

# Economic aspects of the WFD



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# Content

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- The role of economics in WFD implementation
- Main economic elements of the WFD
- The WATECO Guidance document
- Where are we now regarding implementation?
- Some concluding remarks

# Water Framework Directive (WFD)



- re-orders European water legislation;
- imposes the **Integrated River Basin (Water Shed) Management Approach**
- thus affects administrative structures and
- reduces the importance of Frontiers in Europe
- introduces/reinforces the **use of economic concepts** in water resource management (cost recovery, polluter/user pays etc.).

--> Chances and difficulties!

# Central economic aspects of the WFD

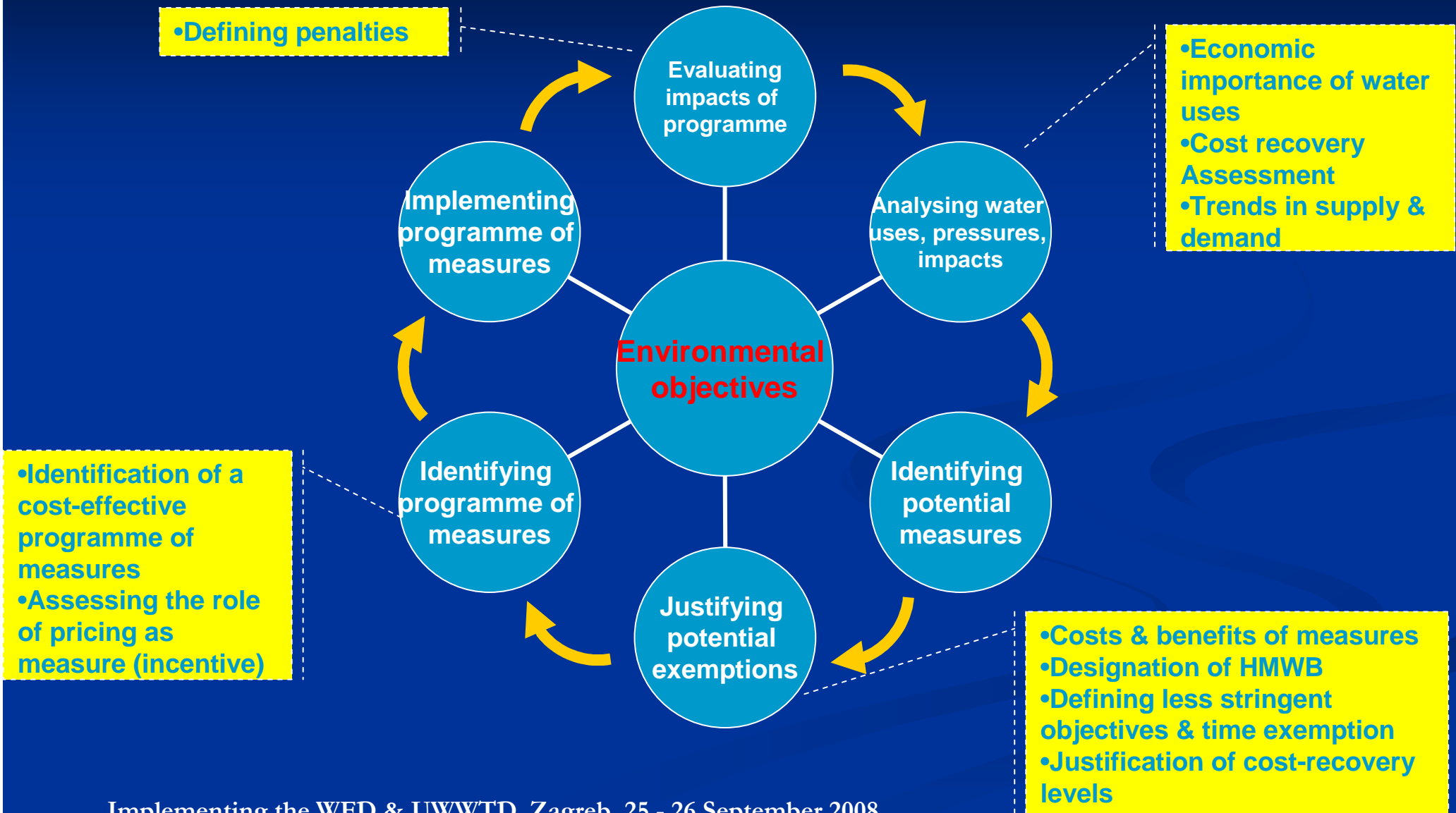
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## Overview:

