



EU legislation and EU water projects (Mediterranean region)

Contents presentation

- EU Water legislation: WFD and UWWTD
- EU Water Projects in Mediterranean area

European Union legislation on waste water treatment and nutrient removal

Key directives:

- Urban Waste Water Treatment Directive
- Water Framework Directive



History of Water Policy

- First wave of legislation 1975
- Binding quality targets, quality objective legislation on fish waters, shellfish waters, bathing waters and groundwaters
- Second wave of legislation 1988-early nineties addressing urban and agricultural pollution in water : the Urban Waste Water Treatment Directive and the Nitrates Directive, addressing water pollution by nitrates from agriculture.



History of Water Policy

- EU Rethink 1995: Third Wave
- Whilst EU actions of the past such as the Drinking Water Directive and the **Urban Waste Water Directive** can be considered milestones, European Water Policy has to address the increasing awareness of citizens and other involved parties for their water. At the same time water policy and water management are to address problems in a coherent way. This is why the new European Water Policy was developed in an open consultation process involving all interested parties
- The result is The EU **Water Framework Directive**.

Water Framework Directive

- Applies to all surface and groundwaters and dependent waterbodies
- The most significant piece of European legislation to date dealing with water quality and quantity



Water Framework Directive - integrated river basin management for Europe (2000/60/EC)

- Directive 2000/60/EC of the European Parliament and the Council of 23 October 2000
- Establishes a **framework** for community action in the field of water policy
- May mean extensive changes in regulations and monitoring programme
- The Directive is legally binding and is to be reflected in national legislation within three years
- Common approach with respect to interpretation, goals, legislative principles and methods

Recommendations of the WFD

- It combines protection of ecological status with long-term water use and sustainable development
- Demand management and reduced water consumption, through the use of water charging and other economic incentives as well as the use of less water consuming technology, re-use of waste waters, changes in crop choices and development of efficient irrigation systems must be explored
- An incentive for finding solutions, which build on a genuinely better balanced between exploitation of available resources and protection and improvement of the natural resources and natural ecology

Recommendations of the WFD

- Water cannot be abstracted, transferred or diverted in large quantities without a throughout examination of the possible environmental impacts
- This is likely to reduce transfer of water and give incentives towards a mix of other instruments, including demand management, charging, recycling and re-use of water, development of less water consuming technologies and agricultural practices, land use policies, etc.

Incorporates existing legislation

- The Bathing Water Directive (76/160/EEC)
- The Birds Directive (79/409/EEC)
- The Drinking Water Directive (80/778/EEC) as amended by Directive (98/83/EC)
- The Major Accidents (Seveso) Directive (96/82/EC)
- The Environmental Impact Assessment Directive (85/337/EEC)
- The Sewage Sludge Directive (86/278/EEC)
- **The Urban Waste-Water Treatment Directive (91/271/EEC)**
- The Plant Protection Products Directive (91/414/EEC)
- The Nitrates Directive (91/676/EEC)
- The Habitats Directive (92/43/EEC)
- The Integrated Pollution Prevention Control Directive (96/61/EC)

UWWTD: Treatment objectives

Art.4,5,6

- Basically “secondary treatment” (i.e. biological treatment involving organic carbon removal)
- Additional N and P removal - “advanced treatment” in “sensitive areas”, i.e. basically water bodies being eutrophic or tending to be eutrophic
- Exceptions possible in “less-sensitive areas”, i.e. certain marine areas, and in high mountain areas

UWWTD: Requirements secondary treatment

Art.4,5,6

Parameters	Concentration max. annual means	Minimum reduction %
BOD5	25 mg/l O ₂	70 – 90
COD	125 mg/l O ₂	75
Total suspended solids	35 mg/l	90

- Either the concentration or the percentage of reduction shall apply
- 24-hours samples
- Minimum annual number of samples depending on size of treatment plant, plus maximum number of non-complying samples

UWWTD: Requirements for discharges in sensitive areas/ Advanced treatment

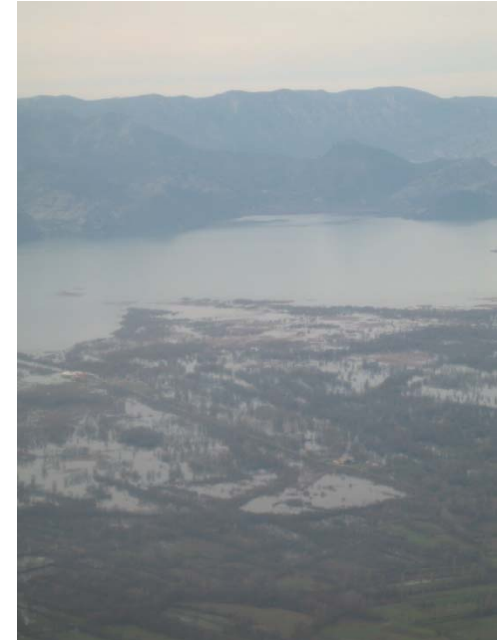
Annex II,
art. 5

Parameters	Concentration	Efficiency (% of reduction)
Total Phosphorus 10.000 -100.000 p.e. > 100.000 p.e.	2 mg/l 1mg/l	80% 80%
Total Nitrogen 10.000 - 100.000 p.e. > 100.000 p.e.	15 mg/l 10mg/l	70 – 80% 70 – 80%

- Either concentration or the percentage of reduction shall apply
- One or both parameters are to be applied depending on local conditions
- Total N = org.N + NH₃/NH₄-N + NO₂-N + NO₃-N
- Annual mean of samples to comply

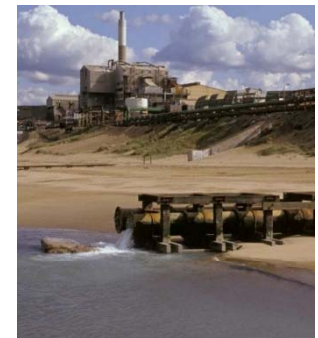
Water Framework Directive - Main principle

It requires that all inland and coastal waters within defined river basin districts must reach at least good status by 2015 and defines how this should be achieved through the establishment of environmental objectives and ecological targets for surface waters. Aim to have sufficient supply of good quality surface water and groundwater.



Water Framework Directive – Key elements

- Protecting all waters and all impacts on these waters
- Good quality ('good status') to be achieved, as a rule, by 2015 - linked to a non-deterioration clause
- Water quality defined in terms of biology, chemistry and morphology (surface waters) and of chemistry and quantity (groundwater)
- Monitoring programs for surface and groundwater
- Water management based on river basins
- Economic instruments: economic analysis, and getting the prices right (to promote prudent use of water)



Water Framework Directive – Key elements – cont.

- Participation by citizens, municipalities, NGOs in developing river basin management plans
- Streamlining water legislation and providing one coherent management frame for water legislation

