

“Workshop “Program of Measure under the Water Framework Directive”

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Economic analysis – methodology, water price and tariffs, cost recovery



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Structure of the presentation

- Definitions
- WFD Cost recovery
- Steps to calculate full cost recovery
- Cost categories
- Water services
- Water price



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Economic elements of the WFD

- **Cost recovery** is about the amount of money that is being paid for water services, i.e. it answers the question **how much is paid for water**;
- The **polluter-pays-principle** addresses the adequacy of contributions from different water uses to the total cost, based on their role in causing these costs, i.e. it answers the question **who pays for water**;
- **Incentive pricing** deals with the way water users pay for their use, and whether the right price signals are transmitted, i.e. it answers the question **how is water being paid for, and which effects the water price has on the behaviour of water users**.

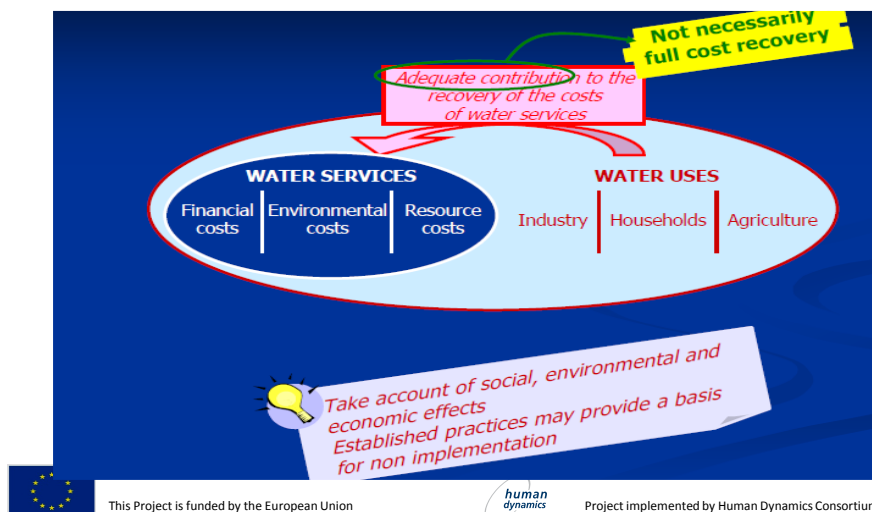


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Cost recovery, WFD

„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))..



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Programmes of measures (Art.11 WFD)

Under Article 11 of the WFD, EU Member States will need to develop a Program of Measures (POM) for each River Basin District (RBD) taking into consideration the results of characterisation of the particular river basin.

A POM may include actions such as:

- measures to manage specific pressures arising from: forestry, agriculture, industry, etc;
- control regimes or environmental permitting systems;
- water demand management measures;
- **economic instruments such as incentives**, taxes on fertilisers, etc;
- river restoration strategies, etc.
- Any measure or policy instrument that is targeted at changing water prices (both for water supply / abstraction and for water pollution) would need to be included in the programme of measures.



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Definitions

Cost recovery means the generation of sufficient revenues to pay the cost of water and sewage services.

It includes user fees and charges for services that allocate costs to users in an equitable manner and are affordable.

Full cost recovery supports a business plan and funding approach that suits local conditions, sustains water and sewage systems in perpetuity and maintains acceptable service levels for the users of the systems.

Costs include all water and sewage system costs that must be incurred to provide services at sustainable service delivery levels and reflect customer, industry and government service standards.



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Steps to calculate full cost recovery

1. Set goals for achieving full cost recovery.
2. Identify components of full costs.
3. Estimate full costs (i.e., over the life of the assets to quantify long-term needs).
4. Conduct gap analysis (i.e., the financial gap between what is being spent and what should be spent).
5. Identify revenue sources and prioritize.
6. Review financing methods and prioritize sources of revenue.
7. Develop a financial plan.
8. Set the rates and charges.
9. Review full costs and the cost recovery plan annually.



