

**Implementation of the National Plan for
Approximation of Environmental Legislation**

A project for Albania funded by the European Union

Draft

DCM on Urban Waste Water Treatment¹

Draft 1

Version 1

6 August 2010

¹ This Decision transposes Directive 91/271/EEC Concerning Urban Waste Water Treatment, as amended by Directive 98/15/EC, Regulation EC/1882/2003 and Regulation EC/1137/2008



**REPUBLIC OF ALBANIA
COUNCIL OF MINISTERS**

DECISION

(Draft 1 Version 1 of 6 August 2010)

No. _____, date _____

**ON
Urban Waste Water Treatment²**

Pursuant to Article 100 of the Constitution and to Article xxxx of the Law no ____, dated _____ “On Water Management”, the Council of Ministers;

DECIDED:

I. GENERAL

1. The scope of this Decision is to establish minimum requirements for the collection, treatment and discharge of urban waste water, with the aim of protecting the environment from the adverse effects of such discharges.

II. Definitions

² This Decision transposes Directive 91/271/EEC Concerning Urban Waste Water Treatment, as amended by Directive 98/15/EC, Regulation EC/1882/2003 and Regulation EC/1137/2008

2. For the purposes of this Decision, the following terms shall have the following meanings:
- a. “**Agglomeration**” means 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 or to a final discharge point;
 - b. “**Appropriate treatment**” means treatment of urban waste water by any process and/or disposal system which after discharge allows the receiving waters to meet the relevant water quality norms established pursuant to Article xxx of the Law “On Water Management”, and to meet the relevant provisions of this Decision and of the Law “On Water Management”;
 - c. “**Collecting system**” means a system of conduits which collects and conducts urban waste water;
 - d. “**Domestic waste water**” means waste water from residential settlements and services which originates predominantly from the human metabolism and from household activities;
 - e. “**Environmental Permit**” means the Class A, Class B or Class C environmental permit in accordance with the Law No ____, dated ____ “On Environmental Permitting”;
 - f. “**Estuary**” means the transitional area at the mouth of a river between fresh-water and coastal waters;
 - g. “**Eutrophication**” means the enrichment of water by nutrients, especially compounds of nitrogen and/or phosphorus, causing an accelerated growth of algae and higher forms of plant life to produce an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned;
 - h. “**Industrial waste water**” means 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;
 - i. “**Secondary treatment**” means treatment of urban waste water by a process generally involving biological treatment with a secondary settlement or other process in which the requirements established in Table 1 of Annex I are respected;
 - j. “**Sludge**” means residual sludge, whether treated or untreated, from urban waste water treatment plants;
 - k. “**Urban waste water**” means domestic waste water or the mixture of domestic waste water with industrial waste water and/or run-off rain water;
 - l. “**1 population equivalent (p.e.)**” means the organic biodegradable load having a five-day biochemical oxygen demand (BOD5) of 60 g of oxygen per day. The load shall be calculated on the basis of the maximum average weekly load entering the treatment plant during the year, excluding unusual situations such as those due to heavy rain.
3. All other terms used in this Decision shall have the meaning given to them by the Law “On Water Management”.

III. Designation of agglomerations

4. The Minister, after consultation with the Minister with responsibility for territorial planning and the Minister with responsibility for public works, shall designate agglomerations by population equivalent sizes so that the requirements of this Decision may be satisfied.
5. The designation referred to in Paragraph 4 shall be reviewed, and if necessary revised, every four years.
6. The designation referred to in Paragraphs 4 and 5 shall be published in the Official Gazette by way of a Ministerial Order.

IV. Designation of sensitive areas

7. The Minister, after consultation with the relevant River Basin Council, shall designate sensitive areas in accordance with the criteria set out in Annex II.
8. Sensitive areas shall be designated by 31 December 2013 [date to be agreed – this date fits with the 4 year review required by the Directive].
9. The Minister shall review the designation of sensitive areas no later than 31 December 2017 and thereafter at intervals of no more than four years.
10. The designations referred to in Paragraph 7 and 9 shall be published in the Official Gazette by way of a Ministerial Order.

