

Questionnaire according to Commission Decision 94/741/EC for the report of the Member States on the transposition and implementation of Directive 86/278/EEC on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture, amended by Directive 91/692/EEC

Please provide the following contact information and complete the grey text boxes:	
Institution/Organisation you are representing	MINISTRY OF ENVIRONMENT ENERGY & CLIMATE CHANGE
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Support
<p>Should you have any questions please do not hesitate to contact us. The best way to contact us is via our functional email address: estat-waste-statistics@ec.europa.eu</p> <p>Please specify your contact details and indicate what your question is about: e.g. registration in CIRCA, use of the eDAMIS system, waste concepts.</p> <p>With kindest regards, the Waste Data Centre Team at Eurostat EUROPEAN COMMISSION - Eurostat - Environment Statistics L-2920 LUXEMBOURG http://ec.europa.eu/eurostat/waste</p>

Submission
<p>The submission is due the 30. September 2010.</p> <p>Please send the completed questionnaire to EUROSTAT via eDAMIS.</p> <p>For more information how to submit the completed questionnaire via eDAMIS see: http://epp.eurostat.ec.europa.eu/portal/page/portal/waste/reporting#reporting</p>

There is no need to repeat information already supplied but please indicate clearly where and when that information was provided.

I. INCORPORATION INTO NATIONAL LAW	
1. (a) Has the Commission been provided with details of the current laws and regulations in force to incorporate the Directive as amended into national law? (Yes/No)	Yes
1. (b) If the answer to (a) above is 'No', please state the reasons why:	

<p>2. (a) If national measures have been adopted pursuant to Article 5 to ensure that sewage sludge may not be used in soils with concentrations of one or more heavy metals that exceed the agreed limit values, has the Commission been notified of these measures? (Yes/No)</p>	<p>No</p>
<p>2. (b) If the answer to (a) above is 'No', please state the reasons why:</p> <p>No National measures have been set so far, because sewage sludge has not been used in agriculture</p>	
<p>2. (c) If national measures have been adopted that are stricter than those provided for in the Directive, has the Commission been notified of these measures pursuant to Article 12? (Yes/No)</p>	<p>No</p>
<p>2. (d) If the answer to (c) above is 'No', please state the reasons why:</p> <p>In regard to the concentration limits as well as the application of maximum quantities of sludge, Greece has adopted the limits as set in ANNEX I. Moreover in Article 4, JMD 80568 / 4225 / 91 (adoption in National legislation of the Directive 86/278) , specific actions have been set and must be followed by the competent authorities in order to avoid cases of excession of the limit values. Especially as far concentration limit for Chromium (Cr) the following maximum values are used, as set in JMD 114218 / 97 "Framework of specifications and general programmes of solid waste management",</p> <ul style="list-style-type: none"> • Limit value for Cr (iii) in sludge that is used in agriculture: 500 mg/kg dried matter and Cr (iv) : 10 mg/kg dried matter. • Maximum quantity of sludge that can be applied in cultivations per annum, in a basis of a mean value of 10 years, is 5 kg/ hectare /an 	

II. IMPLEMENTATION OF THE DIRECTIVE

1. Please quote any specific conditions which have been deemed necessary for the protection of human health and the environment in accordance with the first indent of Article 3 (2), when using sludge residues from septic tanks and other similar installations for the treatment of waste water for agricultural purposes.

Up to now sludge residues from septic tanks have not been used in agriculture. In general, sewage sludge has not been used in agriculture, with an exception of very small quantities that have been used in the frame of research projects and few pilot studies.

Moreover research projects were carried out focusing on the treatment technologies and the applications of sludge. Some of which are carried out at full scale currently: The project of hygenization - lime addition into sludge at the establishments of WWTP of Thessalonica.

The Drying Unit of sewage sludge generated from the WWTP of Attica at Psittalia, commenced operation in summer 2007. The technology which is applied by this Unit is thermal treatment (drying) in order to achieve hygenization and almost complete dewatering of sludge. The scope of the above mentioned treatment is further utilisation of sludge either as a fertiliser or as a secondary fuel.

Moreover a quantity of 23.313 tones of from WWTP of Psittalia were exported to Germany to be utilised in an Energy Production Plant.

2. (a) With regard to Article 5, please complete the following table, stating whether any of the information given is an estimate:

Metal	Article 5 (1)		Article 5 (2) (a)		Article 5 (2) (b)		Comments and/or reasons for the derogation
	Concentration in soils		Concentration in sludges		Application in agriculture		
	Directive Annex I A	National limit values	Directive Annex I B	National limit values	Directive Annex I C	National limit values	
	mg/kg	mg/kg	mg/kg	mg/kg	kg/ha/year	kg/ha/year	

	dry matter	dry matter	dry matter	dry matter			
Cadmium	1 to 3	3	20 to 40	40	0,15	0,15	
Copper	50 to 140	140	1000 to 1750	1750	12	12	
Nickel	30 to 75	75	300 to 400	400	3	3	
Lead	50 to 300	300	750 to 1200	1200	15	15	
Zinc	150 to 300	300	2500 to 4000	4000	30	30	
Mercury	1 to 1.5	1,5	16 to 25	25	0,1	0,1	
Chromium	—		—		—	5	There is not threshold value for total Cr in sludge. However there are National limits for Cr (iii) which is 500 mg/kg and for Cr (vi) which is 10 mg/kg in sludge.

