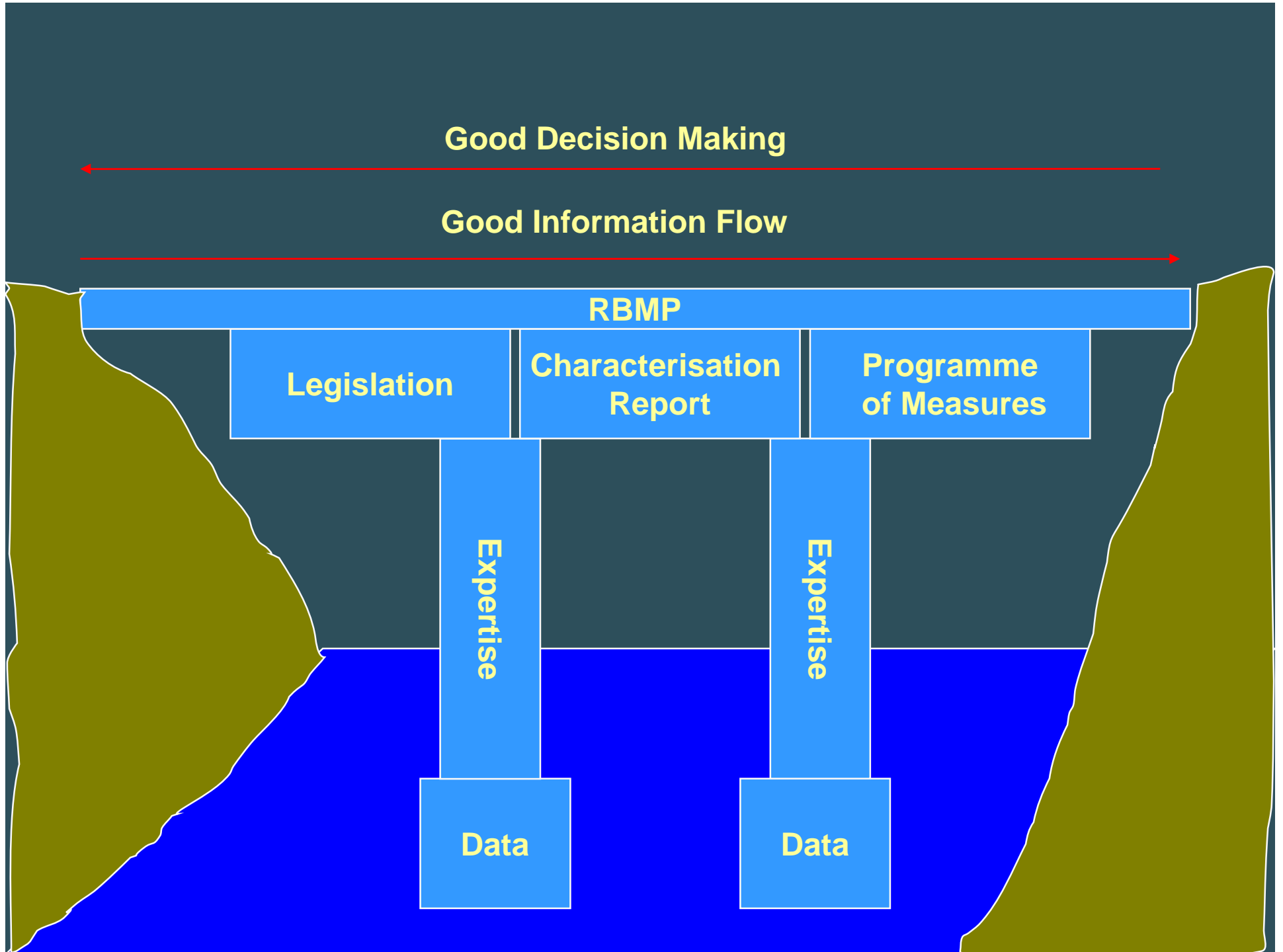
**Programme  
of Measures**

**Expertise**

**Data**

**Expertise**

**Data**



# Background

- There have been a number of European-level water policies before WFD.
- For instance, in 1975, a Surface Water Directive was introduced in order to improve water quality in Europe.

