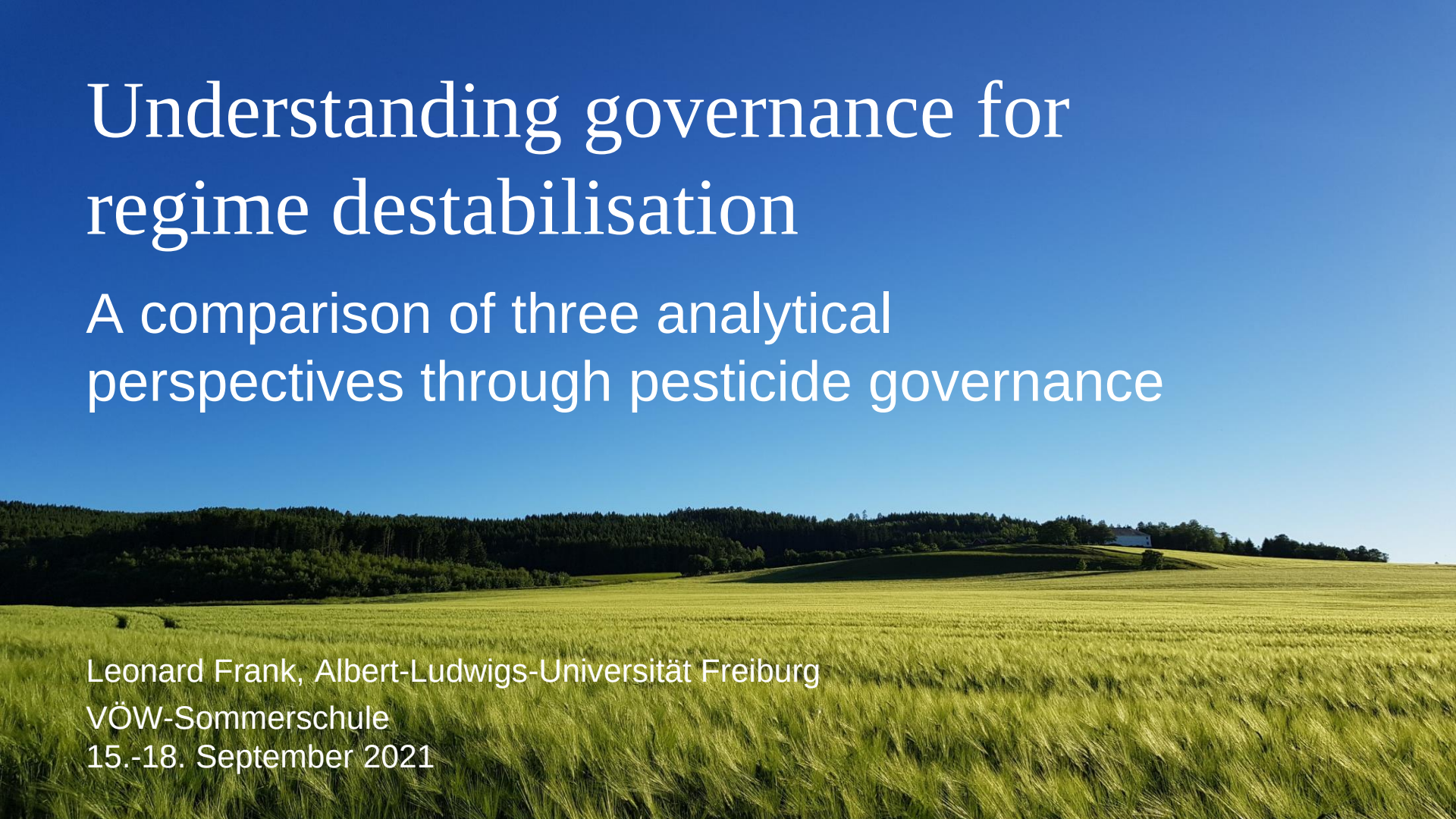
Understanding governance for regime destabilisation

