



**European Commission**



Technical Assistance Information Exchange Instrument, DG Enlargement



*Seminar on Cyprus' obligations in implementing the  
Urban Waste Water Treatment Directive 91/271/EEC by the year 2012*

Introduction to the EU Directive on Urban Waste Water  
Treatment and how the Directive may accomodate the  
realities of Mediterranean countries



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Larnaca, 24<sup>th</sup> November 2005



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# URBAN WASTE WATER TREATMENT

## Directive 91/271/CEE



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# Directive 91/271/CEE

- It concerns the collection, treatment and discharge of urban and industrial waste water;
- The aim of the Directive is to protect the environment from the adverse effects of the waste water discharges.





## BASIC CONCEPTS (1)

- urban waste water : domestic waste water or the mixture of the previous with industrial waste water and/or run-off rain water;
- domestic waste water: waste water from residential settlements and services, which originates predominantly from the human metabolism and from household activities;
- industrial waste water: any waste water which is discharged from premises used for carrying on any trade or industry, other than domestic waste water and run-off rain water;





## BASIC CONCEPTS (2)

- *p.e. (population equivalent)*: the organic biodegradable load having a five-day biochemical oxygen demand (BOD<sub>5</sub>) of 60 g of oxygen per day;
- *agglomeration*: an area where the population and/or economic activities are sufficiently concentrated for urban waste water to be collected and conducted to an urban waste water treatment plant (WWTP) or to a final discharge point;





## MAIN DIRECTIVES (1)

- To provide *prior regulation or specific authorisation* for any discharge of urban waste water and industrial waste water from agro-food factories, as well as for any discharge of industrial waste water into urban waste water systems or directly in the environment;
- To provide urban waste water *collecting systems* (sewerage) and *treatment plants* for all agglomerations above p.e. 2K;





- To ensure that the urban waste water discharges and their effects are monitored and controlled;
- To settle control criteria, limits in concentration and minimum percentage of reduction for W.W.T.P. outlets;
- To publish situation reports every two years and establish implementation programmes;





- To provide general rules or registration or authorisation for the *sustainable disposal of sludge* arising from waste water treatment and to phase out any dumping or discharge of sewage sludge into surface waters; disposal routes shall minimise the adverse effects on the environment;
- To promote the *reuse* of treated waste water and of sewage sludge whenever appropriate;





The general rule for the level of treatment is secondary treatment, i.e. biological treatment.

However, the treatment must be more stringent (tertiary treatment) for discharges to the “*sensitive areas*,” as identified by Member States.

It may be less stringent (primary treatment), under certain conditions of agreement, for certain discharges to coastal waters and estuaries identified as *less sensitive areas*.





**The deadlines for this application were 31/12/1998, 31/12/2000 or 31/12/2005 depending of the size of the agglomerations and the sensitivity of the receiving waters;**





# Table 1 – Requirements for discharges from urban WWTP

Agglomeration (p.e.)	2000 - 10000		>10.000	
	Conc. (mg/l)	% of reduction	Conc. (mg/l)	% of reduction
BOD	25	70-90 40 h.m.	25	70-90 40 h.m.
COD	125	75	125	75
SST	60	70	35	90

h.m. = high mountain, > 1500 m above sea level





## Table 2 – Requirements for discharges from urban WWTP in sensitive areas

Agglomeration (p.e.)	10.000 – 100.000		>100.000	
	Conc.* (mg/l)	% of reduction	Conc.* (mg/l)	% of reduction
Total P	2	80	1	80
Total N	15	70-80	10	70-80

\* annual mean