V. Obligation to provide and maintain collecting systems

11. All Local Government Units [or the authority who is required to provide collecting systems] shall ensure that collecting systems are provided:
 - a. Where the urban waste water discharges into receiving waters which are a sensitive area, by 31 December year [directive date plus 7 years];
 - b. Without prejudice to sub-paragraph (a);
 - i. By 31 December year [directive date plus 9 years] for every agglomeration with a population equivalent of more than 15 000;
 - ii. By 31 December year [directive date plus 14 years] for every agglomeration with a population equivalent of between 2 000 and 15 000.
12. Paragraph 11 shall not apply where either:
 - a. The relevant River Basin Council [National Environment Agency?] has certified that the establishment of a collecting system is not justified because it would produce no environmental benefit; or
 - b. The Minister has certified that the establishment of a collecting system is not justified because it would involve excessive cost.
13. Where Paragraph 12 applies, individual systems or other appropriate systems shall be provided, and the relevant River Basin Council

[National Environment Agency?] has certified that those systems achieve the same level of environmental protection as is provided by Paragraph 11.

14. The collecting systems referred to in Paragraph 11 shall, as a minimum, meet the following requirements:
- a. The collecting systems shall take into account the waste water treatment requirements;
 - b. The design, construction and maintenance of collecting systems shall be undertaken in accordance with the best technical knowledge not entailing excessive costs, notably regarding:
 - i. Volume and characteristics of urban waste water;
 - ii. Prevention of leaks;
 - iii. Limitation of pollution of receiving waters due to storm water overflows.

VI. Obligation to provide and maintain treatment plants

15. All Local Government Units [or the authority who is required to provide treatment plants] shall provide treatment plants so that urban waste water entering collecting systems shall before discharge be subject to at least secondary treatment or an equivalent treatment:
- a. By 31 December year [directive date plus 9 years] for all discharges from agglomerations with a population equivalent of more than 15 000;
 - b. By 31 December year [directive date plus 14 years] for all discharges from agglomerations with a population equivalent of between 10 000 and 15 000;
 - c. By 31 December year [directive date plus 14 years] for all discharges to freshwaters and estuaries from agglomerations with a population equivalent of between 2 000 and 10 000.
16. Urban waste water discharges to waters in high mountain regions which are over 1 500m above sea level and where, in the opinion of the Minister, it is difficult to apply an effective biological treatment due to low temperatures may be subject to less stringent treatment than that prescribed in Paragraph 14, provided that detailed studies indicate that such discharges do not adversely affect the environment.
17. Subject to Paragraph 18, treatment plants which provide more stringent treatment than that described in Paragraph 15 shall be provided by 31 December year [directive date plus 7 years] in respect of all discharges from agglomerations with a population equivalent of more than 10 000 into sensitive areas, or into the relevant catchment areas of sensitive areas where the discharges contribute to the pollution of those areas.
18. Paragraph 17 shall not apply in relation to a sensitive area where the Minister [River Basin Council][NEA] has certified that it is satisfied, as a result of monitoring, that the minimum percentage of reduction of the overall load entering all urban waste water treatment plants in that area, and all urban waste water treatment plants in the catchment area

of that area the discharges from which contribute to the pollution of that area, is at least 75% for total phosphorus and at least 75% for total nitrogen.

19. Where, following a review of the identification of waters as sensitive areas under Paragraph 9, an area becomes identified as a sensitive area, then the provisions of Paragraphs 17 or 18 as the case may be, shall apply to that area as from seven years from the date of that identification.
20. All Local Government Units [or the authority who is required to provide treatment plants] shall provide treatment plants so that urban waste water entering collecting systems shall before discharge be subject to at least appropriate treatment by 31 December year [directive date plus 14 years] in respect of:
 - a. discharges to freshwaters and estuaries from agglomerations with a population equivalent of less than 2,000; and
 - b. discharges to coastal waters from agglomerations with a population equivalent of less than 10,000.
21. Treatment plants referred to in this Part shall be designed, constructed, operated and maintained to ensure sufficient performance under all normal local climatic conditions. When designing the treatment plants account shall be taken of any seasonal variations of the load.

VII. Discharges of treated urban waste water

22. The National Environment Agency shall ensure that the Class B environmental permit for treatment plants referred to in Part VI shall include conditions so as to satisfy the relevant requirements of Annex I.

