



Emerging Pollutants: Protecting Water Quality for the Health of People and the Environment

Assessment of stakeholders' demands on aquatic pollutants to support the transfer of research results

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Presentation's outline

Why do we need to assess stakeholders' demands ?

Which research results are we talking about ?

Who are the stakeholders ?

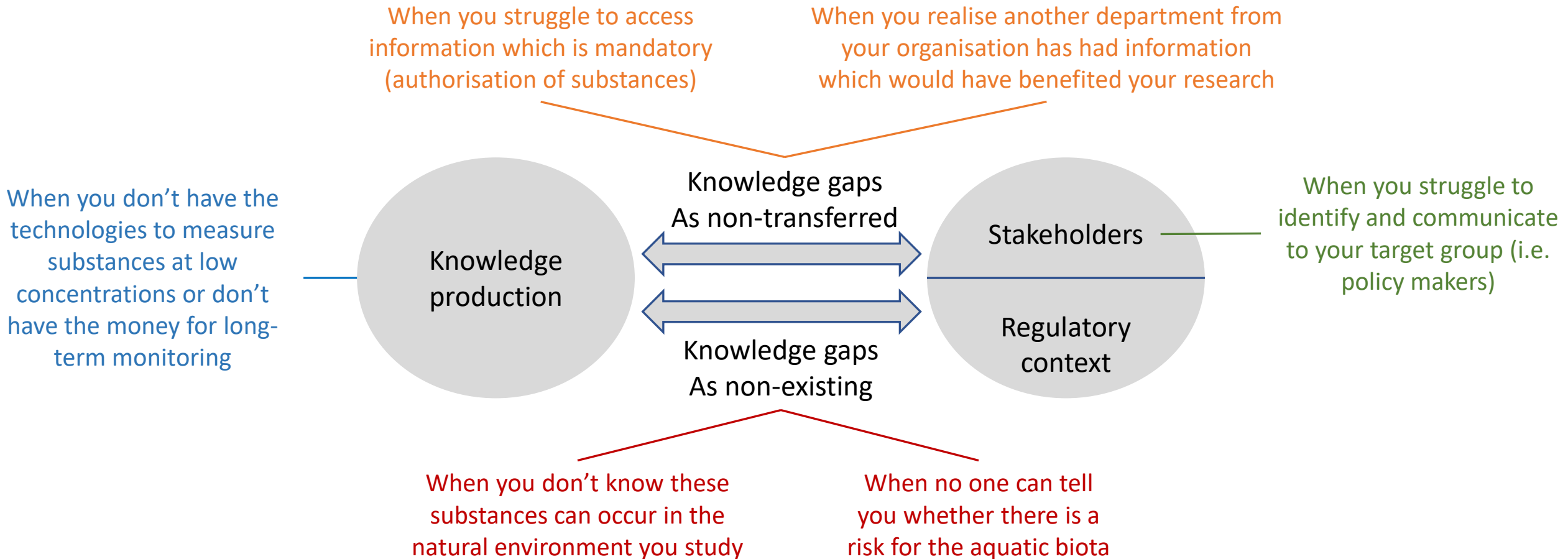
How do you assess stakeholders' demands ?

What are the demands from stakeholders ?

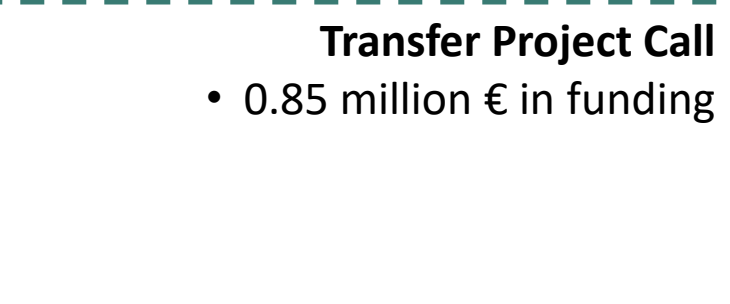
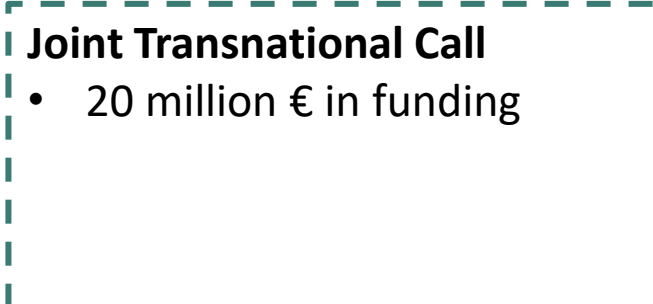
What are the implications for the research projects ?

