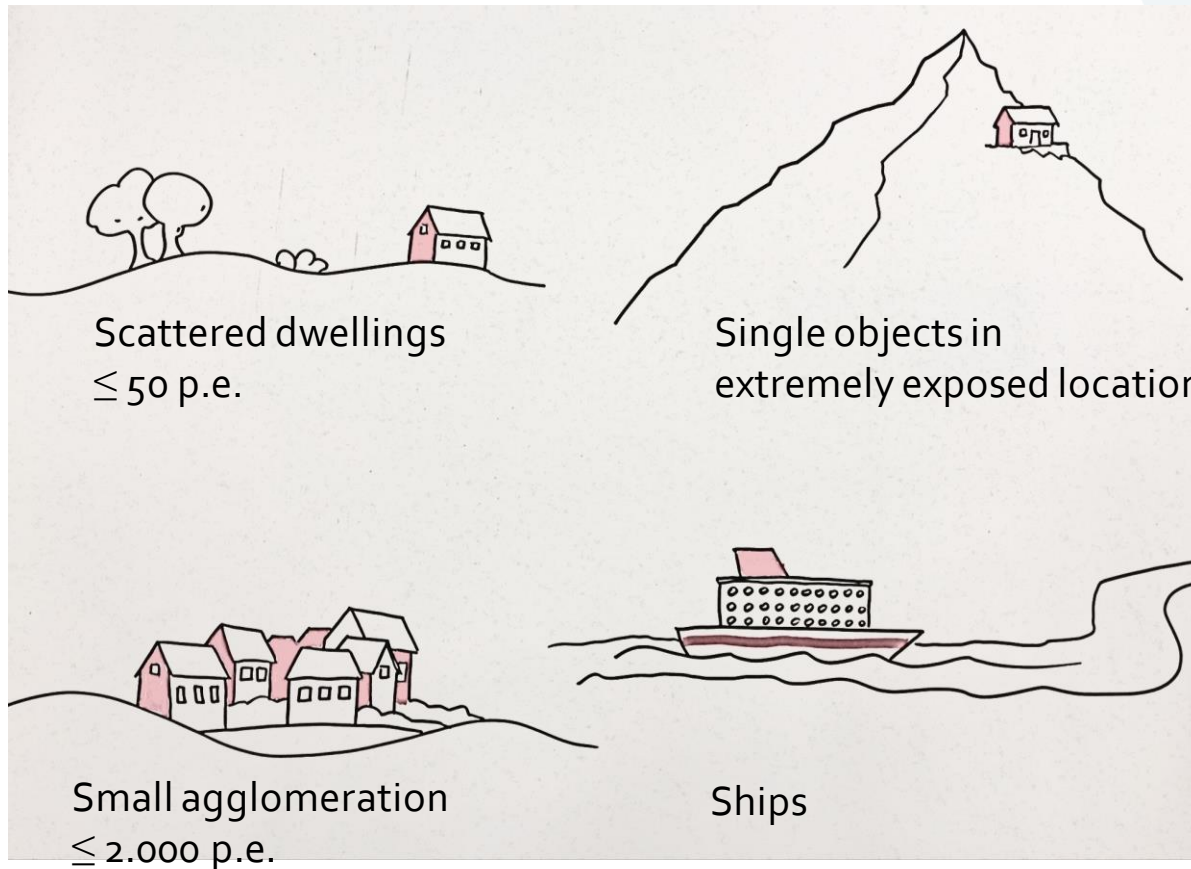


# **Austrian experience in rural (domestic) wastewater management**

Heide Müller-Rechberger  
Austrian Federal Ministry of Agriculture, Regions and Tourism  
Vienna, 19. January 2021

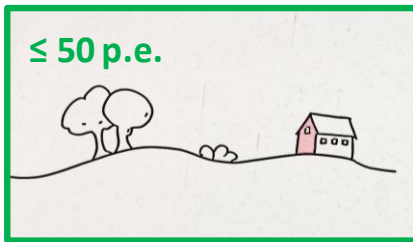
## Rural wastewater treatment – typical settings