This was followed by

- a Drinking Water Directive in 1980 (amended in 1998).
- In 1991, the Urban Waste Water Treatment Directive and Nitrates Directive were approved.
- The Directive for Integrated Pollution and Prevention Control (IPPC), addressing pollution from large industrial installations was adopted in 1996

# Background

- u In 1988, the European Council decided to develop a more comprehensive European Water Policy.
- u The development of the new European Water Policy was undertaken by having an open consultation process involving interested parties such as local and regional authorities, water users and NGOs
- u The Commission published its first proposal in February 1997 and the Water Framework Directive was finally adopted by the European Parliament and the European Council in October in 2000.)



# Water Framework Directive

## u What's Different from previous Directives

- All waters, (rivers ,lakes canals, transitional, coastal waters, groundwaters)
- Deadline driven.
- Common Implementation Strategy (Guidance for implementation, Monitoring Intercalibration, Water policy – hydromorphology)



# WFD Objectives

- u Overall to achieve good water quality
  - Specifically to prevent deterioration of existing status of waterbodies
  - Protect, enhance and restore good status to groundwater and good ecological status to surface water



# Definition of River Basin

- u to achieve this objective, the WFD introduces, among other things, management according river basin.

WFD a river basin is defined as

- u “the area of land from which all surface run-off flows through a sequence of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta”





# River Basin Districts

- Article 3 of the WFD deals with the administrative arrangements for river basin management.
- According to this article, Member States should, by December 2003, have identified individual river basins and assigned them to River Basin Districts (RBDs).



# RBD

a 'river basin district' is defined as follows,  
"the area of land and sea, made up of one or more neighbouring river basins together with their associated ground waters and coastal waters, which is identified under Article 3(1) as the main unit for management of river basins"

- For each RBD, the Member States should ensure that appropriate administrative arrangements are made, including the appointment of a competent authority.



# RBD

- Member States are thus asked to coordinate “all programmes of measures” for the whole RBD “where use of water may have transboundary effects”.

This means that the Member States are

- encouraged to collaborate with neighbouring States whose territory falls within the same international river basin. Water resource management challenges can thus be assessed and addressed on the basis of a common strategy.
- In addition, a list shall be created, containing the information on the legal status, competences and international cooperation of the Competent Authorities

# RBD

The Common Implementation Strategy (CIS), it is stated that Member States may identify

- u one or several competent authorities per RBD, and if several authorities are appointed, coordination arrangements should be established.
- u If a river basin extends across international bodies the WFD specifically requires it to be assigned to an international RBD, with appropriate administrative arrangements in accordance with Article 3.
- u This demand is based on the fact that water bodies span national borders.



# Characterisation

- Based on the RBD as a spatial management unit, a **characterisation** in terms of pressures, impacts and the economics of water usage should be carried out (Article 5), and a **programme of measures** for achieving environmental quality standards drawn up (Article 11).



# What does Characterisation tell us?

- u Description of River Basin Districts
- u Preliminary identification of main pressures acting on waterbodies
- u Preliminary assessment of water bodies and risk of not achieving the WFD objectives
- u Provides a gap analysis - level of uncertainty
- u Indicates where further characterisation may be required



# Identification of Measures

- ❏ Characterisation Report identifies the key pressures
- ❏ Need to verify these pressures as being significant
  - The measures required may be costly and may have socio economic impacts
  - Further research work will probably be required.
- ❏ Measures need to be scientifically robust
- ❏ Stakeholders must be involved



# Monitoring

- u WFD sets out specific monitoring requirements
- u WFD Monitoring is purposeful in that
  - It reinforces the initial characterisation of the basins
  - The higher the level of uncertainty in characterisation the more monitoring required
  - It provides long term trend analysis of the basins
  - It demonstrates the effectiveness of the measures (this may require a very long time).
- u WFD Monitoring is costly
- u Must be cost effective and focused