How to access more details about our methodologies and findings ?

Issues with knowledge transfer on aquatic pollutants



Research projects funded under the Aquatic pollutants call



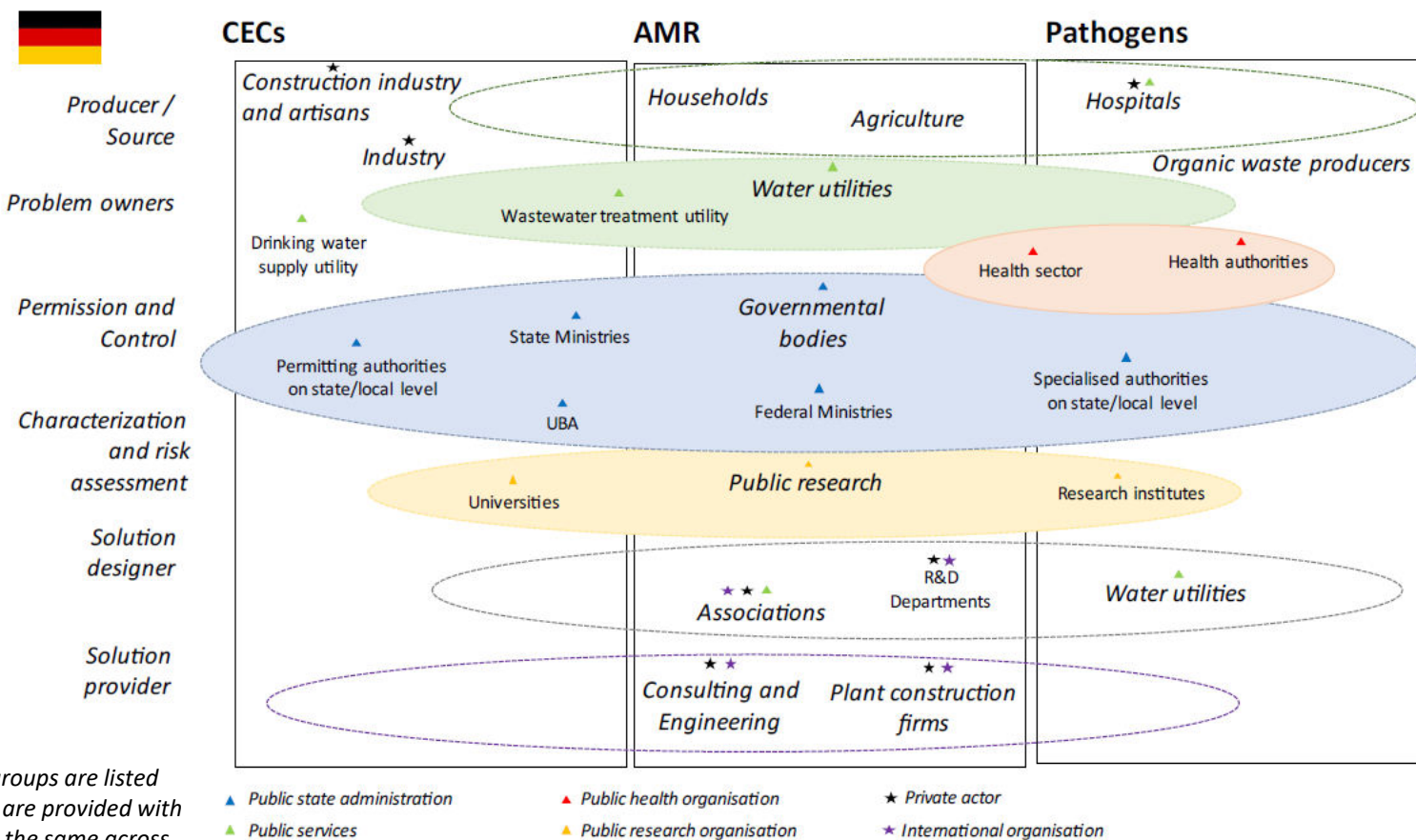
- Goals:**
- Determine pollution pathways of CECs & pathogens, transformation behaviors
 - Establish cross-sectoral approaches for risk management
 - Design & evaluate strategies / technologies to reduce concentrations
 - Develop methodologies to encourage policy change