- **Cost recovery** (including internalization of environmental & resource costs of water use)
- Economic **incentives** for rational water use
- Selecting the most **cost-effective** set of measures to reach the environmental aims
- Support the **designation** of HMWB (Heavily Modified Water Bodies) & assessing different exemptions under Article 4 (“**disproportionate costs**” etc.)

# Which role for Economics?



# Central economic aspects: Cost Recovery

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- „Member States shall take account of the principle of recovery of the costs of water services, **including environmental and resource costs** [...] and in accordance in particular with the polluter pays principle.
- Member States shall ensure by 2010: an **adequate** contribution of the different water uses, disaggregated into a least industry, households and agriculture, to the recovery of the costs of water services“ (Art. 9 (1)).

# “Social” & reasonable Cost Recovery

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- “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” (Art. 9 (1)).

--> **important, realistic** restriction of the cost recovery principle: room for interpretation (political consensus through transparency!)



- “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” (Art. 9 (1)).



# Central economic aspects: measures

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- [...] (b) make judgments about the **most cost effective combination of measures** in respect of water uses to be included in the programme of measures under Art. 11 based on estimates of the potential costs of such measures (Annex III).



# Central economic aspects: exemptions

Possible to **lower environmental objectives, apply for time exemptions, designate HMWBs** (Art. 4.3-4.6);

- Number of conditions to be met, of relevance for all: **“disproportionality of costs”!**
- Use of proportional **“mix” of methods** for justification (affordability arguments/cost-benefit analysis etc.)
- Of importance also for **new modifications!** (Art. 4.7: “The beneficial objectives served by those modifications [...] cannot for reasons of [...] disproportionate cost be achieved by other means, which are a significantly better environmental option.”)

# Ambitious aims!

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How can they be achieved?

--> **Information & better understanding** of the current situation as a first step ! (Annex III).

# Requirements of the WFD for 2004



For each river basin:

1. analysis of characteristics
2. review of the impact of human activities on water bodies
3. **economic analysis** of water uses

(according to Article 5, Annex II, III and V)

# Economic Analysis of Water Use

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(required until 2004!)

Contain enough information for :

- calculations for taking into account the **cost recovery** principle
- judgments on the most cost-effective **combination of measures**
- calculations for water pricing policies giving **incentives** for the efficient use of water

# Practical Implementation

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In order to clarify main issues & provide support for the implementation:

- Various **working groups** within the **CIS-process** (Common Implementation Strategy) producing Information Sheets on economics etc.; therein,
- Main **Guidance document** on economic aspects of the WFD prepared by the WATer ECOnomics working group (WATECO) in 2003

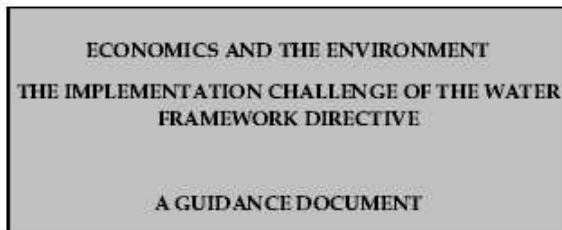
(can be found at

<http://circa.europa.eu/Public/irc/env/wfd/library>)

# WATECO: main outputs



Guidance for experts and stakeholders  
in the implementation of the economic elements of WFD



