EUROPEAN UNION

Interreg
Danube Transnational Programme

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

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Workshop on sludge management in the Danube Region

Balázs Horváth
EUSDR PA4 coordinator

EUSDR PA4 Steering Group meeting
19 October 2021

Workshop on sludge management in the Danube Region

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- **10 June 2021, online**
- **Partner Event of the EU Green Week**
- Cooperation with ICPDR, World Bank and Sava Commission
- Linked to the ongoing **review of the EU Sewage Sludge Directive**
- **Builds on the EUSDR PA4 preparatory study** on sewage sludge management in the Danube Region: overview on the Danube countries' sludge management, best practices and difficulties, recommendations for future steps
- **Goal of the workshop:** improve knowledge about sludge management in the Danube Region, discuss policy option for future sludge management with the European Commission in light of the EU Green Deal and the on-going review of the EU Sewage Sludge Directive, share good technological practices.
- **Target groups:** national sewage sludge experts and interested stakeholders in the Danube Region and in Europe, policy makers, water and sludge managers and thematic coordinators

WORKSHOP ON SEWAGE SLUDGE MANAGEMENT IN THE DANUBE REGION FOR A GREENER EU

10 June 2021, online (**REGISTER HERE**)

EU GREEN WEEK 2021 PARTNER EVENT

10:00 SESSION I: WELCOME NOTES

Moderator: *Zsuzsanna Kocsis-Kupper* (EUSDR PA4)

Balázs Horváth, Priority Area Coordinator, EU Strategy for the Danube Region PA4 "Water Quality"
Stjepan Gabric, Senior Water Supply and Sanitation Specialist, World Bank
Ádám Kovács, Technical Expert-Pollution Control, International Commission for the Protection of the Danube River
Dragan Zeljko, Secretary, International Sava River Basin Commission

10:15 SESSION II: SETTING THE SCENE

Moderator: *Zsuzsanna Kocsis-Kupper* (EUSDR PA4)

Keynote speech: Revision of the Sewage Sludge Directive and the Urban Waste Water Treatment Directive – Sylvie Grajales and Nele-Frederike Rosenstock, *European Commission DG Environment*

Presentation block
Wastewater management in the Danube River Basin – *Ádám Kovács, ICPDR*
Preparatory study on sewage sludge management in the Danube Region – *Attila Fürstand, Trenecon Ltd.*

Q/A block based on chat messages

11:15 SESSION III: POLICY

Moderators: *Ádám Kovács (ICPDR) & Balázs Horváth (EUSDR PA4)*

Presentation block
Legislation and experience in Germany – *Andrea Roskosch, German Environment Agency*
Legislation and experience in Slovakia – *Veronika Gregusova, Water Research Institute*
Legislation and experience in Romania – *Gheorghe Constantin, Ministry of Environment, Waters & Forests*
Legislation and experience in Sweden – *Agneta Thor Leander, VA SYD Water & Wastewater Regional Association*

Roundtable discussion block
Slovenia – *Iztok Rozman, Chamber of Commerce and Industry of Slovenia – Chamber of Public Utilities*
Romania – *Gheorghe Constantin, Ministry of Environment, Waters & Forests*
European Union – *Sylvie Grajales, DG Environment*
World Bank – *Stjepan Gabric*

13:00 LUNCH BREAK

14:00 SESSION IV: TECHNOLOGY & BEST PRACTICES

Moderator: *Stjepan Gabric (WB) & Samo Groselj (ISRBC)*

Presentation block
Mitigation of hazardous substances in sewage sludge – *Hans Peter Arp, Sludgeffect project*
WALUE: Waste to Value for small/medium WWTPs – *András Deli, UTB Envirotech*
Wastewater sludge use in agriculture in Ireland– *Aoife Kyne, Irish Water*
Nutrient recovery from sludge in Austria – *Lukas Egle, City of Vienna*
Sludge biomethanization in Spain – *Jose F. Cabeza, LIFE NEWEST project*

Q/A block based on chat messages

15:45 SESSION V: WRAP-UP & RECOMMENDATIONS

Policy wrap-up: *Ádám Kovács (ICPDR) & Balázs Horváth (EUSDR PA4)*
Technology & best practices wrap-up: *Stjepan Gabric (DWP) & Samo Groselj (ISRBC)*