- Goals:**
- Identify key stakeholders & their knowledge gaps
 - Develop innovative approaches for enhanced knowledge / results transfer & exchange
 - Create synergies among 18 funded projects & facilitate collaboration

Stakeholders' concerned with or working on aquatic pollutants

Diversity of organizations, sizes and focus

Strong gap between public and private organizations



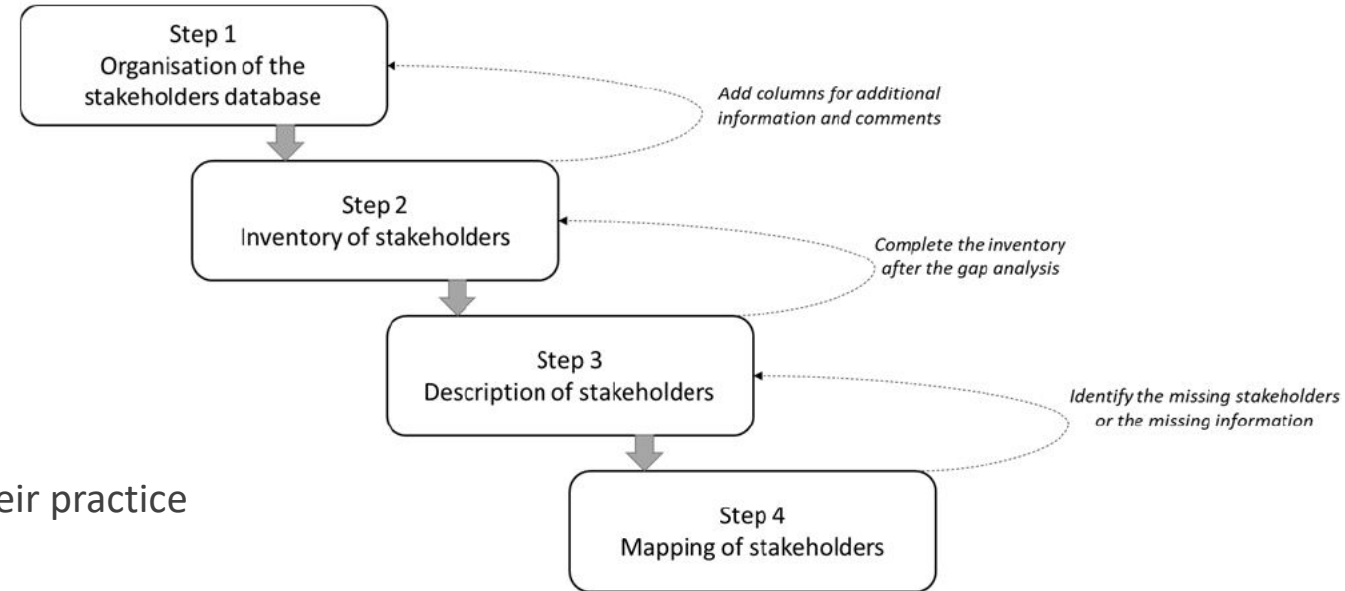
Explanatory map of German water stakeholders. General stakeholder groups are listed with large text, whereas examples of specific organisations/companies are provided with smaller text. The oval groupings indicate where stakeholder groups are the same across substance group (@Dechema, ISOE)

Methodology to assess stakeholders' demands

1/ Stakeholders' identification and mapping
(FR, DE, SE)

2/ Semi-structured interviews

- their organization and professional networks
- their knowledge and field of expertise
- the influence of the regulatory context on their practice
- the knowledge they need for their work
- their means to acquire this knowledge
- the knowledge they produce
- their means to disseminate their knowledge
- their views on how to improve data access and knowledge transfer



Stakeholders' demands on aquatic pollutants 1/4

Generic observations

- Stakeholders' needs are highly dependent on their specific functions
- The regulatory framework is shaping the demands from stakeholders
- Professional networks are central in knowledge transfer mechanisms
- Responsibility for knowledge production or transfer is diluted along the substance life cycle
- Data sharing represents a major challenge : between / within economic sectors and organisations
- Need for a better access to reliable information (eased by the universities), more frequent, better structured
=> current trend on digitalization of environmental data
- Lack of information into EU database (exposure, etc..)
- Lack of homogeneity among countries (besides the WFD reporting for the targeted substances)
- No data base on the presence of antibiotics in the environment



