

Stockholm World Water Week 2017

Policy strategies for contaminants of emerging concern in water

Seminar “Opportunities and limits to water pollution regulations: Session II”

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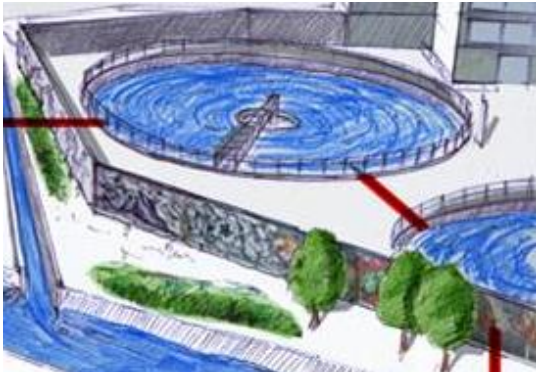
University of Bern

Overview

1. Contaminants of emerging concern as **a new challenge** for water protection policy
2. The **Precautionary Principle** as a means to deal with **uncertainties**
3. **Policies** for the reduction of contaminants of emerging concern to water quality
4. **Decision-makers' perspective:** Results from an international survey with public, private, and civic actors about preferences regarding policies for the reduction of CECs

1. CECs CHALLENGE TRADITIONAL POLICY APPROACHES

Wastewater treatment as traditional response to water quality issues



Challenges

- Contaminants that are not vulnerable to conventional wastewater treatment are steadily transported into the aquatic environment.

Environmental quality norms (EQN) as traditional response to water quality issues

- Compound-by-compound approach
- Precondition: detection, risk assessment, deduction of EQN



Challenges due to uncertainties

- Diversity of contaminants, sources, inputs
- "Unknowns"
- "Cocktail effect"
- Constant engineering of new substances

2. THE PRECAUTIONARY PRINCIPLE

- The Precautionary Principle justifies political action where suspicion exists, but **uncertainties** remain about potential risks to humans or the environment
- Radical, inherent uncertainties
 - Not an absence of knowledge, but
 - Occurrence and damage of an event are incalculable
- “Uncertainty paradox”: Current policy approaches follow the scientific-testing-and-regulation-paradigm and are ill-adapted to deal with uncertainties inherent to CECs



3. POLICIES IN PRACTICE

Netherlands

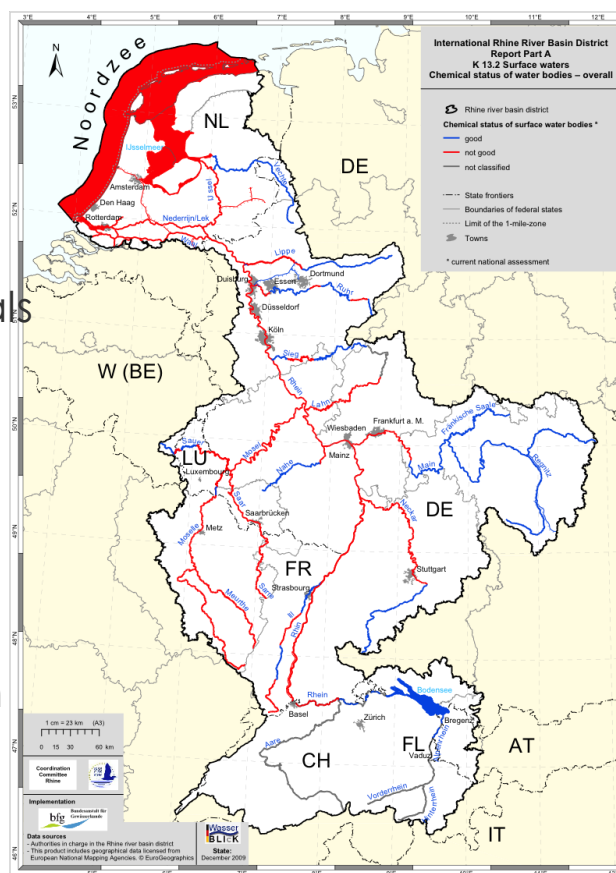
Voluntary approach

Policy debate since early 2000, focus on pharmaceuticals

France

Control approach

Instrument mix, persuasion (Plan Micropolluants 2009)