# Monitoring

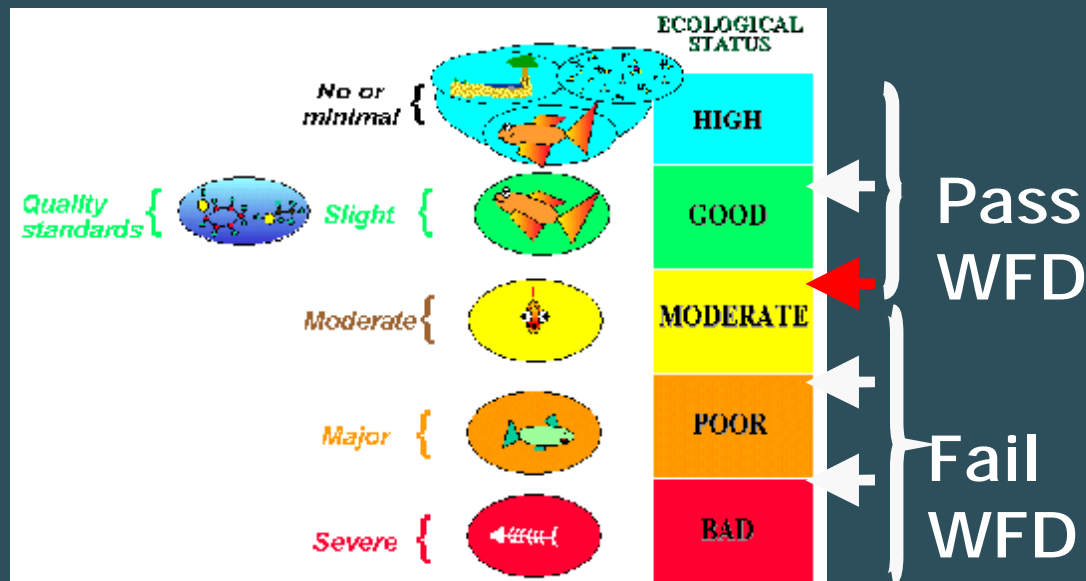
The directive specifies three types of monitoring.

- u **Long-term** surveillance monitoring- provides a broad understanding of the health of water bodies and tracks slow changes in trends such as those resulting from climate change.
- u **Operational monitoring**- focuses on water bodies which do not meet good status and on the main pressures they face –pollution where this is the main problem, water flow where extraction creates risks..
- u **Investigative monitoring** when they need further information about surface water bodies that cannot be obtained via operational monitoring, including information on accidents.
- u In addition to these three main types of monitoring, Member States need to carry out more **detailed analysis** in areas that are protected for drinking water or for natural habitats and species.



# Monitoring

The directive sets a five-class scale  
high, good, moderate, poor and bad status –  
and it requires Member States to achieve good  
status in all waters by 2015



# Monitoring

- u While prior European legislation considered chemical contamination in water, the directive provides a major innovation by addressing aquatic ecosystems as well.
- u Monitoring will now assess the health of ecosystems. This is a complex task, as ecosystems differ across Europe, and therefore an intercalibration process was required to ensure harmonised results



# Economic Principles

- u WFD is the first piece of EU water legislation to explicitly integrate economics into its measures. For many Member States the directive's use of economics has brought a new approach to water management



# Economics cont..

The WFD introduces two key economic principles.

- First, it calls on **water users** – such as industries, farmers and households – to pay for the full costs of the water services they receive.
- Second, the directive calls on Member States to use economic analysis in the management of their water resources and to assess both the cost-effectiveness and overall costs of alternatives when making key decisions



# Recovering the costs

- u One of the key innovations of the directive is its call for water services – such as supplying clean drinking water, irrigation for agriculture, reservoirs for hydropower and wastewater treatment facilities – to be charged at a price which fully reflects the services provided

u



# Recovering the costs cont...

- Under the directive the recovery of costs refers to several elements. The prices users pay for water should cover the operational and maintenance costs of its supply treatment and the costs invested in infrastructure. environmental and resource costs.
- This is a key step towards implementing the economic principle that polluters and users should pay for the natural resources they use and the damage they create

# Recovering the costs cont...

- u Environmental costs include damage to ecosystems such as pollution that harms fish and wildlife in rivers.
- u Extracting water for human causes repercussions such as reducing water levels in rivers and lakes and this may harm ecosystems.
- u These costs do not appear on financial balance sheets, but they can be measured.
- u When a water resource is partly or fully depleted and less water is available for other users the cost of that resource goes up. Recovering such resource costs is especially important in river basins where water is scarce.





