

## **Phosphorus Governance**

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### **Cooperation partners**

- University of Rostock (Faculty of Law etc.)
- ▶ Leibniz Institute for Baltic Sea Research Warnemünde (IOW) · Rostock
- ► Leibniz Institute for Catalysis (LIKAT) · Rostock
- Leibniz Institute for Farm Animal Biology (FBN) -Dummerstorf
- ► Leibniz Institute of Plant Genetics and Crop Plant Research (IPK) · Satellite collections Groß Lüsewitz
- ▶ Leibniz Institute for Plasma Science and Technology (INP) · Greifswald



## **Phosphorus – an Issue for Social Sciences**

- social sciences (or humanities) = law, economics, philosophy, sociology, political science, cultural studies, psychology, etc.
- ▶ P = issue only for natural sciences?
- natural science insights and the pure existence of technical options alone do not change societies
- dealing with scarce resources = technological change/
  behavioral change (p cycles AND eating less meat)



### **Governance, Transformation, Normativity**

- governance analysis = finding the most effective instruments for achieving a given target
- transformation analysis = tries to explain human behavior (necessary to identify effective governance instruments)
- normative analysis = gives justifications for targets and balancing between different targets



## **Preconditions for Societal Change**

- analysis of how and why people act (farmers, politicians, companies, civil servants, etc.)
- not only knowledge
- further aspects = personal advantage, conceptions of normality, emotions (tendency to convenience, habit, problems involving the complex correlation of timespace damages), problems of collective goods, values



# **Understanding typical Governance Problems**

- problems regarding lack of ambitiousness (also taking imports, meat consumption etc. into account)
- enforcement problems
- gains in efficiency often compensated by the overall growing consumption (rebound effect)
- regulation of individual procedures, products or crops can cause sectoral, geographic and resource-based shifting effects



#### **Governance Instruments**

- ► Legal framework in EU and Germany with regard to P (agricultural, water, soil, conservation, and planning law) ignores governance problems
- development of alternative governance options
- ▶ better regulatory law or quantity control that can set up absolute quantitative limit for the usage of P, either directly through caps or indirectly by imposing taxes or a reformed agricultural subsidies system
- ▶ interactions of the governance of P, nitrogen, climate, biodiversity, soil degradation; quantity reduction in one of these fields may have positive effects on the other realms



## **Potential of Quantity Control**

- potential to trigger not only technological progress (P recycling) but also behavioral changes
- less enforcement problems than regulatory law
- makes shifting effects less likely and eliminates rebound effects (in case of a broad geographical and substantive scope of application)
- unbureaucratic and supporting principles of freedom and democracy



#### **Normative Issues**

- perspective of ethics or legal principles (e.g. human rights)
- balancing between different targets such as sustainability and economic growth
- dealing with distributional effects

## Thank you for listening!

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