VIII. Discharges of industrial waste water to collecting systems or treatment plants

23. The National Environment Agency or the Regional Environment Agency as the case may be, shall ensure that the relevant environmental permit for the discharge of industrial waste water to collecting systems or to treatment plants shall include conditions so as to satisfy the requirements of Annex III.

IX. Discharges of certain industrial waste water to receiving waters

24. The National Environment Agency or the Regional Environment Agency as the case may be, shall ensure that the relevant environmental permit for the discharge of biodegradable industrial waste water from plants representing 4 000 population equivalent or more belonging to the industrial sectors listed in Annex IV which does not enter urban waste water treatment plants before discharge to receiving waters shall contain conditions which are appropriate to the nature of the industry concerned for the discharge of such waste water.

X. Requirements on the use of sludge

25. The disposal of sludge to surface waters by dumping from ships, by discharge by pipelines or by any other means is prohibited. [need to check if this is already prohibited – if not may need transitional period – see directive Art 14(3) and (4)]
26. Sludge shall be re-used whenever possible. Disposal routes shall minimise the adverse effects on the environment.
27. The National Environment Agency or the Regional Environment Agency as the case may be, shall ensure that the relevant environmental permit for the re-use of sludge shall include conditions so as to satisfy the requirements of Paragraph 26.

XI. Requirements on the re-use of treated waste water

28. Treated waste water shall be re-used whenever possible. Disposal routes shall minimise the adverse effects on the environment.
29. The Council of Ministers, acting on a proposal of the Minister, shall adopt standards and requirements for the re-use of treated waste water.

XII. Transboundary pollution

30. Where waters within the jurisdiction of the Republic of Albania are adversely affected by discharges of urban waste water from another State, or where discharges of urban waste water within the Republic of Albania adversely affect the waters within the jurisdiction of another State, the Minister shall use his best efforts to take the necessary co-ordination to identify the discharges in question and the measures to be taken at source to protect the waters that are affected in order to ensure conformity with the requirements of this Decision.

XIII. Monitoring

31. The National Environment Agency shall monitor discharges from urban waste water treatment plants to verify compliance with the requirements of the environmental permit and to verify compliance with the requirements of Part A of Annex I in accordance with the control procedures set out in Part B of Annex I.
32. The National Environment Agency [River Basin Council?] shall monitor waters subject to discharges from urban waste water treatment plants.
33. The National Environment Agency [and REA?] [River Basin Council?] shall monitor waters subject to direct discharges of biodegradable industrial waste water pursuant to Paragraph 24.
34. The Authorities referred to in Paragraphs 31, 32 and 33 shall keep any information collected by them and shall make it available to the Minister upon request.

35. The Minister, by way of Ministerial Order which shall be published in the Official Gazette, shall adopt guidelines on the monitoring referred to in this Part.

XIV. Implementation programme

36. The Minister, after consultation with [who?], shall establish a programme for the implementation of this Decision.

37. The programme referred to in Paragraph 36 shall be prepared within two years of the entry into force of this Decision.

38. The Minister shall review and assess the implementation of the programme every two years, and shall publish a report thereon.

39. The Minister, by way of Ministerial Order which shall be published in the Official Gazette, shall adopt the methods and formats for reporting on the implementation of the programme.

40. The reports referred to in Paragraph 38 shall be made available to the public.

XV. Final Provisions

41. The Council of Ministers is responsible for endorsing the normative acts for the application of Paragraph 29.

42. The Minister is responsible for endorsing the normative acts for the applications of Paragraphs 6, 10, 35 and 39.

43. The Ministry of Environment, Forestry and Water Administration, the National Environment Agency, the National Water Council and the Water Basin Councils are responsible for the implementation of this Decision.

44. This decision enters into force 15 days after publication in the Official Journal.

PRIME MINISTER

SALI BERISHA

Annex I. Requirements for urban waste water

Part A. Requirements for discharges from treatment plants to receiving waters

1. Waste water treatment plants shall be designed or modified so that representative samples of the incoming waste water and of treated effluent can be obtained before discharge to receiving waters.
2. Discharges from urban waste water treatment plants subject to treatment in accordance with Paragraphs 15 and 17 shall, subject to Paragraphs 4 and 5 of Part B of this Annex, meet the requirements shown in Table 1.
3. Discharges from urban waste water treatment plants to those sensitive areas which are subject to eutrophication as identified in Annex II point (a) shall in addition meet the requirements shown in Table 2 of this Annex.
4. More stringent requirements than those shown in Table 1 and/or Table 2 shall be applied where required to ensure that the receiving waters satisfy any other requirements of relevant legislation.
5. The points of discharge of urban waste water shall be chosen, as far as possible, so as to minimize the effects on receiving waters.

