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

Reporting year 2024

Please provide the following contact information and complete the grey text boxes:	
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Support
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 Please specify your contact details and indicate what your question is about: e.g. registration in CIRCA, use of the eDAMIS system, waste concepts. With kindest regards, the Waste Data Centre Team at Eurostat EUROPEAN COMMISSION - Eurostat - Environment Statistics L-2920 LUXEMBOURG http://ec.europa.eu/eurostat/waste

Submission

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:	

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)	Yes
2. (b) If the answer to (a) above is 'No', please state the reasons why:	
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)	Yes
2. (d) If the answer to (c) above is 'No', please state the reasons why:	

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.

According to the Section 7 of the Ministry of Agriculture and Forestry Decree 964/2023 on Fertilizer Products, the provisions concerning the use of sludge from wastewater treatment plants apply also to sludge from septic tanks and waste from earth closets. Only exception is sludge from septic tanks and waste from earth closets that originate from living on the farm in question, from other activities of the farm or from other dwellings near the farm, provided that the recovery of the sludge does not need an environmental permit in accordance with the Environment Protection Act (527/2014).

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 dry matter	mg/kg dry matter	mg/kg dry matter	mg/kg dry matter	kg/ha/year	kg/ha/year	
Cadmium	1 to 3	0.5	20 to 40	1.5	0.15	0.0015	Article 5 (1) and Article 5 (2) (a): Finland has a stricter national limit value for cadmium concentration in soils and in sludges. The limit value in sludges is same in Åland Islands (autonomous region of Finland).

							Article 5 (2) (b): Finland has chosen to apply the option proposed under Article 5 (2) (a). Åland Islands, autonomous region of Finland, has 0.0015 kg/ha/year limit value for application in agriculture.
Copper	50 to 140	100	1000 to 1750	600	12	0.6	Article 5 (2) (a): Finland has a stricter national limit value for copper concentration in sludges. Exceeding of the maximum concentration in sludges can be allowed if the soil is proven to be poor in copper. The limit value in sludges is same in Åland Islands (autonomous region of Finland). Article 5 (2) (b): Finland has chosen to apply the option proposed under Article 5 (2) (a). Åland Islands, autonomous region of Finland, has 0.6 kg/ha/year limit value for application in agriculture.
Nickel	30 to 75	50	300 to 400	70	3	0.05	Article 5 (2) (a): Finland has a stricter national limit value for nickel concentration in sludges. The limit value in sludges is 50 mg/kg dry matter in Åland Islands (autonomous region of Finland). Article 5 (2) (b): Finland has chosen to apply the option proposed under Article 5 (2) (a). Åland Islands, autonomous

							region of Finland, has 0.05 kg/ha/year limit value for application in agriculture.
Lead	50 to 300	60	750 to 1200	100	15	0.10	Article 5 (2) (a): Finland has a stricter national limit value for lead concentration in sludges. The limit value in sludges is same in Åland Islands (autonomous region of Finland). Article 5 (2) (b): Finland chosen to apply the option proposed under Article 5 (2) (a). Åland Islands, autonomous region of Finland, has 0.10 kg/ha/year limit value for application in agriculture.
Zinc	150 to 300	200	2500 to 4000	1500	30	0.80	Article 5(2)(a): Finland has a stricter national limit value for zinc concentration in sludges. Exceeding of the maximum concentration in sludges can be allowed if the soil is proven to be poor in zinc. The limit value in sludges is 800 mg/kg dry matter in Åland Islands (autonomous region of Finland). Article 5 (2) (b): Finland has chosen to apply the option proposed under Article 5 (2) (a). Åland Islands, autonomous region of Finland, has 0.80 kg/ha/year limit value for application in agriculture.
Mercury	1 to 1.5	0,2	16 to 25	1	0,1	0.001	Article 5 (1): Finland has a stricter national limit value for mercury concentration in soils.