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Water services – cost recovery

1. Estimates costs of water services, including financial, environmental and resource costs;
2. Estimate the price/tariff currently paid by the users;
3. Assess the extent of cost recovery by water service and sector;
4. Assess the contribution to cost recovery from key water uses;
5. If felt necessary, initiate review of incentive pricing properties of existing tariffs.



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Information base

1. Estimation of financial costs (broken down in operating maintenance and capital costs);
2. Tax transfers, administrative costs and any other costs. (to be evaluated);
3. Environmental and resource costs as required. (to be evaluated);
4. Extent of financial and environmental cost-recovery;
5. If activities initiated for reviewing incentive pricing: current pricing structure and price elasticity, affordability criteria.



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Art 9 implementation (1)

A pragmatic approach to create a data base in relation with water pricing policies in order to identify proper solutions on basin wide scale

Possible questions for the countries:

- What are the main gaps identified in relation with implementing an adequate water price policy (i.e. assessment of environmental & resource cost, cross subsidies, lack of incentives instruments...)
- Which economic sectors are covered by the cost recovery calculations (full/partially).
- Which are the water services covered by cost recovery policy and which not? (i.e diffuse pollution).
- What are the rate of cost recovery per sector?



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Art 9 implementation (2)

- What kind of economic instruments (price/tariffs/contributions...) do you use in relation with PPP, Beneficiary pay principle?
- Do you apply economic incentives.? (i.e higher tariffs for higher consumption), What kind?
- For which economic sector?
- Do you estimate the trend of water prices in relation with the future water demand? Per economic sectors? What it will be?
- Do you take into account the climate change in future water price policy?
- Do you have a data base related to the water pricing policy?



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Cost categories

In order to achieve full cost recovery 3 main categories of cost should be taken into account:

- **Financial Cost** : Operation and maintenance cost
- **Resource Cost** : Opportunity cost
- **Environmental Cost**: The cost is created either from the deterioration of water quality from pollution or deprival of quantity of water from the different uses.



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Water is an economic good

Water is not a free good – it has an economic value!

Opportunity cost concept: when scarce, water has a value in alternative use

Value and charges are two different things

- the value of water is essential for allocation
- the price of water is essential for cost recovery/feasibility

Economic instruments: essential tools for demand management

- regulating behaviour: conserve and save!
- service levels <-> affordability/willingness-to-pay and accept for an improved service
- market as the regulator!?

Transparent subsidies for the poor



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Water tariffs and water value

System of National Accounts (SNA) values water at price of transaction. Why can't we just use this value?

- Because the price charged by water suppliers—if any—often unrelated to value of water, too low
- Water price often does not even reflect full costs of water supply
- Water is not supplied by competitive markets due to natural characteristics
 - Necessary for human survival
 - Natural monopoly
 - Characteristics of public good
 - Property rights not always well defined



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Water pricing (1)

- According to the EEA's glossary, water pricing is defined as 'applying a monetary rate or value at which water can be bought or sold'.
- Arcadis et al. (2012) proposes a broad definition of water pricing, describing it as 'monetizing the abstraction, use, or pollution of water'; this broader definition is used in the Aquamoney project



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Water pricing (2)

Prices for water services can be charged in many ways.

Water tariffs are prices assigned to water supplied by a public or private utility through a piped network to its customers

Water charges are usually made for the (compulsory) payment related to a specific service, e.g. wastewater collection and treatment, but they are also applied to levies on emissions/discharges (air and water pollution charges) and for water supplies.



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Water Resource Cost Present Policy

- Water allocation and water price are still very high political issues
- Priorities for water allocation are established based on the importance in the national economy not necessarily having in mind the most market value
- Environmental water requirements (non-value costs) are still not ranking in high priorities
- In the climate change conditions the water allocation should be more based on the economic analysis of **alternative costs**



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Thank you!



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