Stakeholders' demands on aquatic pollutants 2/4



On measuring and analyzing CEC, AMR and pathogens in the aquatic environment

- More measurement of pollutants in the environment: PMT and AMRs
- Analytical development for low quantification limits & emerging substances
- Better coordination in the measurements
- Stability of measurement series
- More groundwater quality data in terms of microbiological composition of water (existing tool mainly designed for kinetics of surface waters), but also of presence, diffusion and effects of pollutants
- Lack of standardized protocols to monitor AMR in the environment
- Developments in non-target analysis, including the incorporation of machine learning would help in measuring non-regulated substances
- Promotion of passive samplers and biological tools



Stakeholders' demands on aquatic pollutants 3/4

On risk assessment and management of the aquatic pollution

- Assess substances cocktail effect on health by developing indicator values or the identification of indicator genes/bacteria. This could limit the effort required to test water quality and increase the amount of knowledge on present substances and their trajectory in the environment.
- Need for more information regarding the toxicity of substances
- Improved toxicological assessment using modules already in place (ToxBox and Neurobox).
- Modelling referring to fate and transport of pollutants
- Mapping seen as very useful when it comes to climate adaptation



Stakeholders' demands on aquatic pollutants 4/4



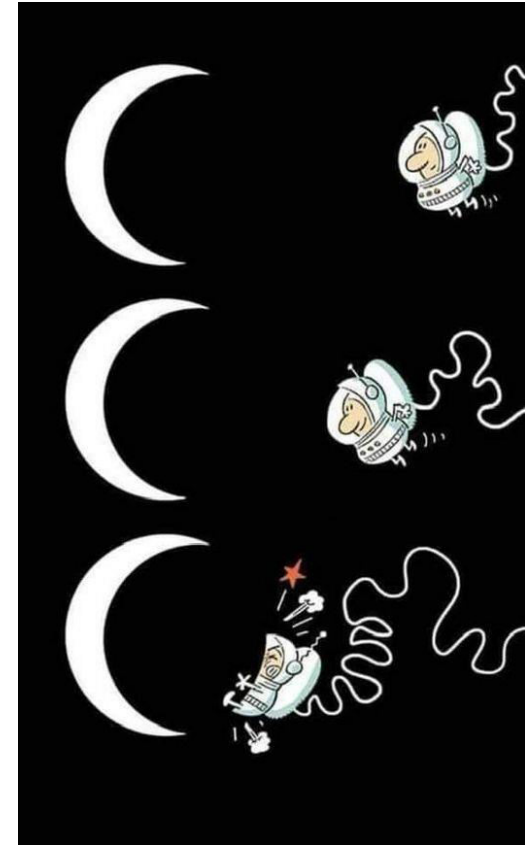
On treatment and mitigation of the aquatic pollution

- Comprehensive treatment approaches that look at the entire pollution chain
- Comparable assessment of the efficiencies of existing and developing treatment technologies
- Better and quicker approval process of new technologies to support their development and uptake
- Determination of discharge rates based on risk assessments and not the quantification limits
- A fourth treatment step in the water treatment process is emerging as an effective method to remove micropollutants
- Solutions to address the effects of combined sewer overflow on aquatic pollutants
- Taking into account the effects of climate change (e.g. droughts, extreme events) on the performance of water treatment



Implications for the research projects

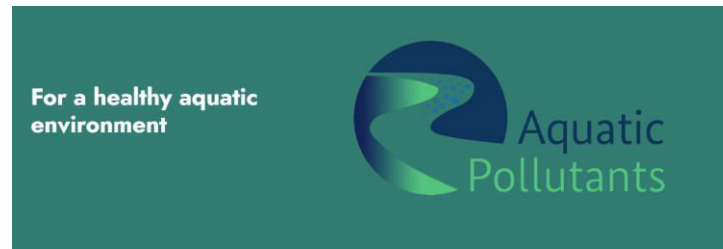
- We provide tools to identify the stakeholders in their own countries + to review the regulatory contexts + to carry-out interviews and identify the needs
 - ⇒ Ready-to-use by the 18 projects for their own goals
- We highlight specific knowledge gaps related to CEC / AMR / pathogens
 - ⇒ Match that list to the research focus of the 18 projects
 - ⇒ Contribute to the definition of the next JPI calls
- We identify barriers to knowledge transfer on aquatic pollutants
 - ⇒ To be further investigated by Transnet in the coming months (workshops, hackathon)
 - ⇒ Identify the most effective transfer tools
 - ⇒ To advice the 18 projects in the best ways to disseminate their results



More information and publication details



<http://aquatic-pollutants.eu>



Deliverable 1.1. Mapping of end-user groups and governance and synthesis of their demands for knowledge, November 2022



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