

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

10 June 2021

EU GREEN WEEK 2021 PARTNER EVENT

# Wastewater management in the Danube River Basin

*Progress and challenges*

Adam Kovacs

ICPDR

**ZERO** #EUGreenWeek  
**POLLUTION**  
for healthier people and planet



# Danube River Basin & ICPDR

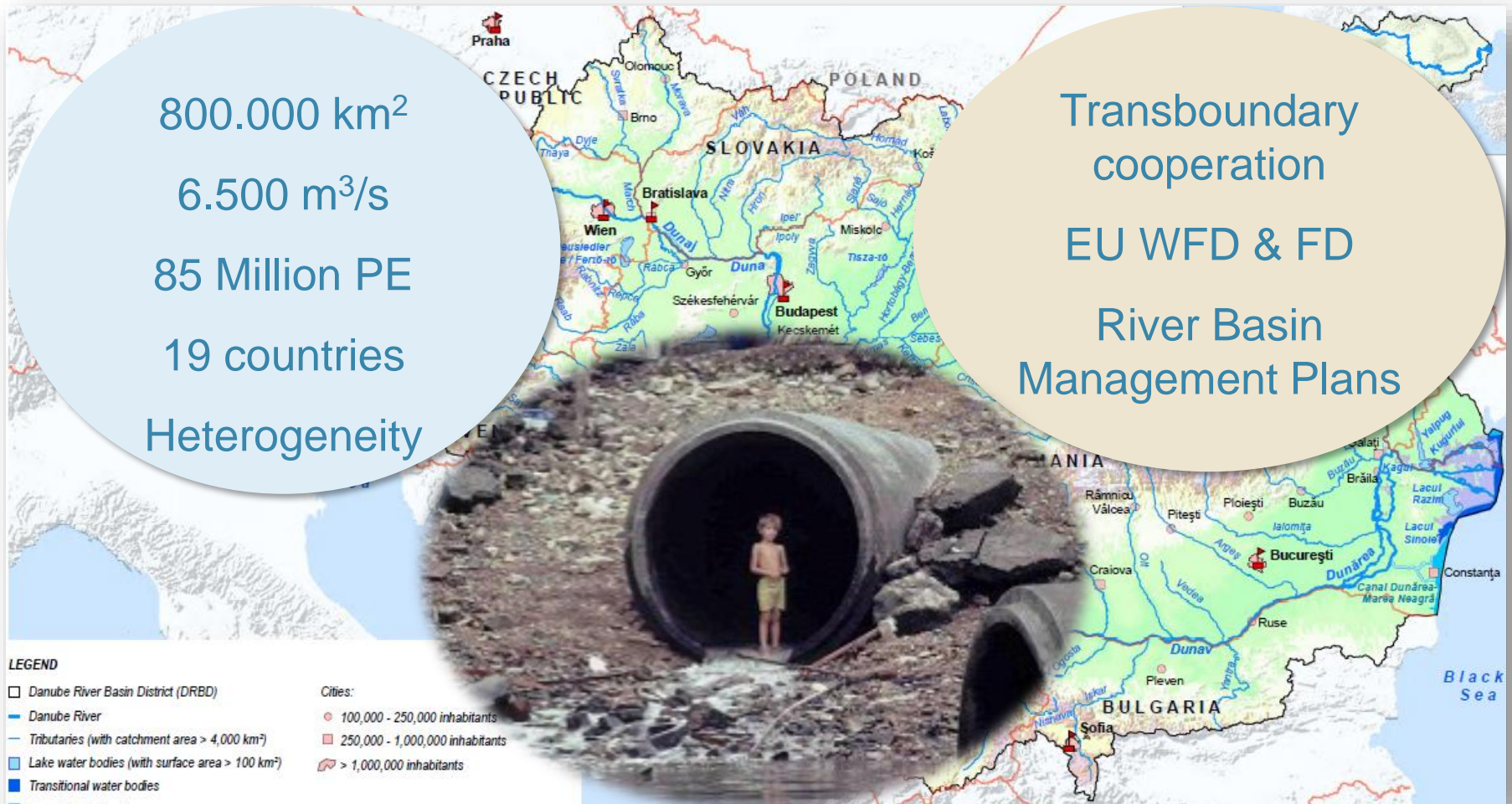
**ICPDR** IKSD

International Commission  
for the Protection  
of the Danube River

Internationale Kommission  
zum Schutz der Donau

800.000 km<sup>2</sup>  
6.500 m<sup>3</sup>/s  
85 Million PE  
19 countries  
Heterogeneity