2. (b) If the option proposed under Article 5 (2) (a) has been chosen, please indicate the maximum quantity of sludge that may be applied to the soil per surface unit per annum (in tonnes of dry matter per hectare per annum).

The procedure of Article 5 (2) has not been utilised because there has not been use of sludge in agriculture.

2. (c) If any less stringent limit values for heavy-metal concentrations in soils have been permitted in accordance with Annex I A, footnote 1, please complete the following table, stating whether any of the information given is an estimate.

Metal	Number of sites	Surface area covered (ha)	Soil type (including hydrological characteristics)	pH	New limit value (mg/kg dry matter)	Comments and/or reasons for the derogation (use a separate sheet if necessary)
Cadmium						
Copper						
Nickel						
Lead						

Zinc						
Mercury						
Chromium						

2. (d) If any less stringent limit values for heavy-metal concentrations in soils have been permitted in accordance with Annex I A, footnote 2, please complete the following table (the first three columns are not obligatory):

Metal	Number of sites	Maximum quantity of sludge authorized (tonnes dry matter)	Soil type (including hydrological characteristics)	pH	New limit value (mg/kg dry matter)	Comments and/or reasons for the derogation (use a separate sheet if necessary)
Copper						
Nickel						
Zinc						

2. (e) If any less stringent limit values for heavy-metal concentrations in soils have been permitted in accordance with Annex I C, footnote 1, please complete the following table, stating whether any of the information given is an estimate.

Metal	Number of sites	Surface area covered (ha)	Soil type (including hydrological characteristics)	pH	New limit value (mg/kg dry matter)	Comments and/or reasons for the derogation (use a separate sheet if necessary)

Cadmium						
Copper						
Nickel						
Lead						
Zinc						
Mercury						
Chromium						

3. (a) With regard to Article 6, please briefly describe the technologies employed for treating sludge.

The main technologies for sludge treatment in order to prepare the waste for further management are: 1) thermal treatment (drying), 2) hygenization by addition of lime, 3) aerobic stabilization, 4) solar drying (in greenhouse).

3. (b) Have rules been drawn up to ensure that analyses are carried out at more frequent No

intervals than those provided for in Annex II A (1)? (Yes/No)

3. (c) If the answer to (b) above is 'Yes', please give further details.

3. (d) Have conditions been laid down for authorizing the injection or working into the soil of untreated sludge (Article 6 (a))? (Yes/No) No

3. (e) If the answer to (d) above is 'Yes', please give further details.

4. With regard to Article 7, please indicate, where appropriate, the length of the period during which it is forbidden to use sludge on grassland before it is grazed, and on forage crops before harvest.

5. (a) Have any reduced limit values or, where appropriate, any other measures, been authorized at national level where the pH of the soil is below 6, as provided for in Article 8? (Yes/No)

5. (b) If the answer to (a) above is 'Yes' please complete the following table:

Metal	Cadmium	Copper	Nickel	Lead	Zinc	Mercury	Chromium
Reduced limit value (mg/kg/dry matter)							
Other Measures							

6. (a) If appropriate, indicate which types of analysis are carried out, pursuant to Article 9, on soil parameters in accordance with Annex II B (1), other than those mentioned in Annex II B (3) (pH and heavy metals).

There are no other additional types of analyses carried out than the ones laid down in Annex II B (3).

6. (b) State the minimum frequency of soil analysis (Annex II B (2)).

Since sludge is not used in agriculture soil analysis is not set as compulsory. Additional to the above answers it must be noted that, according to the National Legislation (JMD 80568/4225/1991) in order to use sludge in agriculture the appropriate permit must be granted to the user by the competent Prefectural Authority. In this permit the required terms and conditions for the use of sludge as set in the ANNEX II of Directive 86278 are laid down.

7. On the basis of the data contained in the records referred to in Article 10, complete the following tables, stating whether the information given is an estimate.

	Dry matter (tonnes/year)	Surface covered (optional)
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	2007	2008	2009	2007	2008	2009
Sludge produced by the waste water treatment plants	133954	136106	151514			
Sludge used in agriculture	0,3 (300 kg)	0,3	0,3			

SLUDGE USED IN AGRICULTURE			
Average content (mg/kg dry matter)			
Parameters	2007	2008	2009
METALS			
Cadmium			
Copper			
Nickel			
Lead			
Zinc			
Mercury			
Chromium			
ELEMENTS			
Nitrogen (total N)			
Phosphorus (total P)			

8. State the number of cases in which exemptions under Article 11 have been granted.

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