Germany

Control approach

Environmental Quality Norms for 162 substances (OGewV 2011)

Switzerland

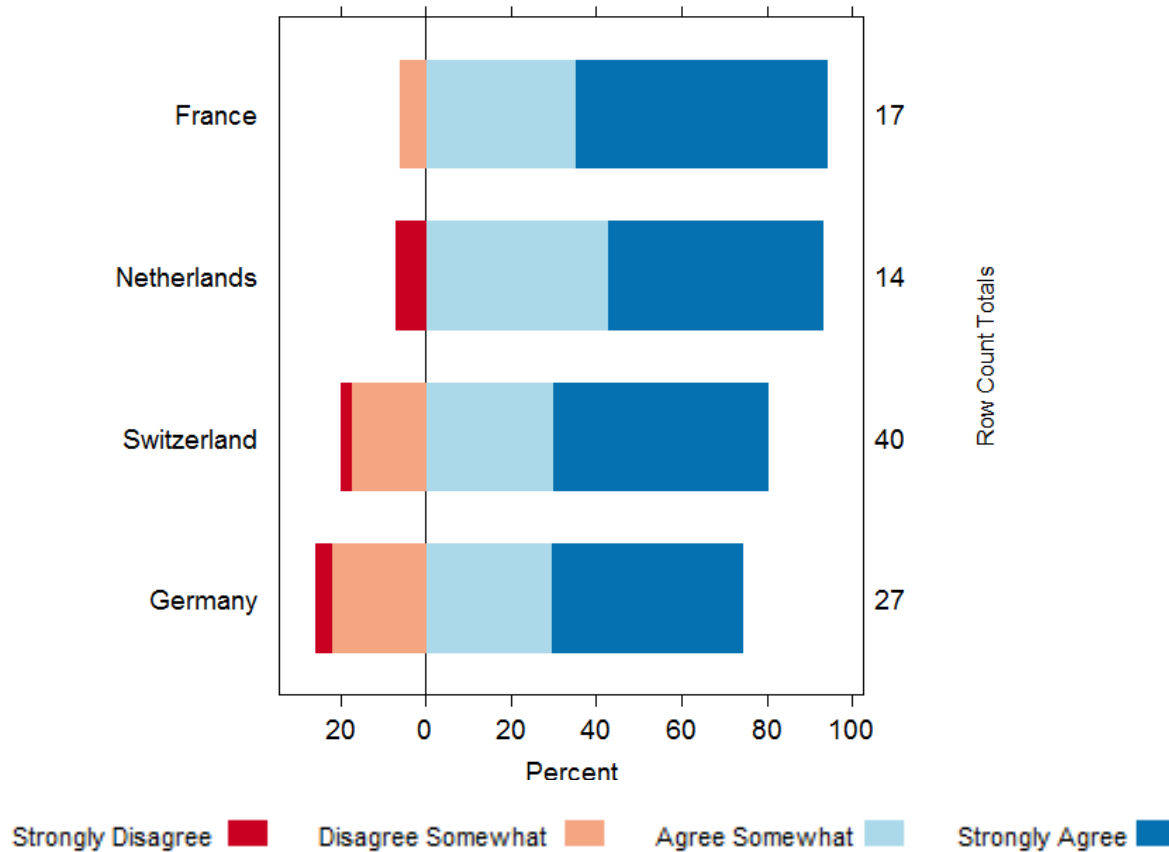
End-of-pipe approach

Technical standard
Waste water charge
Subsidies
(GSchG/V Revision 2014/15)

