



*Institutional and Economic Instruments
for Sustainable Water Management
in the Mediterranean Region*

2nd survey on the evaluation of institutional and economic instruments

Short description of terms used

(A) Economic options/instruments

The term “economic instruments” refers to a rather diverse set of policies which have a common feature: they provide market signals to consumers, polluters and users in order to influence their behavior and provide them with incentives to internalize the negative {external} impacts that they may be producing. The specific instruments that pertain to this category are explained below.

A1. Water pricing

Water pricing usually aims at recovering the financial costs of services related to water, such as drinking water provision, irrigation water provision and wastewater collection and treatment. Thus, it is one of the key instruments that can ensure the long-term sustainability of water services and ensure that infrastructure operates in a satisfactory way (provision of high quality services). Specific price structures (e.g. volumetric pricing), can also be used for providing incentives towards efficient water use and allocation.

A2. Subsidies & funding

Subsidies are a type of financial government assistance, such as grants, tax rebates, loans with subsidized interest etc. In water management, subsidies are used to provide the necessary incentives for achieving a desired (but not required) action or for compensating users for a cost they incur in response to a required action (e.g. change of irrigation methods, relocation of industries to specific areas, such as industrial parks). Financial assistance and funding can also be directed towards projects that have positive environmental impact, and can take the form of funds specifically designed to finance a specific type of project (e.g. revolving funds for wastewater treatment plants).

A3. Environmental charges and taxes

In water management, these instruments refer to (a) water abstraction charges (or taxes) and (b) water pollution charges (or taxes). Charges are usually set administratively by a government agency, a public utility etc., and they are “prices” for public (or publicly provided) goods. On the other hand, taxes are not payments for “services” but for raising fiscal revenue.

A **water pollution charge** takes the form of a direct payment based on the measurement or estimate of the quantity and quality of a pollutant discharged to a natural water body.

A **water abstraction charge** is a direct payment for the abstraction of water from a surface or groundwater source. Usually, water abstraction charges are differentiated depending on the source, the specific environmental and socio-economic conditions, and can be set to indicate the relative water scarcity.

A4. Market instruments

Market instruments refer to the establishment of transferrable rights to use/pollute water and to the creation of rules which allow the trading of these rights. They can take the form of (a) tradable discharge (emission) permits, and (b) tradable water abstraction rights or tradable water quotas.

A5. Taxes on inputs/outputs

Taxation on inputs (e.g. fertilizers) and final products (e.g. industrial or agricultural production) has the advantage on relying on existing administrative arrangements, but is not as effective as direct environmental taxation. Taxes on inputs/outputs can reduce the use of polluting inputs but provide no incentive for pollution abatement.

A6. Liability systems

Liability systems refer to the set of rules that are enforced in case of non-compliance with environmental regulations and legislation. They include fines, penalties and other forms of non-compliance. Their aim is to internalize and recover the cost of environmental damage through legal action and make polluters pay for the damage that their activity has caused.

A7. Voluntary/Cooperative Agreements

A voluntary agreement is a contract between the public administration and the user/polluter (or the user group). In this contract, the user agrees to achieve a certain environmental objective (e.g. reduce fertilizer application or install an advanced wastewater treatment unit) and receives a subsidy to change its technology or practices.

In cooperative agreements, this contract can be established between users who hold conflicting interests (e.g. a water utility can establish a contract with farmers for reducing the application of agrochemicals and offer compensation for income loss resulting from the production decrease).

(B) Institutional options/instruments

B1. Command-and-Control Approach

Command and control measures (CCM) refer to regulatory norms and standards that forbid or allow certain actions or outcomes. The “**command**” phase involves the definition of standards and allowable actions. During the “**control phase**” public authorities have to monitor and enforce the legislation, and in case of non-compliance initiate relevant legal procedures.

With regard to **water pollution**, the types of standards can include: (a) **ambient standards**, which regulates the amount of pollutant present in the surrounding (ambient) environment, (b) **emission standards**, which regulate the level of emissions allowed, and (c) **technology standards**, which require polluters to use certain technologies, practices, or techniques.

With regard to **water use**, a legal water standard or quota can be introduced that places restrictions on the amount of water that can be extracted for use. It will be effective if water users face substantial monetary penalties for not lowering water abstraction below this standard or not adhering to the quota.

B2. Decentralization of water management operations

Decentralization aims at enhancing local involvement in water services and water management operations in general. Decentralization can refer to (a) specific activities or to (b) devolution. In particular, community planning and management are also considered essential and supplementary to other measures that aim at influencing water user behaviour. For example economic instruments are being used for encouraging people to use water wisely and institutional arrangements are providing the enabling environment for improved water management efficiency. However local involvement engages the public to act in a desired way and when institutional and economic instruments can only be gradually integrated into the water policy, local involvement can be seen as the most efficient tool for improved water management

B3. Public participation

Public participation aims to facilitate consensus and can take many forms. **Initially** it could mean accountability, transparency and access to relevant information. It could also mean communication among the various stakeholders who carry specific interests or competences in water management sector. At a **higher** level, it could mean public consultation during decision-making, offering the opportunity to raise objections against proposed decisions or processes based on extensive discussion among all parties involved in order to develop win-win solutions for all. At the **highest** level, it can involve the public at a deliberative stage, by assigning them impeditive power (veto), or even co-decision.