**Focus on 2004 requirements**

## The role of economics in WFD

*Key economic elements?  
Combination with water management ?...*

## Planning the economic analysis

*When and how? Roles of actors involved?  
How to manage difficulties?...*

## Methodologies for undertaking the economic analysis

*How to select measures?  
How to assess costs, benefits...?...*

## Reporting the results of the economic analysis

*How to report on economic analyses?  
With which indicators?...*

# The WATECO Guidance

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Based on overall **3-step-approach**:

Step 1 (2004): economic analysis of water use, establishing trends for 2015 (baseline scenario)

Step 2 (2005?): Assessment of “risk” to fail environmental objectives

Step 3 (2007-8?): Choosing cost-effective measures, assessing exemptions, “approaching cost recovery”



# The Baseline Scenario (04-05)



## Description of the initial situation



Source: Ministry of the environment,  
Quebec, Canada

## Baseline scenario: projection for 2015



Source: Ministry of the environment,  
Quebec, Canada

### Focus on economic aspects:

- estimate the economic "weight" of water uses and services
- assess the level of recovery of costs of water services

### Baseline scenario:

- appraisal of evolutions of uses, pressures...
- identification of potential gaps in water status with GES

# BLS: Practical Implementation



**Basic measures**  
to ensure GES

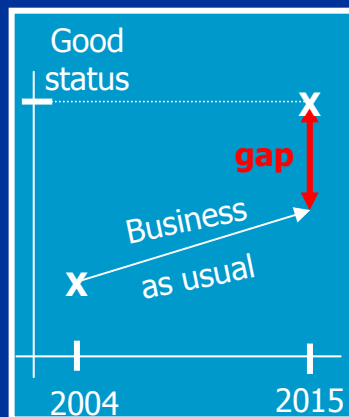
Drinking water directive

Urban wastewater treatment directive

Birds directive

Nitrates directive

...