4. HOW DO ACTORS DEAL WITH UNCERTAINTIES?

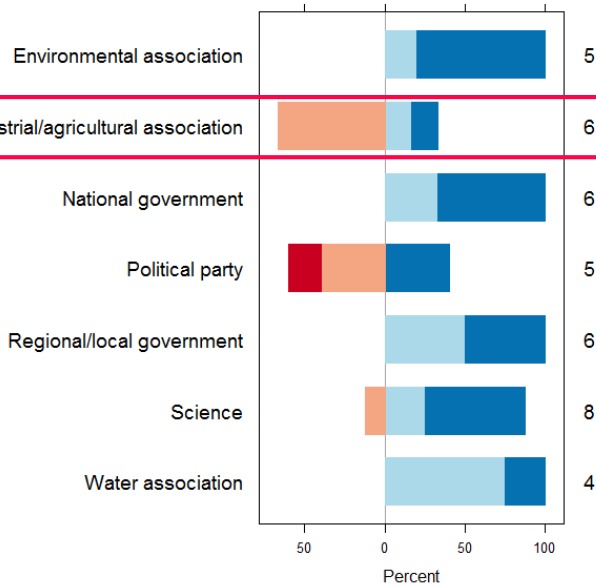
- 209 surveyed state and non-state actors participating in policy-making on CECs, April 2013 – August 2014