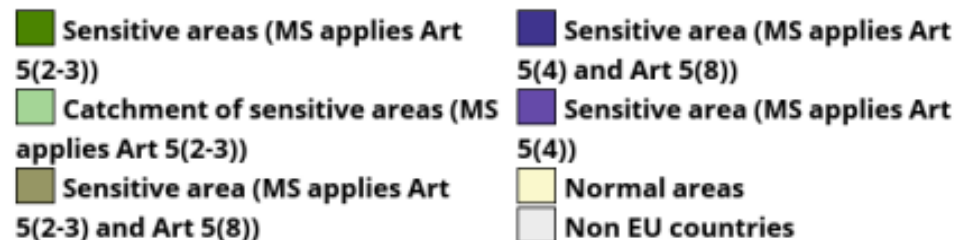
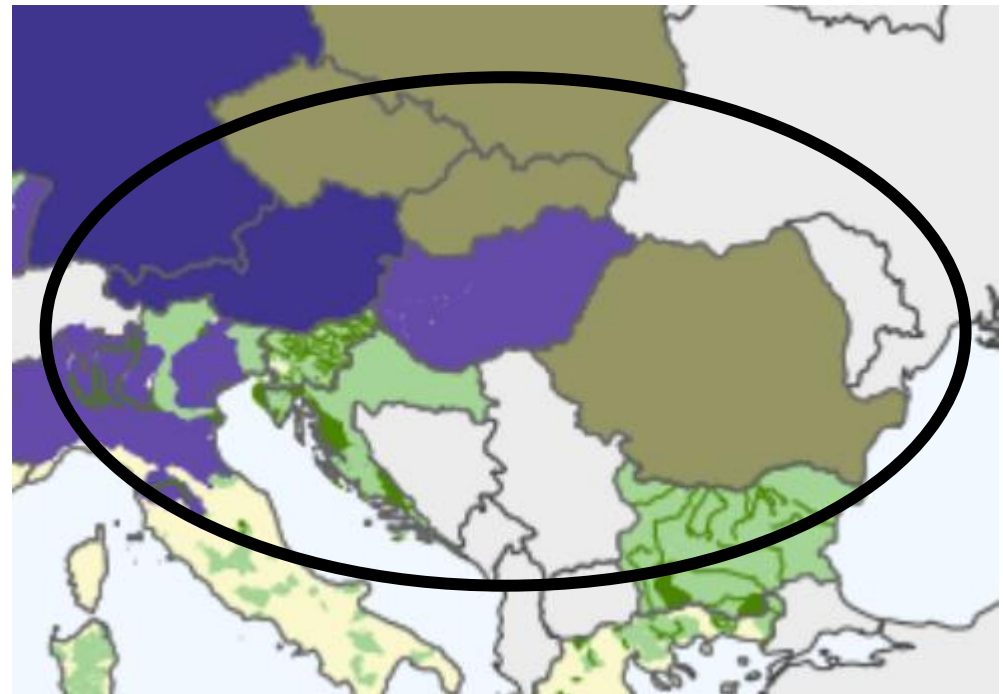
Transboundary  
cooperation  
EU WFD & FD  
River Basin  
Management Plans





# UWWTD regional perspective: Black Sea eutrophication

- Black Sea coastal area designated as **sensitive area** by Romania under Art 5(1) in 2007
- DRB as **catchment** of the sensitive area (Art 5(5))
- **68 million PE** at ca. 1,350 agglomerations above 10,000 PE: tertiary
- **18 million PE** at ca. 4,350 agglomerations below 10,000 PE: secondary