**Supplementary measures**  
to fill the gap

Codes of good practice

Water pricing policies

Emissions / abstraction controls

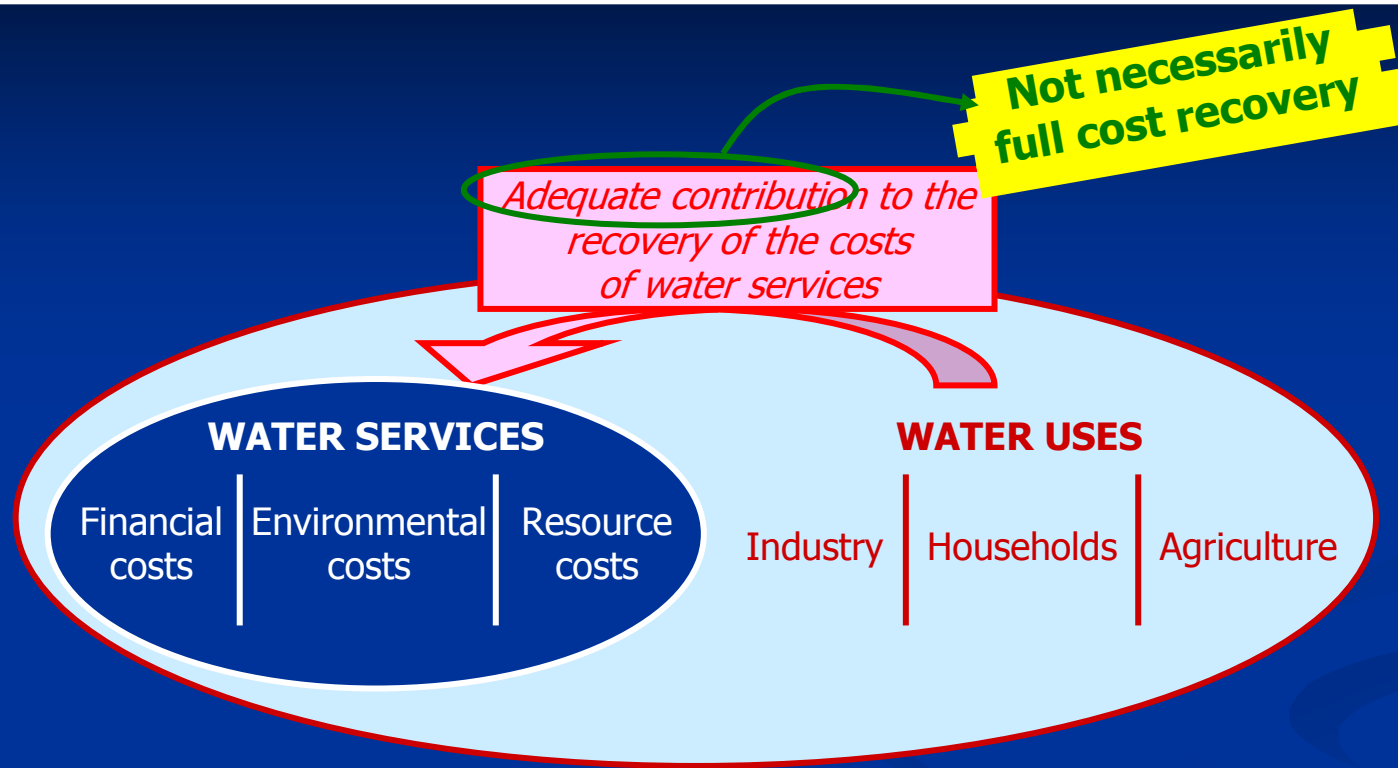
Education / research projects

...

**Selection of the (sets of) measures on a cost-effectiveness basis**



# WATECO: cost recovery



*Take account of social, environmental and economic effects  
Established practices may provide a basis for non implementation*

# WATECO: what costs?



Costs	Definition	Example
Financial cost	Capital costs	<i>Principal and interest, depreciation</i>
	Operating costs	<i>Wages, electricity, maintenance of equipment, analyses of the quality of water...</i>
Environmental cost	Costs of the damages to the environment caused by a given activity	<i>Contamination of an aquifer, destruction of wetlands...</i>
Resource cost	Value of the alternative foregone by choosing a particular activity (= opportunity costs)	<i>Cost of electricity that could have been produced if water would be available instead of being pumped for irrigation</i>

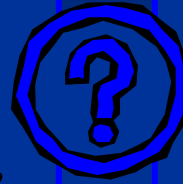
**Sum = full cost**

# WATECO: Disproportionate costs



## What are disproportionate costs?

⇒ refer to the costs of the measures required to achieve good ecological status



## How to assess disproportionate costs?

⇒ carry out a cost-benefit analysis  
⇒ consider all types of costs and benefits

## What if costs are judged disproportionate?

⇒ water body may be designated as HMWB  
⇒ a exemption may be sought

financial & environmental present & future...



Disproportionality of costs is a case-by-case issue. Ultimately, disproportionality is a local judgement informed by economic information.

# Current implementation status

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- Characterization reports – **economic analysis** prepared (even if some were delayed); evaluation of EU-COM showed room for improvement up to 2009
- **Intense work** currently across Europe on:
  - preparing the **selection of measures**;
  - assessing potential **exemptions**;
  - revising **water pricing** structures;
  - international **coordination** of River Basin Management Plans;
  - etc.