# RBMP

- u A River Basin Management Plan (RBMP) should be produced and published for each district, the first version of which is to be ready by 2009 (Article 13).



# River Basin Management Plan

Characterisation Report

Where we are

Significant Water  
Management issues

The main pressures and issues we  
have to deal with

Programme of Measures

What we intend to do to achieve the  
objectives, impacts, costs and  
timeframe

Monitoring Programme

How we will show change

Public Consultation

How we involve the  
public/stakeholders in the decision  
making process



# Key Requirements for Implementation of WFD

- u Transpose the WFD into National Law
- u Characterisation report
  - Develop GIS
  - Identify and map waterbodies
  - Assign typology
  - Reference Conditions
  - Identify Key Pressures
  - Assess Risk of Failing to meet the objectives



**Identify Significant Water Management Issues**

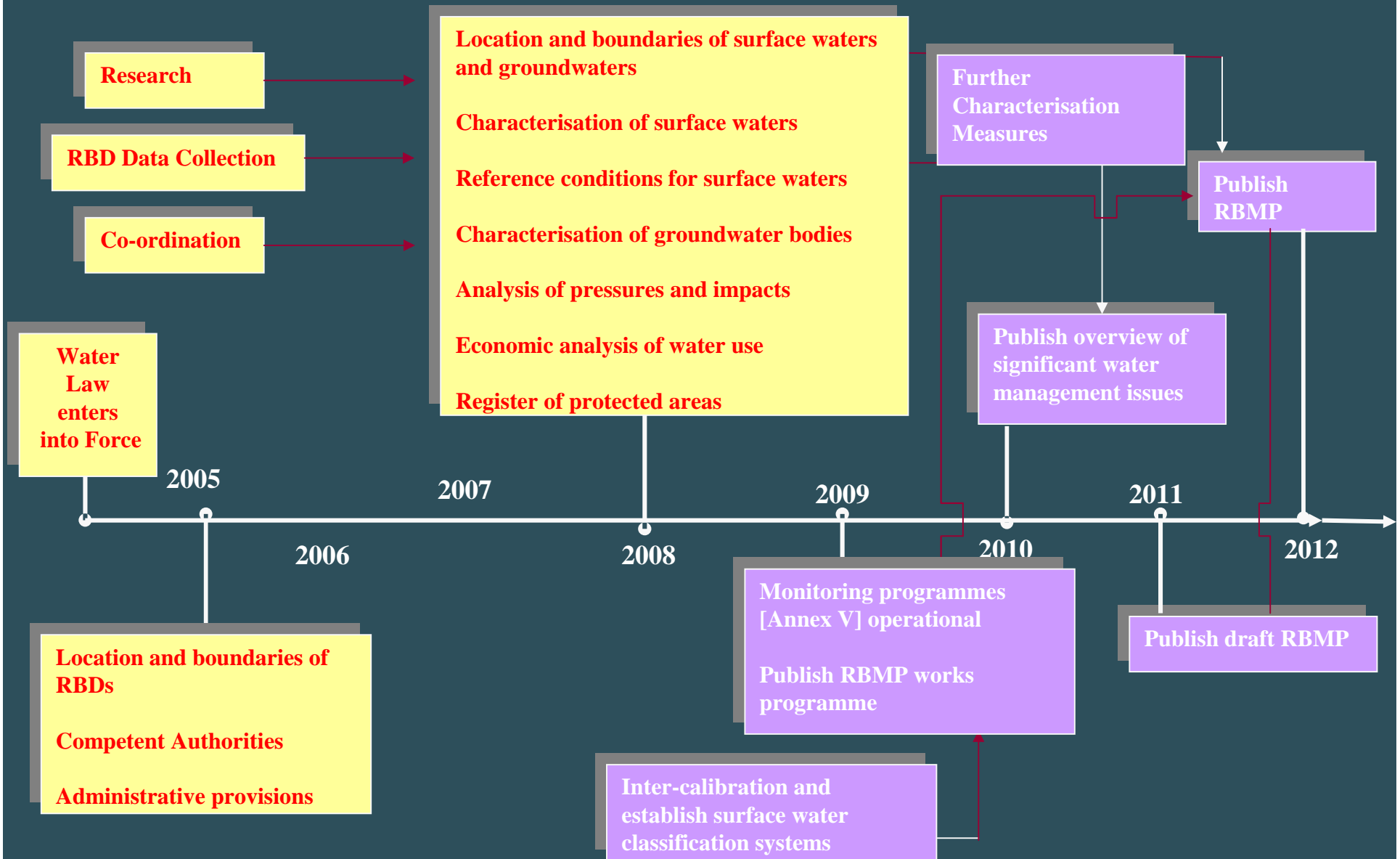
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# Key Requirements for Implementation of WFD