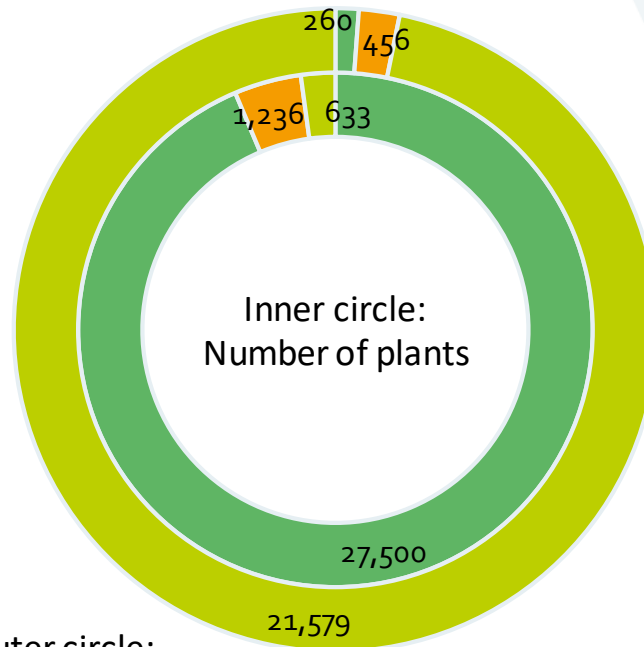
### Other settings

- Individual appropriate systems (IAS) in agglomerations
- ....

## Rural and urban WW management: Capacity and quantity



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< 2.000 p.e.:  
98 % number of plants  
3 % of treatment capacity

Figures from BMLRT, 2020, and Langergraber et al, 2018

## Rural and urban WW management: Costs

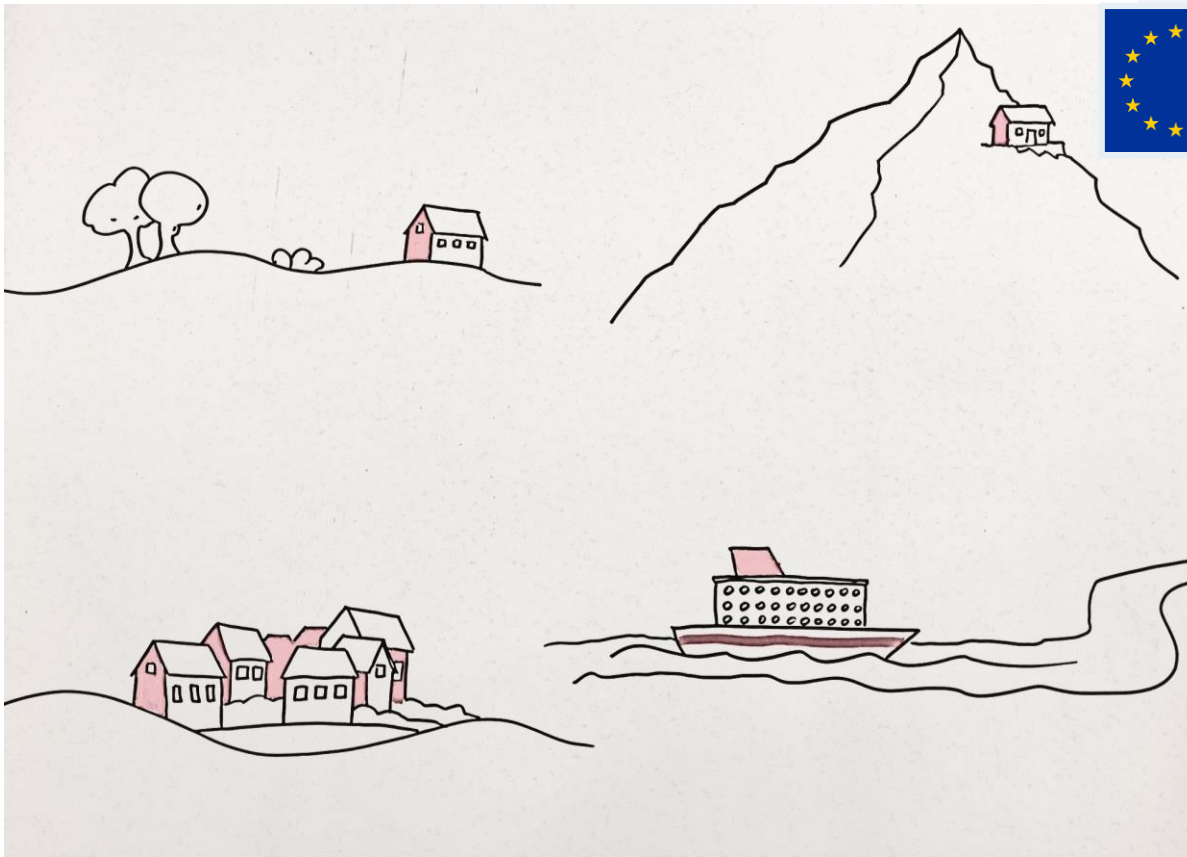
WWTP size	Number of plants*	Investment costs since 1993	
< 2.000 p.e.	17.000	622 Mio. EUR	19 %
≥ 2.000 p.e.	516	3.283 Mio EUR	81 %