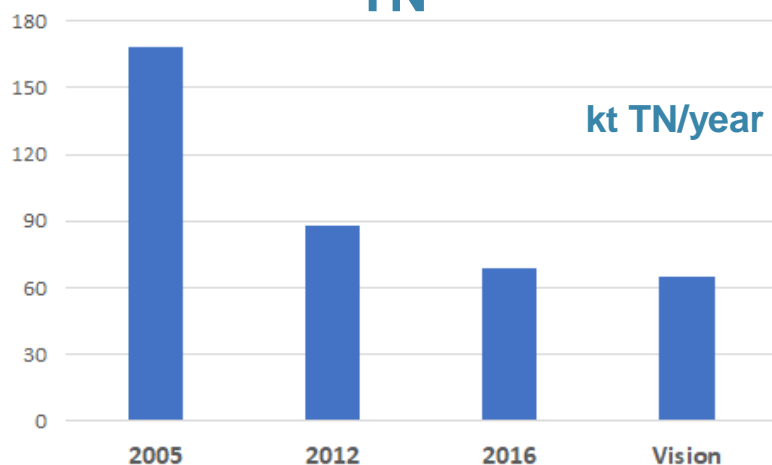


# Implementation progress

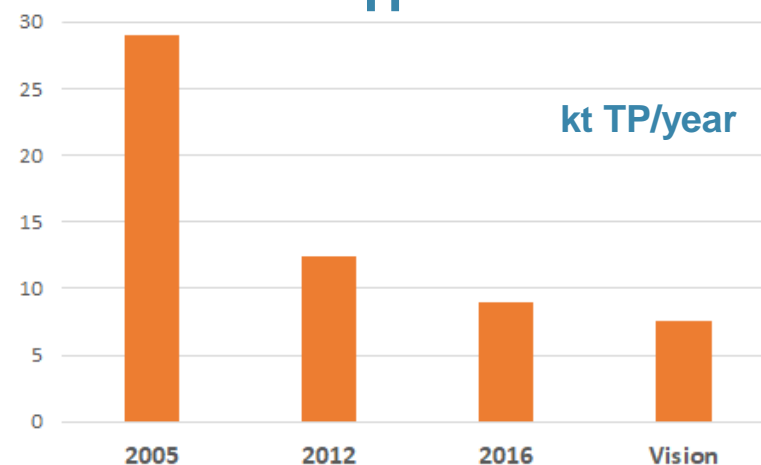
- Significant **progress** even in a short period (2005-2016), shift to more **enhanced** technologies
- Improvement of wastewater infrastructure for ca **40 million PE**, ongoing or planned projects for 25 million PE
- **IAS**: ca 4 million PE
- **Secondary** treatment: ca 8 million PE and ca 800 WWTPs
- **Tertiary** treatment: ca 53 million PE and almost 2,000 WWTPs
- Country **investments** in wastewater sector: ca. 22 billion EUR (2005-2016, DRB parts), in total more than 40 billion EUR (without DE)