Support for the Precautionary Principle

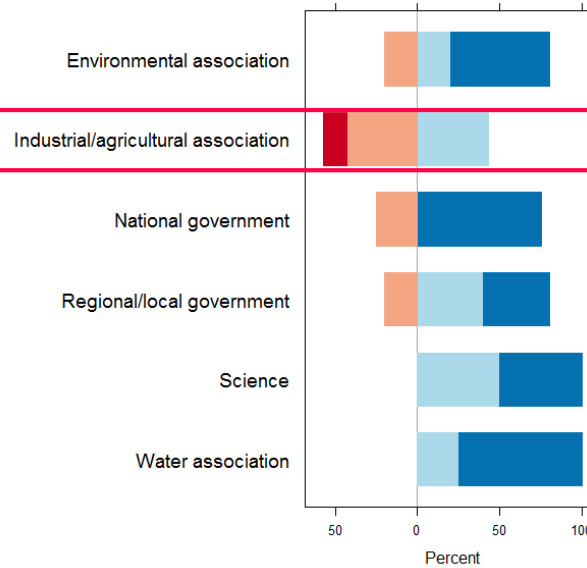


SUPPORT FOR PRECAUTIONARY MEASURES BY ACTOR TYPE

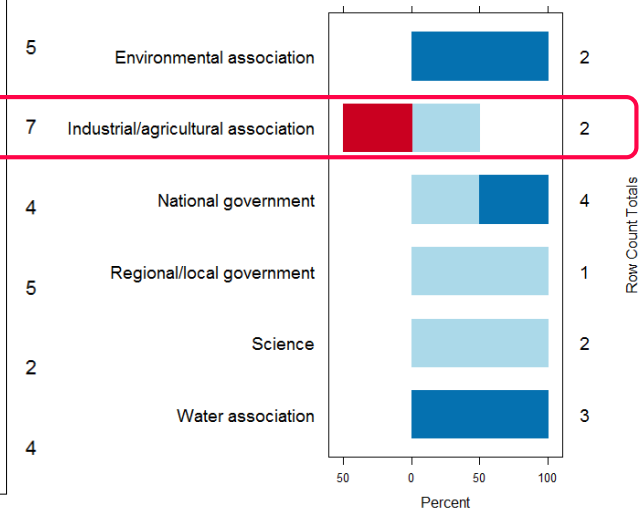
Switzerland



Germany



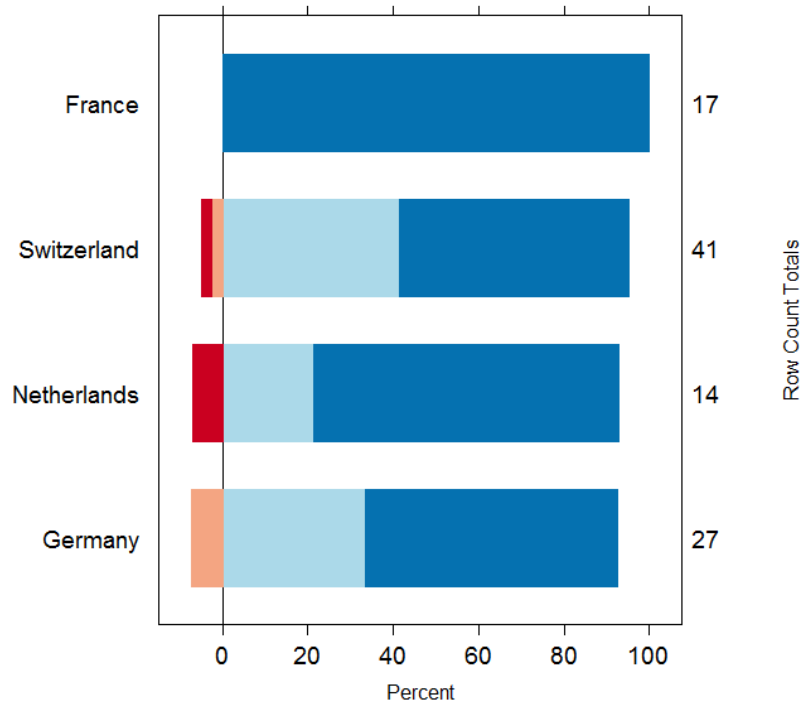
Netherlands



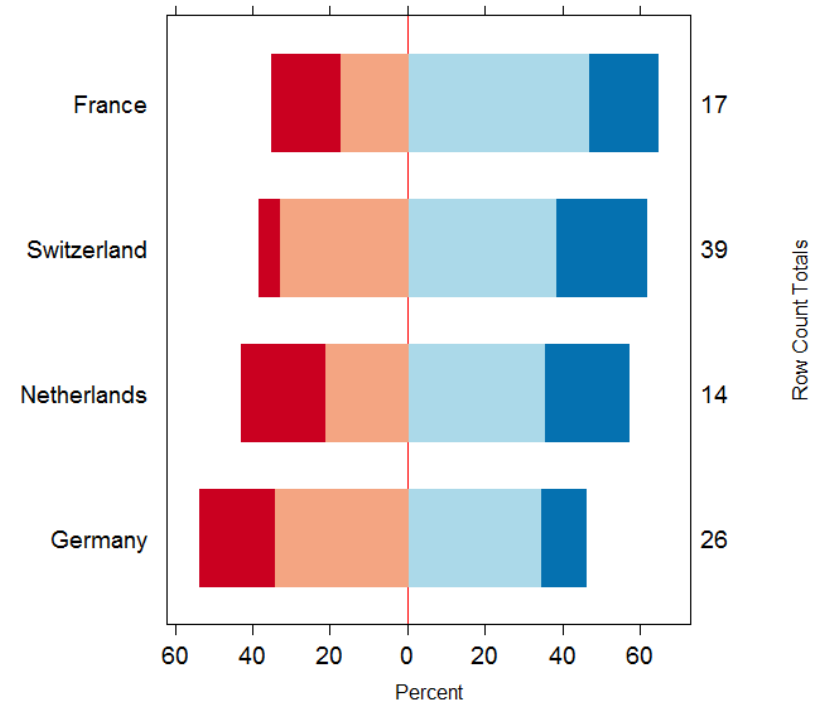
Strongly Disagree ■ Disagree somewhat ■ Agree Somewhat ■ Strongly Agree ■