**< 2.000 p.e.:**  
**98 % number of plants**  
**3 % of treatment capacity**  
**20 % of investment costs**

\* number of plants that have been partly financed with federal subsidies since 1993

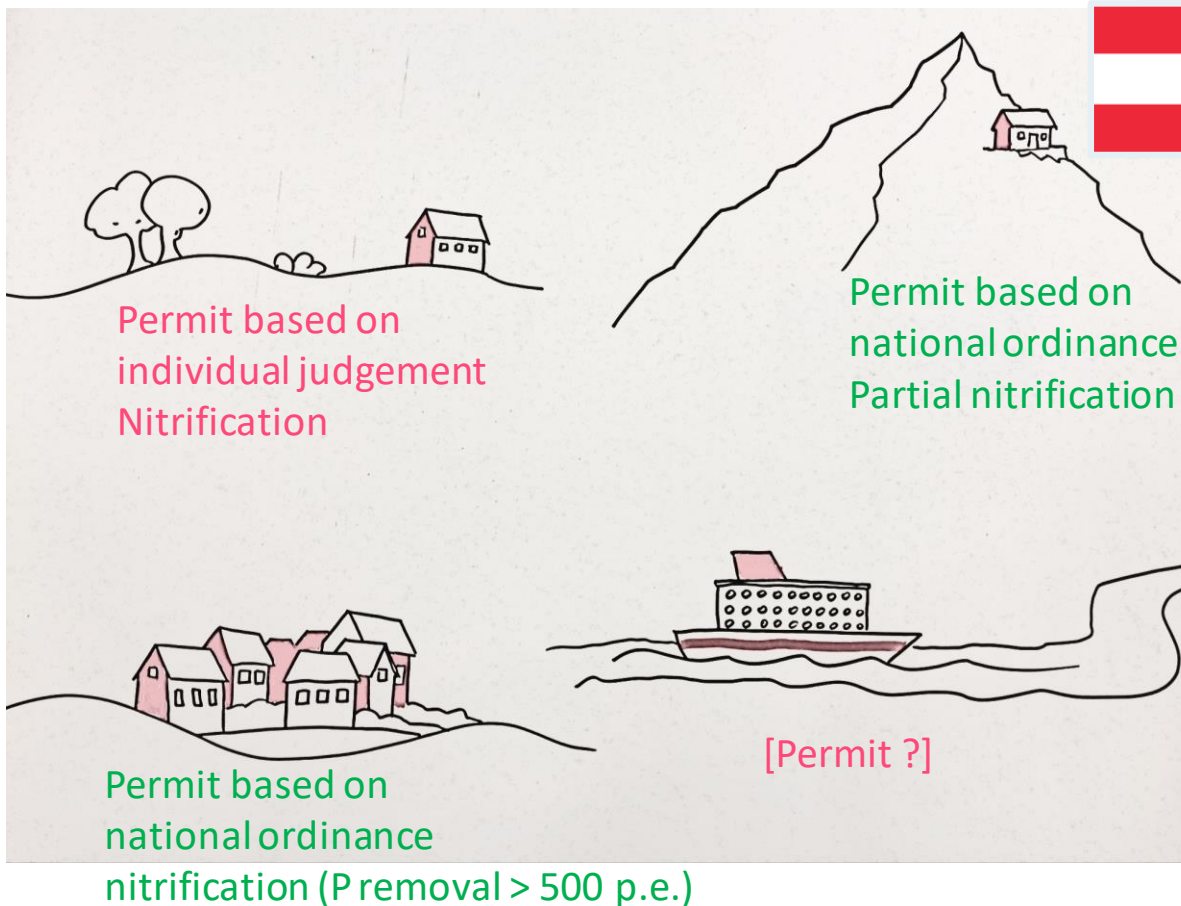
Figures: KPC 2021

## WWT < 2.000 p.e. and European legislative framework



- Water Framework Directive
- Urban Wastewater Treatment Directive
- Nitrates Directive
- Harmonized EN 12566-3
- European standards for inland waterway vessels  
(ES-TRIN 2017/1 and Directive EU 2016/1629)

