Workshop on Sludge management in the Danube Region for a greener EU

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Legislation and Experience in Slovakia

EU GREEN WEEK 2021 PARTNER EVENT

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ZERO POLLUTION #EUGreenWeek
for healthier people and planet

DANUBE REGION strategy Water Quality

ICPDR IKSD
International Commission for the Protection of the Danube River
Internationale Kommission zum Schutz der Donau

IAWD DANUBE WATER PROGRAM
Smart policies, strong utilities, sustainable services

INTERNATIONAL SAVA RIVER BASIN COMMISSION

Management of the Sewage Sludge from Municipal WWTPs:

1. RECOVERY
- a) controlled application to the soil
- b) energy recovery

2. DISPOSAL
– part of sludge excessively contaminated

1.a) Controlled application to soil:

- direct application of the sludge itself to the soil according to Act No. 188/2003 Coll. on the application of sewage sludge to soil,

- application of sludge to agricultural land in the form of compost, or soil adjuvant or growing medium in accordance with Act no. 136/2000 Coll. on fertilizers

1.a) Direct Application of Sewage Sludge to the Soil

- implemented in accordance with Act No. 188/2003 Coll. on the application of sewage sludge and bottom sediments to the soil, as amended

- until 2004, it was the most widespread way of sludge recovery in the Slovak Republic
- since 2003, when Act no. 188/2003 Coll. was issued, there was a shift in favour of composting

- the change in the complicated process of approving the application of sludge to agricultural land (amendment of the law in 2009) occurred slightly in 2010-2014 and today it can be said only a temporary revival of the process of application of sludge to the soil. In these years, about 0.01-2% of annual sludge production was applied directly to agricultural land.

- since 2015, the sludge has not been applied directly to the soil

1.a) Application of Sewage Sludge to the Soil in the Form of Compost

- the production and application of composts is subject to the provisions of Act no. 136/2000 Coll. on fertilizers as amended. This law determines the conditions for putting fertilizers on the market, their certification, conditions for their storage and use, etc.

- composting was the most widespread method of sludge recovery in the monitored period.

- in the period 2004 - 2013, more than 60% of total sludge production had been treated in this way

- since 2014, the share of composted sludge has decreased to the level of approximately 45% of total production, as the energy recovery of sludge has gradually started to be enforced in this period

1.a) Other Ways of Use of Sludge in Soil Processes

- recultivation of agricultural land - Act no. 220/2004 Coll. on the protection and use of agricultural land and amending Act no. 245/2003 Coll. on integrated pollution prevention and control

- recultivation of non-agricultural land - it is possible to proceed according to approaches to recultivation of non-agricultural land on the basis of Act no. 220/2004 Coll. on the protection and use of agricultural land with the support of technical norm TNI CEN/TR 13983 Principles of good practice for the use of sludge in land reclamation/regeneration

- use as a landfill cover layer - Act no. 79/2015 Coll. on waste and on the amendment of certain laws

- the share of sludge used in soil processes in other ways in the last 5 years ranged from 12 to 18% of total production

1.b) Energy Recovery

- includes processes such as incineration, co-incineration, combined heat and power production, gasification, pyrolysis and wet oxidation

- these processes fall within the scope of Act no. 79/2015 Coll. on waste, as amended, and Act no. 39/2013 Coll. on integrated prevention and control of the environmental pollution

- the amount of energy-recovered sludge gradually increased, in 2012, it was just over 5% of annual production, but in 2015 it was more than 30% of annual sludge production

- since 2016, the share of energy-recovered sludge has remained at the level of 22% of annual production

2. Disposal of Sludge by Landfilling

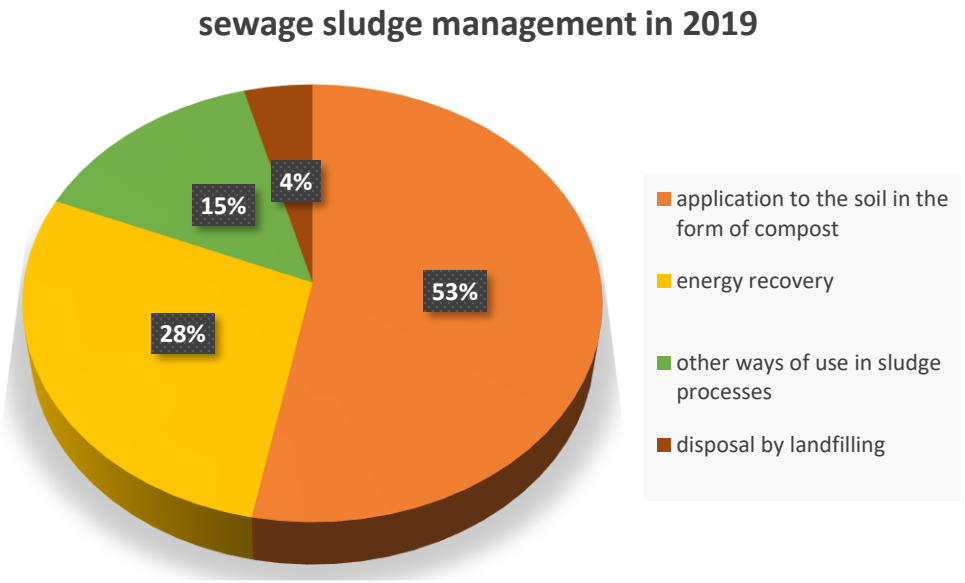
- Act no. 79/2015 Coll. on waste as amended and Act no. 39/2013 Coll. on integrated prevention and control of environmental pollution and on amendments to Certain Acts.

- over the last 5 years, the amount of sludge disposed of in landfills has not exceeded 5% of annual production

- not all sludge produced in a given year is exported from the WWTP in the same year for recovery or disposal

- the sludge is thus temporarily collected and stored on the premises of the WWTP and its export is not carried out until the following year

- the share of sludge collected in the WWTP premises has fluctuated in the range of 5 - 15% of annual production over the last 5 years



- from the presented methods of final sewage sludge management, in the sludge economy of the Slovak Republic, with the exception of a group of thermal methods such as gasification, pyrolysis and wet oxidation, every method has already been carried out

- these methods are all covered by the legislation of the Slovak Republic