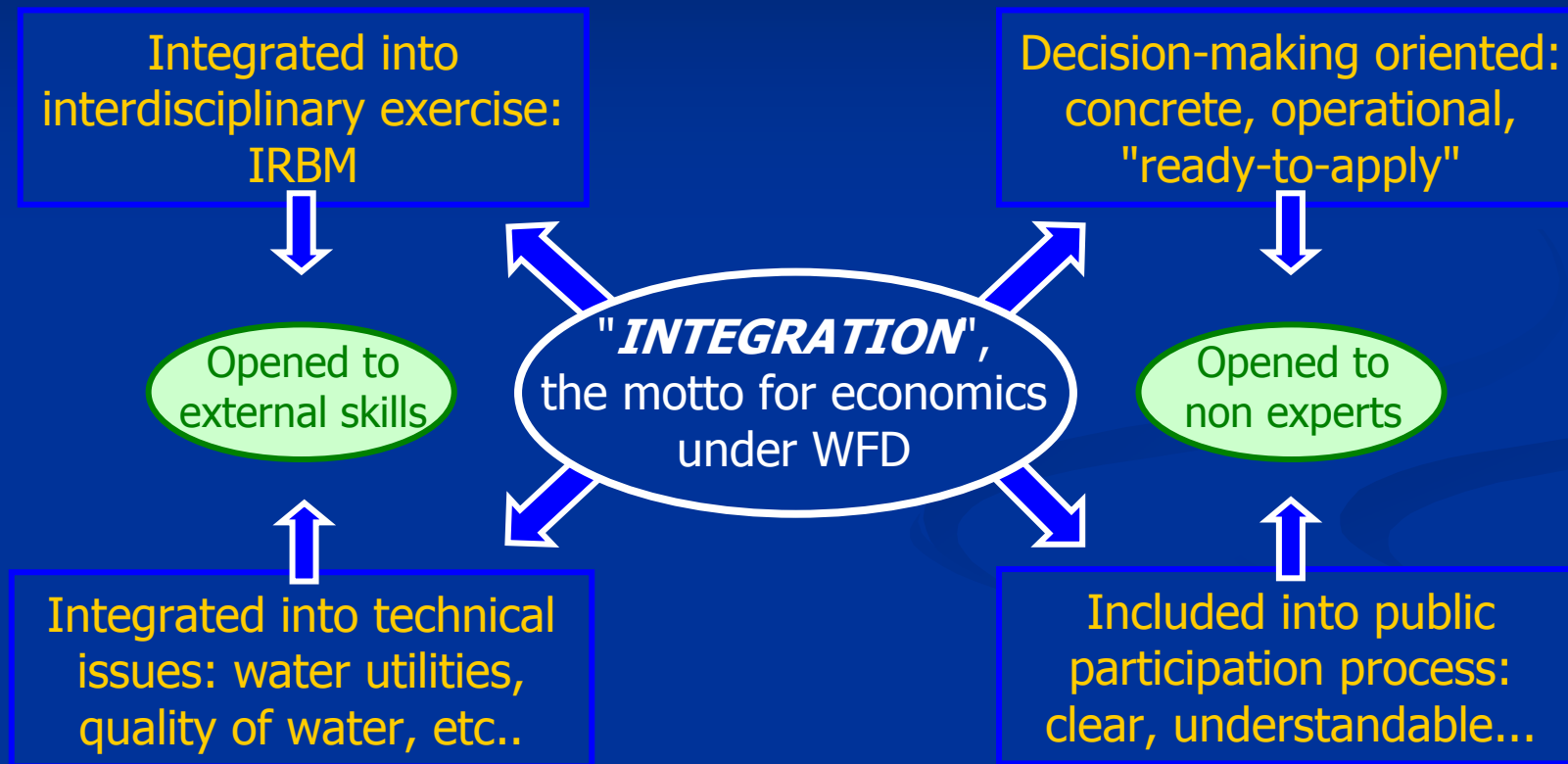
# Current implementation status

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- Main challenges/issues:
  - **definition** of w. uses & w. services;
  - linking WFD implementation to **climate change** (& scarcity);
  - assessing **Environmental & Resource costs**
  - assessing “**disproportional costs**” for exemptions

# Concluding remarks





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- The WFD implementation process so far showed the **advantages** of the systematic integration of economics into water management;
- Still, the **challenges** are considerable, but progress is made!
- **Public participation** is key, both for better knowledge basis as well as acceptance of results
- Cost-effectiveness & wastewater treatment/prevention: **consider innovative solutions!**

**Thank you for listening!**



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