PREFERENCES FOR POLICY APPROACHES

Support for Source-directed Measures

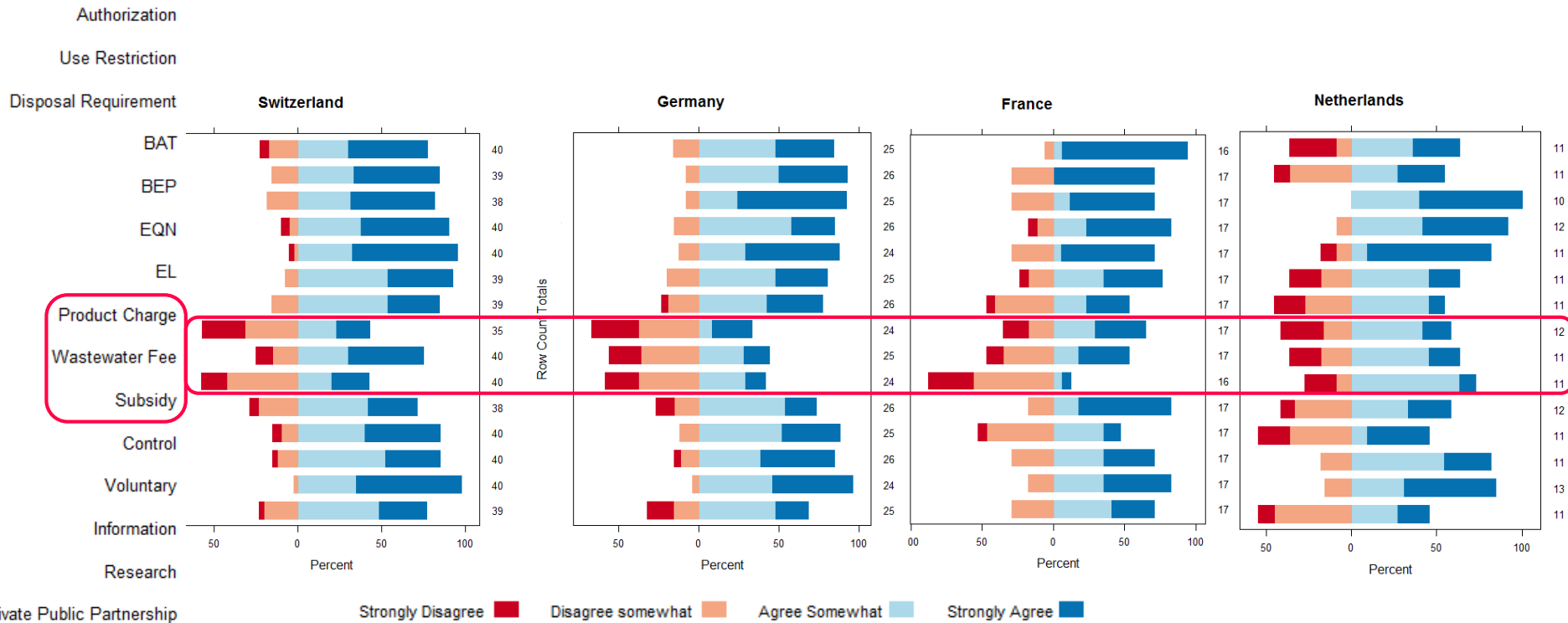


Support for End-of-pipe Measures



Strongly Disagree ■ Disagree Somewhat ■ Agree Somewhat ■ Strongly Agree ■

INSTRUMENT PREFERENCES



- Acceptance depends on cost efficiency of solutions.

CONCLUSIONS

1. CECs challenge traditional policy responses to water quality issues.
2. The precautionary principle is an appropriate strategy to deal with uncertainties inherent to CECs.
3. Current policies build on scientific-testing and regulation paradigm, which hampers adopting measures for the reduction of CECs.
4. There is support for precautionary, source-directed policies on behalf of decision-makers.

 Need for a **reduction of regulatory boundaries** to apply the **precautionary principle**.

These are only back-up slides in case of questions

A TOOLBOX OF POLICY RESPONSES IN WATER PROTECTION

Definition: *policy instruments* = single means through which political goals can be reached

	Source-directed	End-of-pipe	Control
Regulatory instruments	<ul style="list-style-type: none"> • Substance bans • Restrictions • Authorizations • Best environmental practices(BEP) 	<ul style="list-style-type: none"> • Best available technologies (BAT) • Technical standards • Disposal requirements 	<ul style="list-style-type: none"> • Environmental quality norms (EQN) • Emission limits • Registries • Monitoring • Reporting
Economic instruments	<ul style="list-style-type: none"> • Product charges • Substance charges • Subsidies for “green” action 	<ul style="list-style-type: none"> • Effluent/emission charges • Subsidies (e.g. for improved wastewater treatment) 	<ul style="list-style-type: none"> • Subsidies for monitoring
Voluntary instruments	<ul style="list-style-type: none"> • Information campaigns (e.g. on waste disposal) • Voluntary agreements between private & public 	<ul style="list-style-type: none"> • Advice/consulting about BAT • Voluntary agreements on wastewater treatment 	<ul style="list-style-type: none"> • Voluntary agreements on control measures