# Nutrient emissions and sludge production

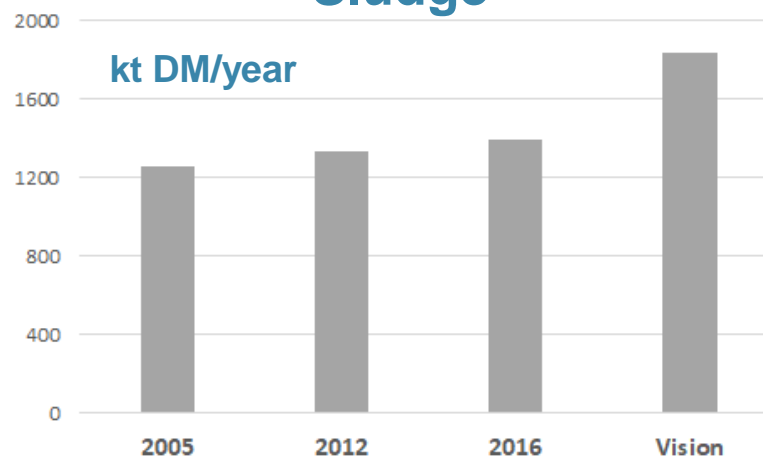
## TN



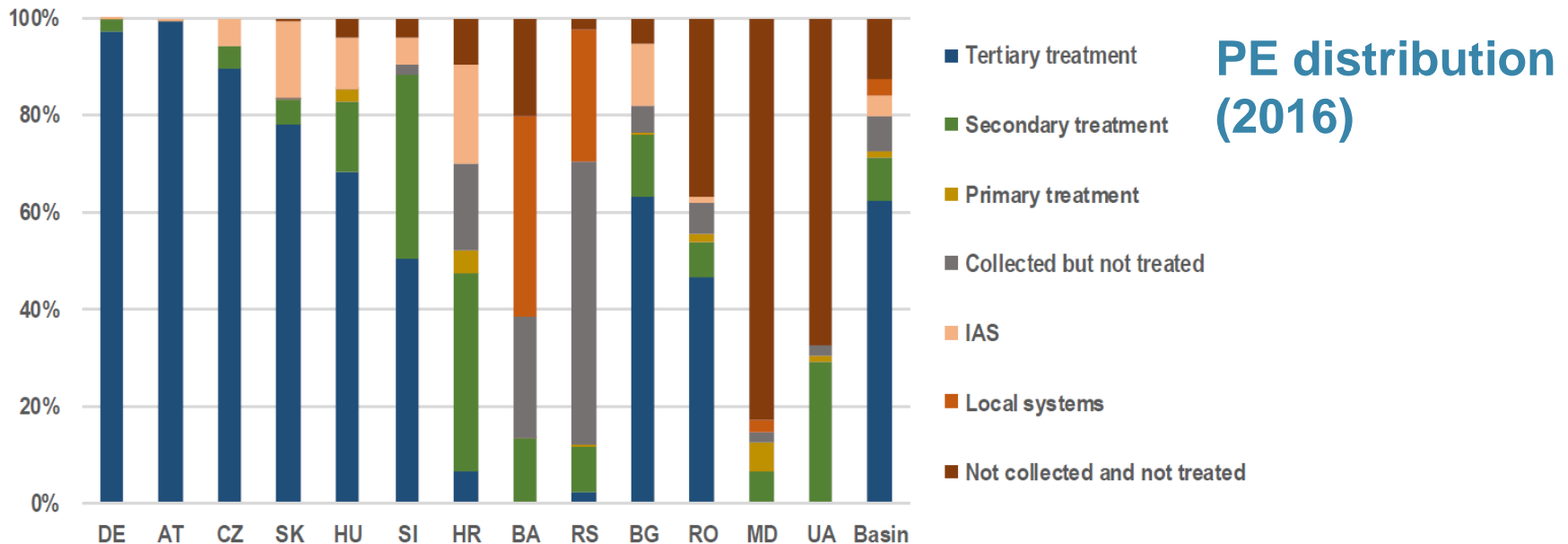
## TP



## Sludge



# Development needs



- 75% (65 million PE) with **adequate treatment**, 21 million PE lagging
- Need of **basic infrastructural** development for 9.5 million PE (secondary)
- Need of **nutrient removal** for 11.5 million PE (protecting the Black Sea)
- Total **investment costs** estimated by 2040: 57 billion EUR

---

# Remaining challenges

- UWWTD as a key **basic measure** of the WFD to be implemented (high ambitions, fairness, precautionary and solidarity)
- Issues in **old EU MS**:
  - Emerging issues (urban runoff, CSO, sludge management, energy optimization, reuse)
  - Removal of emerging contaminants, WFD supplementary measures
  - Maintenance of existing infrastructure, adapting to climate and demographic changes
- Issues in **new and non-EU MS** (in addition):
  - Technical and regulatory conditions of IAS & appropriate legislation for rural areas
  - Capacity building at administration and utility level
  - Ambitious conditions/transitional periods for UWWTD implementation
  - Adsorbing investments, ensuring operational costs, affordability
  - Restructuring water sector, enabling policy framework

# What ICPDR is doing...



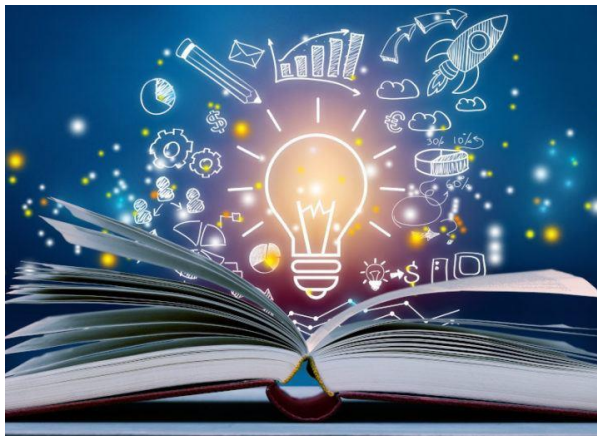
International Commission  
for the Protection  
of the Danube River

Internationale Kommission  
zum Schutz der Donau

- Wastewater **initiative**



- **Recommendation paper** on wastewater management





---

# Thank you for your attention!



International Commission  
for the Protection  
of the Danube River

Internationale Kommission  
zum Schutz der Donau

---

For more information please visit the **ICPDR website**:

<http://www.icpdr.org>