16:00 CLOSURE OF THE WORKSHOP

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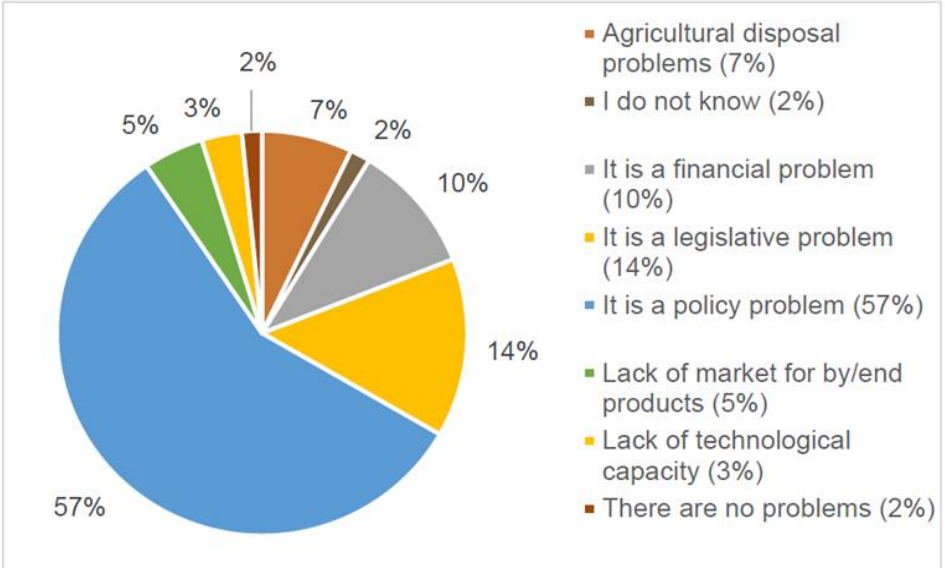
- 84 participants from 17 countries
- All Danube countries except UA & MD
- National and international bodies (EIB, GWP-CEE) and policy makers including non-Danube Basin countries (ES, IE, LT, SE, NO, AL)
- 13 presentations, audience polls, policy discussion panel
- Technology and policy aspects, future potentials, including, treatment, pollution control, agricultural application, energy source sustainability, circular economy

Audience polls

Audience Poll question: What is the main problem related to sewage sludge management in your country? **It is a policy problem: 57%**



What would be in one word your take-away message?

Source control is a priority according to many – the concern about sewage contamination was often raised in the discussions and considered an obstacle of using sewage as a source

Country practices

- **DE:** 75% of sewage sludge is incinerated. P-recycling is mandatory when phosphorous content of sludge exceeds 2% of dry mass. Steadily decreasing agricultural use.
- **SK:** 50% composted, 22% of sludge is used for energy recovery, 12-18% landfill cover layer, 5% landfilling
- **RO:** remediation, rehabilitation of polluted sites, application of sludge to agricultural land – all with pollution control. Main challenge of sludge management is the increasing volume of sewage sludge in urban wastewater treatment plants versus the reduced possibilities of disposal or co-incineration and resistance to its use in agriculture or forestry.
- **SI:** part of sludge is exported
- **AT:** 53% of sludge to thermal treatment, 20% directly applied in agriculture, rest other. More P recovery is planned.
- **IE:** 98% of sludge is used in agriculture. There is a pressure to increase energy recovery and reduce sludge quantities
- **SE:** prevention, source control. 60% is for land reclamation 39% recycling of organic matter and nutrients on farmland, 1% is incinerated, disposal is not allowed. REVAQ certification system: reintroduction of nutrients to land in compliance with environmental regulations
- **NO:** 82% sludge in agriculture, 1% incinerated

Workshop on sludge management in the Danube Region – conclusions (I)

- Expanding wastewater treatment in Danube region results in ever **increasing sludge volumes which represents a serious challenge** for utility sector and industry.
- Not only the volumes are growing considerably but the **pollutant content of sludge is an issue to be addressed**; source control is encouraged for the circular economy and to avoid cross-media pollution.
- Availability of data on sludge production, national or regional alike remain an issue, with **data often outdated and not reliable**. Data gaps are particularly serious when it comes to pollutants presence in sludge, sludge quantities and sludge treatment methods.
- Sludge management **solutions applied drastically differ across countries** ranging from use in agriculture to incineration depending on technology advancement, general perception, legal framework, etc.
- It is acknowledged that **there is no one-size-fits-all solution, but a mix of treatment solutions can be the most appropriate aligned with national, local particularities**.

Workshop on sludge management in the Danube Region – conclusions (II)

- **Better integration of regulations, policies on waste, water and sludge management in line with the green deal initiative** could result in a more efficient legislation promoting achievement of common goals. A revision/update of EU Sewage Sludge Directive could play an important part in achieving this objective.

- A **common understanding of sludge as a waste/pollutant or product/resource in circular economy** should be adopted to better tackle the complex challenges of sludge management.

- A common approach would help **better coordination, cooperation of responsible authorities and relevant stakeholders**. **Knowledge sharing, exchange of information, transboundary co-operations** could change potentially negative perception and serve technology advancement.

- The **acceptance of** different **treatment technologies** by stakeholders and the public is a key issue which require a common understanding on how we consider sludge and technological improvement in addition to ongoing **communication**.

- Since technologies are getting more and more sophisticated and improvement is driven by costly innovation, investments, **the social aspects, affordability should also be considered**.

Workshop on sludge management in the Danube Region

All related information in: https://waterquality.danube-region.eu/workshop-on-sludge-management-in-the-danube-region-for-a-greener-eu-on-10-june-2021/

THANK YOU FOR YOUR ATTENTION!

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