## WWT < 2.000 p.e. and Austrian legal framework



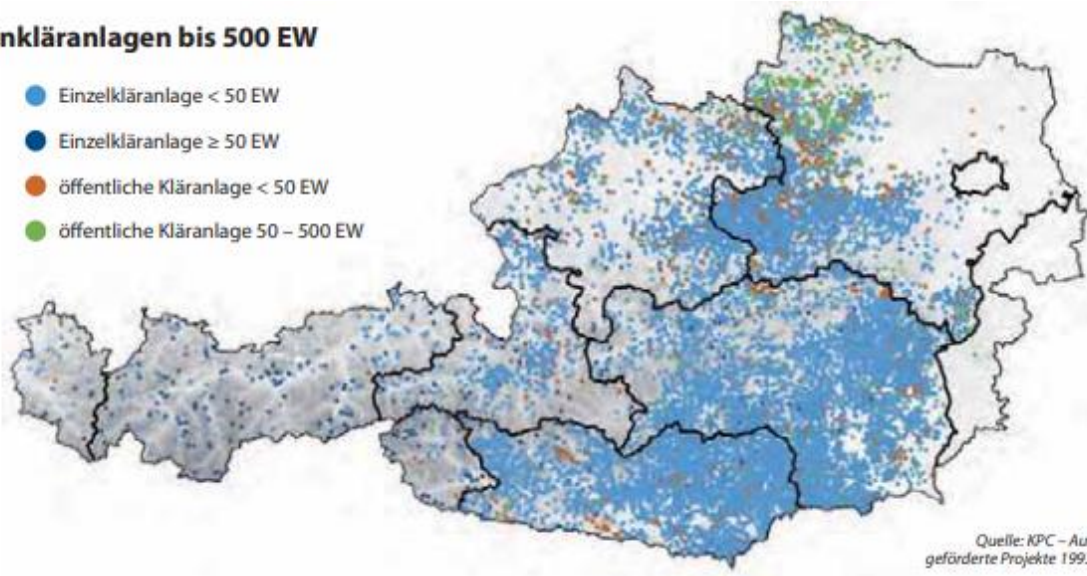
- State-of-the-art: Connection to public sewer, or biological WWTP or watertight sink tank
- Permits
- Maintenance / self-monitoring: Training on the job or service contract
- “External” monitoring by self-mandated laboratory, consultant,...
- Authorities to control results of external monitoring
- No political consensus for ordinance for WWTP  $\leq 50$  p.e. (scattered dwellings)
- No political consensus for type testing ordinance  $\leq 50$  p.e.

## Rural wastewater management - key issues to consider (1)

- A manageable number of small WWTPs
  - Key role of land use planning
  - Favour centralized or common solutions

### Kleinkläranlagen bis 500 EW

- Einzelkläranlage < 50 EW
- Einzelkläranlage ≥ 50 EW
- öffentliche Kläranlage < 50 EW
- öffentliche Kläranlage 50 – 500 EW





## Rural wastewater management - key issues to consider (2)

- Construction of small WWTPs
  - Financing
  - Permitting, notification or registration
  - Control that chosen treatment system is adequate (individual judgment, type testing,...)
  - Digitization





## Rural wastewater management - key issues to consider (3)

- Operation and Maintenance
  - Education and training of individuals?
  - Private companies?
  - Public service providers?



- Supervision and Control
  - Sample taking, analysis: Self monitoring?  
External monitoring? Quality assurance?
  - Judgment whether treatment requirements are met

# Thank you for the attention!



Heide Müller-Rechberger  
Austrian Federal Ministry of Agriculture, Regions and Tourism  
[heide.mueller-rechberger@bmlrt.gv.at](mailto:heide.mueller-rechberger@bmlrt.gv.at)