A comparison of three analytical perspectives through pesticide governance



Leonard Frank, Albert-Ludwigs-Universität Freiburg

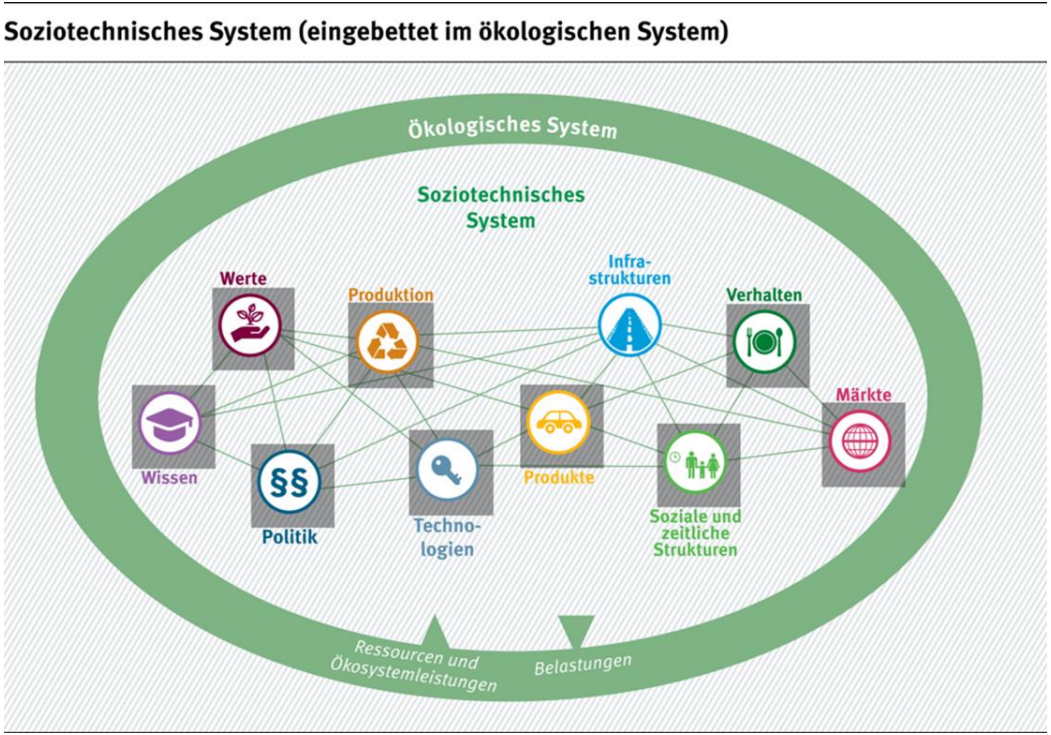
VÖW-Sommerschule
15.-18. September 2021

Paper outline

- Different concepts of processes of regime decline in sustainability transitions, …
- … but unclear implications for researching the governance of such processes
- Aims:
  - synthesising the literature on regime destabilisation processes from a governance perspective
  - exploring the explanatory power of existing frameworks
- Case study: German pesticide governance in EU multilevel polity

Work in progress!

Sustainability Transitions: Change in socio-technical systems



Quelle: Wolff et al. (2018)

Socio-technical regimes

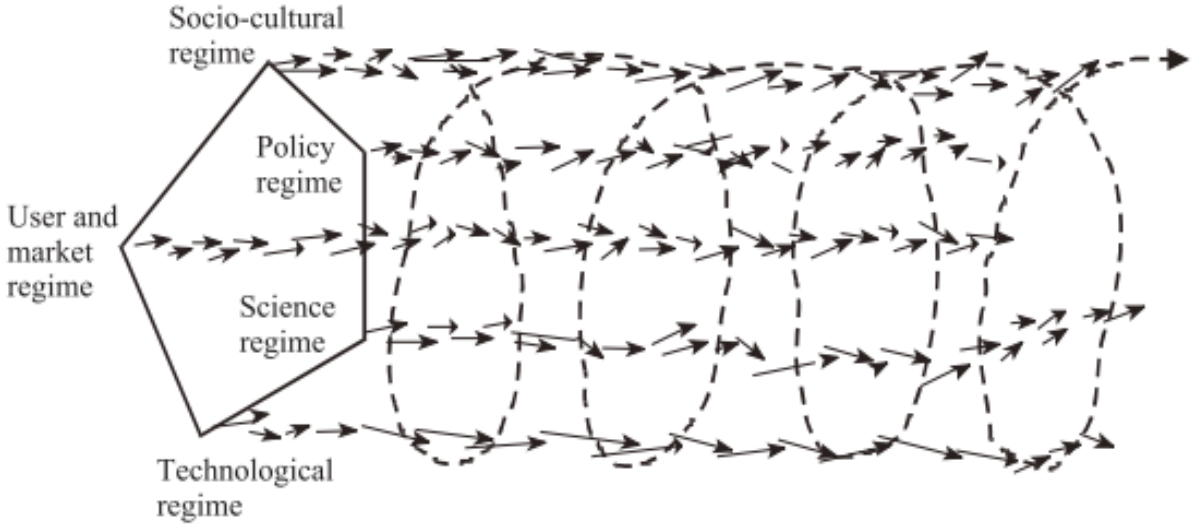


Fig. 1. Alignment of ongoing processes in a socio-technical regime.