- u Develop Monitoring Programme
  - Supports characterisation
  - Supports implementation of measures
- u River Basin Management Plan
  - Identify Measures to reduce/eliminate risk
  - Undertake economic assessment of measure
  - Ensure Public Consultation
- u Implement Measures
- u Review Progress in 2<sup>nd</sup> RBMP



# Water Law RBMP Possible Timetable

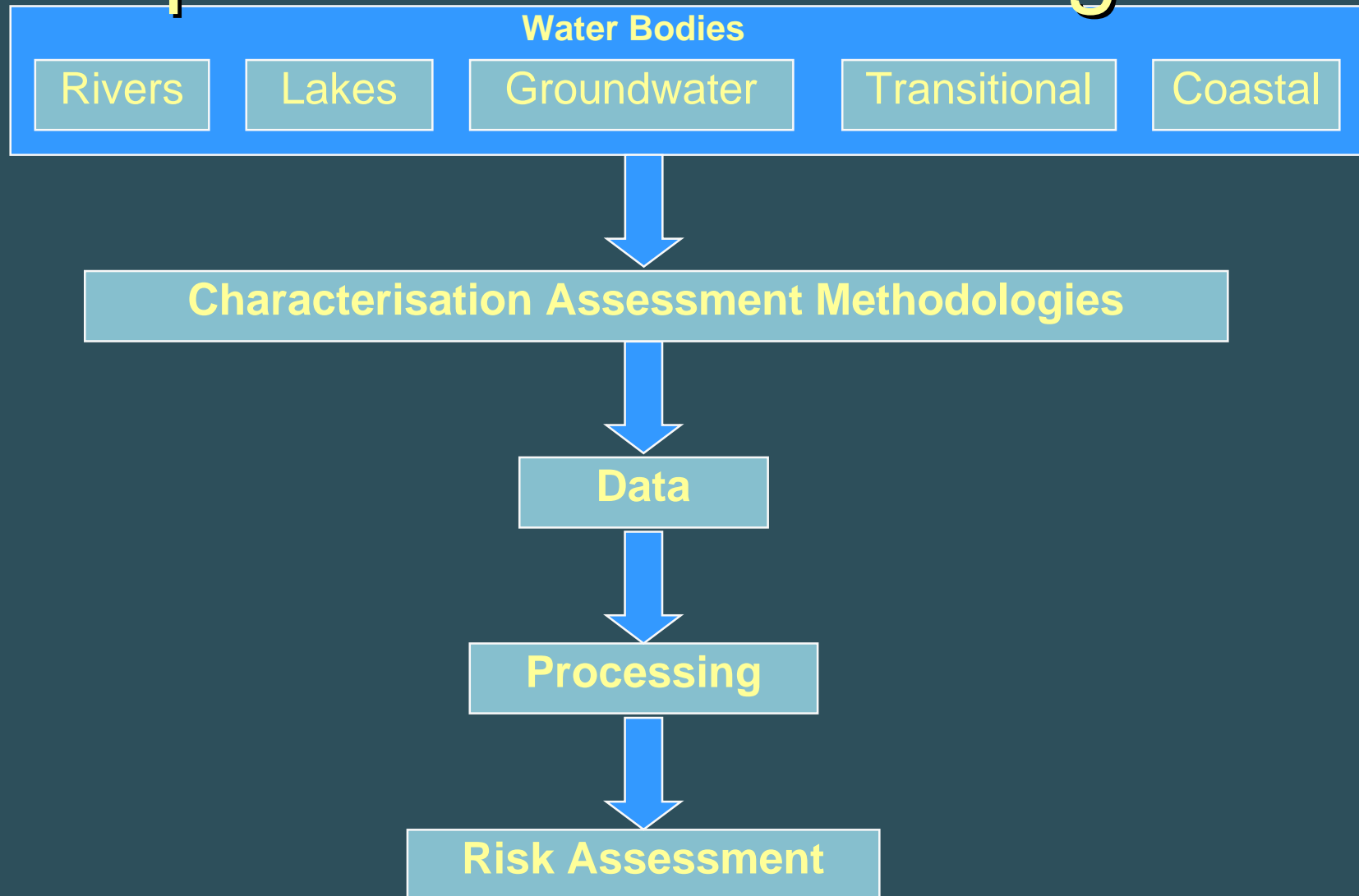


# Characterisation – Waterbody Mapping and Typology

- u Adopt an agreed typology for rivers
- u Adopt an agreed typology for Lakes
- u Transitional and Coastal waters
- u Create water bodies based on Typology



# Operational Methodologies



# Risk Assessment - Issues

- u Analysis operations complex
  - Knowledge of data required
    - u Local knowledge of area
    - u Knowledge of base data e.g. Corine, Municipality & OSi Data
  - Computer processing time intensive
    - u Some complex operations carried out in Vertical Mapper
  - Mixture of GIS & specific scientific knowledge required for various risk assessments
    - u GIS Operator
    - u Scientific expert for particular pressure





# WFD and IWRM

- Water management has traditionally been arranged according to political or administrative units, and often with a strong sectoral division between different types of water management institutions, as well as between water management and other management systems, such as spatial planning and agriculture.



# WFD and IWRM

- ❏ Implementing an *integrated* river basin management model based on hydrological boundaries may therefore entail substantial changes being made to countries' administrative systems for water management.
- ❏ It may thus be questioned whether countries will actually be able and willing to adapt and fully implement the "requirements" of the WFD.



# WFD and IWRM

Integration is a central principle in the WFD.

An important idea behind the creation of the Directive was that impacts on water bodies due to human activities and the exploitation of water would be handled through a single piece of legislation.

- As stated above, a number of Directives addressing water management have been or will be overruled by the WFD.
- The WFD aims to integrate a large number of principles and sectors which are either directly or indirectly related to the achievement of its goals.



# WFD and IWRM

According to the Common Implementation Strategy for the Water Framework Directive, integration in river basin management implies:

- 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;



# WFD and IWRM

- u Integration of all water resources, combining fresh surface water and groundwater bodies, wetlands, coastal water resources at the river basin scale;
- u 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;



# WFD and IWRM

- Integration of disciplines, analyses and expertise, combining hydrology, hydraulics, ecology, chemistry, soil sciences, technology engineering and economics



# WFD and IWRM

- u 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;
- u 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.



# WFD and IWRM

- Integration of stakeholders and 'civil society' in decision making, by promoting transparency and information to the public, and by offering a unique opportunity to involve stakeholders in the development of river basin management plans;





# WFD and IWRM

- u Integration of the different decision-making levels that influence water resources and water status, be they local, regional or national, promoting the effective management of all waters;
- u 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



# THANKS



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