							Article 5(2)(a): Finland has a stricter national limit value for mercury concentration in sludges. The limit value in sludges is same in Åland Islands (autonomous region of Finland). Article 5 (2) (b): Finland chosen to apply the option proposed under Article 5 (2) (a). Åland Islands, autonomous region of Finland, has 0.001 kg/ha/year limit value for application in agriculture.
Chromium	—	100	—	300	—	0.10	Article 5(2)(a): The limit value for chromium in sludges is 100 mg/kg dry matter in Åland Islands (autonomous region of Finland). Article 5 (2) (b): Finland has chosen to apply the option proposed under Article 5 (2) (a). Åland Islands, autonomous region of Finland, has 0.10 kg/ha/year limit value for application in agriculture.

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 maximum quantities of sludge that may be applied on agricultural soil is 6 tonnes d.m./year/ha, or alternatively on a five- year-period max. 30 tonnes (d.m.)/ha (Ministry of Agriculture and Forestry Decree 964/2023, Section 7).

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.

Anaerobic digestion, aerobic digestion, lime stabilization, composting, chemical oxidation, and thermal drying.
The Åland Islands: Anaerobic digestion, aerobic digestion, lime stabilization, composting and drying.

3. (b) Have rules been drawn up to ensure that analyses are carried out at more frequent intervals than those provided for in Annex II A (1)? (Yes/No)	Yes

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

According to Annex 4 of the Government Decree on Waste 978/2021, in order to monitor quality fluctuations, samples of sludge intended for use in agriculture shall initially be taken at short intervals. If there is little fluctuation in results during the first year, analysis frequency can be reduced. The frequency of analyses shall be determined by the size of the sewage treatment plant as follows:

Population equivalent	Frequency of analyses/year	
	First year	Later years
>100 000	≥12	≥4
≤10 000 - <100 000	≥6	≥3
≤2 000 - <10 000	≥4	≥2
≤500 - <2 000	≥ 1	≥ 1
< 500	≥ 1	at least once every two years

Whenever the quality of the incoming sewage water is altered significantly, the frequency of analyses shall be increased to at least the level required during the first year.

Regarding the Åland Islands: See the report for the period 1995-1997. No rules have been drawn up.

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.

Sludge may not be spread on land used for grazing or for growing forage crops before the period of one year has elapsed. For food products the period is two years. (Section 8 of the Ministry of Agriculture and Forestry Decree 964/2023 on Fertilizer Products).

Regarding the Åland Islands: On grassland it is permitted to use sludge just before sow, but it is not permitted to grow potatoes, root-crops and vegetables until at least five years have passed after spreading the sludge.

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)	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).

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

The first samples shall be taken before the sludge is spread for the first time. If, based on the loads of heavy metals, there is reason to assume that the maximum concentrations of heavy metals may be exceeded, a new analyze shall be made every five years before the sludge is spread (Ministry of Agriculture and Forestry Decree 964/2023 on Fertilizer Products, Section 7).

Regarding the Åland Islands: Every 5th year.

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)		
	2022	**2023**	**2024**	2021	2022	2023
Sludge produced by the waste water treatment plants	154 397	141 588	-			
Sludge used in agriculture	60 466	55 629	-			

SLUDGE USED IN AGRICULTURE Average content (mg/kg dry matter)

Parameters	2022	2023	2024
METALS			
Cadmium	0.56	0.52	0.48
Copper	235	197	200
Nickel	26	19	19
Lead	10.3	12.6	10
Zinc	409	379	362
Mercury	0.28	0.36	0.24
Chromium	32	28	26
Nitrogen (total N)	31 658	44 090	34 631
Phosphorus (total P)	20 159	19 300	19 534

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

Exemptions concerning the required frequency of analyses of sludge/year have been granted to waste water treatment plants with less than 2000 person equivalents (see answer to question 3(c)). There are approx. 200 plants with 100-2000 person equivalents in Finland.

Regarding the Åland Islands: No sludge was used in agriculture if the sludge is produced in ordinary waste water treatment plants.

9. National websites for dissemination of the consolidated records in accordance with Article 10(2)

Provide links to national websites where records referred to in Article 10(1) are made available and easily accessible to the public in a consolidated format.

https://www.ymparisto.fi/en/sustainable-circular-and-bioeconomy/waste-and-recycling/national-reporting-waste-data