Source: Geels (2011)

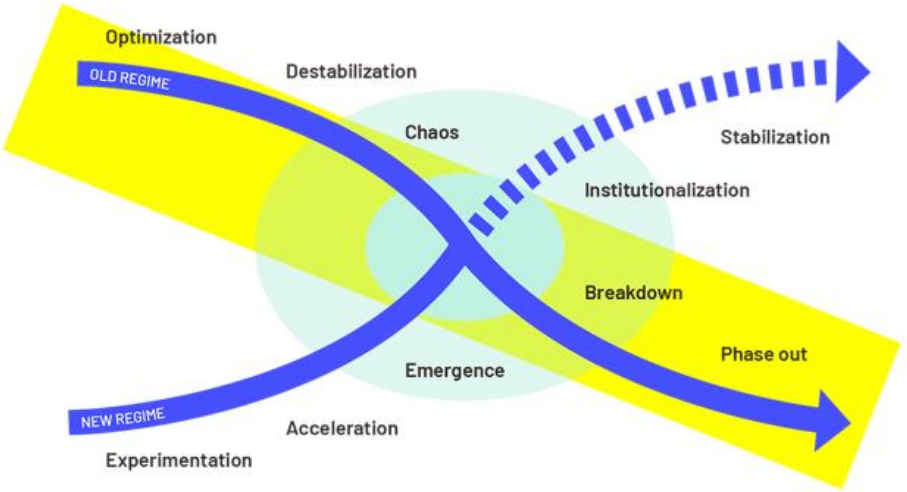
Innovation and decline in sustainability transition studies

“Our point of departure is the observation that the governance of socio-technical systems (Hekkert et al., 2007; Bergek et al., 2008) has preferentially been perceived and associated with advancement and innovation. This may have to do with a bias for progress and continuity in innovation policy and the study of it […]”

- Stegmaier et al. (2014, 112)

Conceptual foundations: regime destabilistation

- Sustainability transitions literature largely focuses on contribution of innovations to system-level change
- “Destabilization principally relates to the pressures upsetting a dynamically stable sociotechnical system […]” (Rosenbloom and Rinscheid, 2020)
- Analytical focus of destabilisation: systemic processes of incumbent regime decline



Transition X-curve (Loorbach, 2014) source: Humankind (https://www.humankind.city/how-we-work) obtained 31.05.21

Conceptual foundations: Governance of regime destabilisation

- Governance as our conceptual perspective on sustainability transitions (Stegmaier et al. 2014, p. 113)
- Regime destabilisation governance: policy outputs and actors' activities and interactions relating to the deliberate destabilisation of socio-technical regimes.

Deliberate regime destabilisation: insights from the literature

- Innovation-centred strategies for transition governance are insufficient (Kemp et al. 1998; Markard and Rosenbloom 2020; Rosenbloom and Rinscheid 2020)
- Policy for deliberate destabilisation is often enacted after exogenous shocks: „harnessing disruption“ (Markard and Rosenbloom 2020)
- Strategically changing regimes‘ selection environment requires changes in narratives and problem definitions
  (Roberts 2017; Turnheim and Geels 2012; Rosenbloom 2018; Davidson 2019)
- Destabilisation governance is likely to have disruptive effects on established networks and thus to encounter resistance (Kivimaa et al. 2021)
- Justice aspect: unevenly distributed social and economic impacts; ripple effects across adjacent systems
  (Johnstone and Hielscher 2017; Heyen et al. 2017; Sillak and Kanger 2020)

Three perspectives on regime destabilisation governance

- We identify three perspectives on the governance of regime destabilisation …
- … offering different explanations of and tools for assessing regime destabilisation governance.
- Aim: comparison of explanatory power (Ylikoski & Kuorikosi, 2010)

Deliberative perspective on regime destabilisation governance

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Energy, Sustainability and Society

ORIGINAL ARTICLE Open Access

The incandescent light bulb phase-out: exploring patterns of framing the governance of discontinuing a socio-technical regime

Peter Stegmaier[1*], Vincent R. Visser[2] and Stefan Kuhlmann[1]

Abstract

Research interest: This paper aims at a better understanding of the governance of the abandonment of socio-technical regimes through the example of the incandescent light bulb phase-out in the European Union and in the Netherlands as one specific case where the EU discontinuation policy has been implemented. In particular, with this paper we focus on the active and intended discontinuation of a socio-technical regime through dedicated governance.

Methods: We approached the phase-out of the incandescent light bulb from a qualitative perspective and analysed about 230 documents from the EU and Dutch level. The study has an explorative character, for we cannot claim to describe the entire policy process, but bring to surface some key issues in order to outline both governance foci and technicalities of governing the phase-out. We looked into how governance makers were actually structuring the ILB phase-out as a governance task. The specific framings we found were grouped into the (a) spectrum of governance dimensions, (b) the more detailed problem-types raised, and (c) the array of discontinuation issues addressed in policy discourse dedicated to negotiating, drafting and implementing the phase-out measures.