Table 1. Requirements for discharges from urban waste water treatment plants subject to Paragraphs 15 and 17

Parameters	Concentration	Minimum percentage of reduction ⁽¹⁾	Reference method of measurement
Biochemical oxygen demand (BOD ₅ at 20°C without nitrification ⁽²⁾)	25 mg/l O ₂	70-90	Homogenized, unfiltered, undecanted sample. Determination of dissolved oxygen before and after five-day incubation at 20°±1°C, in complete darkness. Addition of a nitrification inhibitor
Chemical oxygen demand (COD)	125 mg/l O ₂	75	Homogenized, unfiltered, undecanted sample Potassium dichromate
Total suspended solids	35 mg/l ⁽³⁾	90 ⁽³⁾	- Filtering of a representative sample through a 0,45µm filter membrane. Drying at 105 °C and weighing - Centrifuging of a representative sample (for at least five minutes with mean acceleration of 2800 to 3200 g), drying at 105°C and weighing
	35 under Paragraph 16 (more than 10 000 p.e.)	90 under Paragraph 16 (more than 10 000 p.e.)	
	60 under Paragraph 16 (2 000 to 10 000 p.e.)	70 under Paragraph 16 (2 000 to 10 000 p.e.)	

The values for concentration or for the percentage of reduction shall apply.

Analyses concerning discharges from lagooning shall be carried out on filtered samples; however, the concentration of total suspended solids in unfiltered water samples shall not exceed 150 mg/l.

Notes to Table 1.

- (1) Reduction in relation to the load of the influent
- (2) This parameter can be replaced by another parameter: total organic carbon (TOC) or total oxygen demand (TOD) if a relationship can be established between BOD5 and the substitute parameter.
- (3) This requirement is optional

Table 2. Requirements for discharges from urban waste water treatment plants to those sensitive areas which are subject to eutrophication as identified in Annex II point (a)

Parameters	Concentration	Minimum percentage reduction ⁽¹⁾	of	Reference method of measurement
Total phosphorous	2 mg/l (10 000 to 100 000 p.e.)	80		Molecular absorption spectrophotometry
	1 mg/l (more than 100 000 p.e.)			
Total nitrogen ⁽²⁾	15 mg/l (10 000 to 100 000 p.e.) ⁽³⁾	70-80		Molecular absorption spectrophotometry
	10 mg/l (more than 100 000 p.e.) ⁽³⁾			

One or both parameters may be applied depending on the local situation.

The values for concentration or for the percentage of reduction shall apply.

Notes to Table 2.

- (1) Reduction in relation to the load of the influent.
- (2) Total nitrogen means the sum of total Kjeldahl nitrogen (organic and ammoniacal nitrogen) nitrate-nitrogen and nitrite-nitrogen.
- (3) These values for concentration are annual means as referred to in Part B paragraph 4(c) of this Annex. However, the requirements for nitrogen may be checked using daily averages when it is proved, in accordance with Part B paragraph 1, that the same level of protection is obtained. In this case, the daily average must not exceed 20 mg/l of total nitrogen for all the samples when the temperature from the effluent in the biological reactor is superior or equal to 12 °C. The conditions concerning temperature could be replaced by a limitation on the time of operation to take account of regional climatic conditions.

Part B. Reference methods for monitoring and evaluation of results

1.
 - a. The National Environment Agency shall apply a monitoring method which corresponds at least with the level of requirements described below.
 - b. Alternative methods Alternative methods to those mentioned in paragraphs 2, 3 and 4 may be used provided that it can be demonstrated that equivalent results are obtained.
 - c. The National Environment Agency shall provide the Minister with all relevant information concerning the applied method.

2.
 - a. Flow-proportional or time-based 24-hour samples shall be collected at the same well-defined point in the outlet and if necessary in the inlet of the treatment plant in order to monitor compliance with the requirements for discharged waste water laid down in this Decision.
 - b. Good international laboratory practices aiming at minimising the degradation of samples between collection and analysis shall be applied.

3. The minimum annual number of samples shall be determined according to the size of the treatment plant and be collected at regular intervals during the year:

2 000 to 9 999 p.e.	12 samples during the first year.
	Four samples in subsequent years, if it can be shown that the water during the first year complies with the provisions of the Decision; if one sample of the four fails, 12 samples must be taken in the year that follows.
10 000 to 49 999 p.e.	12 samples
50 000 p.e. or over	24 samples

4. The treated waste water shall be assumed to conform to the relevant parameters if, for each relevant parameter considered individually, samples of the water show that it complies with the relevant parametric value in the following way:
 - a. for the parameters specified in Table 1, a maximum number of samples which are allowed to fail the requirements, expressed in concentrations and/or percentage reductions in that Table, is specified in Table 3;
 - b. for the parameters of Table 1 expressed in concentrations, the failing samples taken under normal operating conditions must not deviate from the parametric values by more than 100%. For the parametric values in concentration relating to

total suspended solids deviations of up to 150 % may be accepted;

- c. for those parameters specified in Table 2 the annual mean of the samples for each parameter shall conform to the relevant parametric values.

- 5. Extreme values for the water quality in question shall not be taken into consideration when they are the result of unusual situations such as those due to heavy rain.

Table 3 maximum permitted number of samples which fail to conform

Series of samples taken in any year	Maximum permitted number of samples which fail to conform
4-7	1
8-16	2
17-28	3
29-40	4
41-53	5
54-67	6
68-81	7
82-95	8
96-110	9
111-125	10
126-140	11
141-155	12
156-171	13
172-187	14
188-203	15
204-219	16
220-235	17
236-251	18
252-268	19
269-284	20
285-300	21
301-317	22
318-334	23
335-350	24
351-365	25

Annex II. Criteria for identification of sensitive areas

1. A water body must be identified as a sensitive area if it falls into one of the following groups:
 - a. natural freshwater lakes, other freshwater bodies, estuaries and coastal waters which are found to be eutrophic or which in the near future may become eutrophic if protective action is not taken.

The following elements might be taken into account when considering which nutrient should be reduced by further treatment:

- i. lakes and streams reaching lakes/reservoirs/closed bays which are found to have a poor water exchange, whereby accumulation may take place. In these areas, the removal of phosphorus should be included unless it can be demonstrated that the removal will have no effect on the level of eutrophication. Where discharges from large agglomerations are made, the removal of nitrogen may also be considered;
- ii. estuaries, bays and other coastal waters which are found to have a poor water exchange, or which receive large quantities of nutrients. Discharges from small agglomerations are usually of minor importance in those areas, but for large agglomerations, the removal of phosphorus and/or nitrogen should be included unless it can be demonstrated that the removal will have no effect on the level of eutrophication;
- b. surface freshwaters intended for the abstraction of drinking water which could contain more than a nitrate concentration of 50 mg/l NO₃ as laid down under the relevant provisions of special legislation concerning the quality required of surface water intended for the abstraction of drinking water if action is not taken;
- c. areas where further treatment than secondary or equivalent treatment is necessary to fulfil the requirements of other legislation.

Annex III. Requirements for industrial waste water

1. Industrial waste water entering collecting systems and urban waste water treatment plants shall be subject to such pre-treatment as is required in order to:
 - a. protect the health of staff working in collecting systems and treatment plants,
 - b. ensure that collecting systems, waste water treatment plants and associated equipment are not damaged,
 - c. ensure that the operation of the waste water treatment plant and the treatment of sludge are not impeded,
 - d. ensure that discharges from the treatment plants do not

adversely affect the environment, or prevent receiving water from complying with other legislation,
e. ensure that sludge can be disposed of safely in an environmentally acceptable manner.

Annex IV. Industrial sectors referred to in Paragraph 24

1. Milk-processing
2. Manufacture of fruit and vegetable products
3. Manufacture and bottling of soft drinks
4. Potato-processing
5. Meat industry
6. Breweries
7. Production of alcohol and alcoholic beverages
8. Manufacture of animal feed from plant products
9. Manufacture of gelatine and of glue from hides, skin and bones
10. Malt-houses
11. Fish-processing industry