Results: A set of frames apparent in the discontinuation discourses in the EU and the Netherlands has been reconstructed, which entails the five governance dimensions 'policy instruments', 'implementation', 'strictness', 'monitoring', and 'policy level'. Technical details of both the socio-technical products to be banned and the replacing products have been the subject of meticulous negotiations in order to be able to implement the big picture, the lightbulb ban, appropriately and appropriately for both industry and environmental associations. The design of discontinuation governance at national and EU level are closely intertwined, but not identical in all aspects. The complexity of the governance task is therefore high.

Conclusions: Discontinuation has to cope with some resistance to dedicated, forced change that takes place in a technically as well as socially highly complex context. Governing the phase-out of a technical device, a production infrastructure, and industry support policy once supposed to support the EU and Dutch ILB industry was a major techno-political challenge, where policymakers needed to grasp key technical and technological problems. These were related to ILBs as objects, to subjects such as engineers and scientists, lobbyists and disinterested experts, to civil society organisations and mass media, along with all sorts of political and administrative issues and discourses. The challenges are threefold: first, translating for each other what cannot be known from one's own background, second, shutting down governance which so far fostered lighting industry and, third, helping to change parts of this industry

Deliberative perspective on regime destabilisation governance

- Decline is understood to be negotiated between state and non-state actors in a highly political, multi-level process of issue framing and agenda setting
- Key framework: Stegmaier et al. (2021)
  - Aim: studying the discontinuation of socio-technical regimes as an interpretive governance process
  - Concept: „procedural dimensions of dedicated discontinuation governance”:

Regulatory perspective on regime destabilisation governance

Contents lists available at ScienceDirect

Research Policy

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Creative destruction or mere niche support? Innovation policy mixes for sustainability transitions

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ABSTRACT

Recently, there has been an increasing interest in policy mixes in innovation studies. While it has long been acknowledged that the stimulation of innovation and technological change involves different types of policy instruments, how such instruments form policy mixes has only recently become of interest. We argue that an area in which policy mixes are particularly important is the field of sustainability transitions. Transitions imply not only the development of disruptive innovations but also of policies aiming for wider change in socio-technical systems. We propose that ideally policy mixes for transitions include elements of 'creative destruction', involving both policies aiming for the 'creation' of new and for 'destabilising' the old. We develop a novel analytical framework including the two policy mix dimensions ('creation' and 'destruction') by broadening the technological innovation system functions approach, and specifically by expanding the concept of 'motors of innovation' to 'motors of creative destruction'. We test this framework by analysing 'low energy' policy mixes in Finland and the UK. We find that both countries have diverse policy mixes to support energy efficiency and reduce energy demand with instruments to cover all functions on the creation side. Despite the demonstrated need for such policies, unsurprisingly, destabilising functions are addressed by fewer policies, but there are empirical examples of such policies in both countries. The concept of 'motors of creative destruction' is introduced to expand innovation and technology policy debates to go beyond policy mixes consisting of technology push and demand pull instruments, and to consider a wider range of policy instruments combined in a suitable mix which may contribute to sustainability transitions.

Regulatory perspective on regime destabilisation governance

- Emphasis on the role of policy in regime destabilisation processes, such that governmental steering is foregrounded
- Key framework: Kivimaa and Kern (2016)
  - Aim: Targeting “the concept of regimes implies rules, technologies and actor-networks as the main components that can […], when they change, create instability of the regime”
  - Concept: policy mixes for creative destruction

Transition pathways perspective on regime destabilisation governance

Contents lists available at ScienceDirect

Research Policy

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Policies, actors and sustainability transition pathways: A study of the EU's energy policy mix

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ARTICLE INFO

Keywords:
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Policy mix
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Actor preferences
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ABSTRACT

Policies and politics are crucial elements of sustainability transitions. Transition pathways unfold as a result of continuous struggles of actors over policy goals and instruments. Taking a policy mix perspective, we study policies and policy preferences of key industry actors in the ongoing energy transition at the level of the European Union. We introduce two central analytical dimensions for transition pathways: the degree of sustainability (here: renewable energy ambition) and the degree of disruption (here: whether to pursue centralized or decentralized energy system configurations). We find that the current EU energy policy mix is heterogeneous with respect to the issue of (de-)centralization, whereas most policies and actors express high or moderate ambitions for renewable energy. Our paper makes three contributions. It demonstrates how actors and policy preferences can be explicitly included in the study of policy mixes. To the literature on transition pathways, we introduce sustainability as another key dimension in addition to disruption. Lastly, we propose a novel methodology for analyzing the politics of transition pathways.

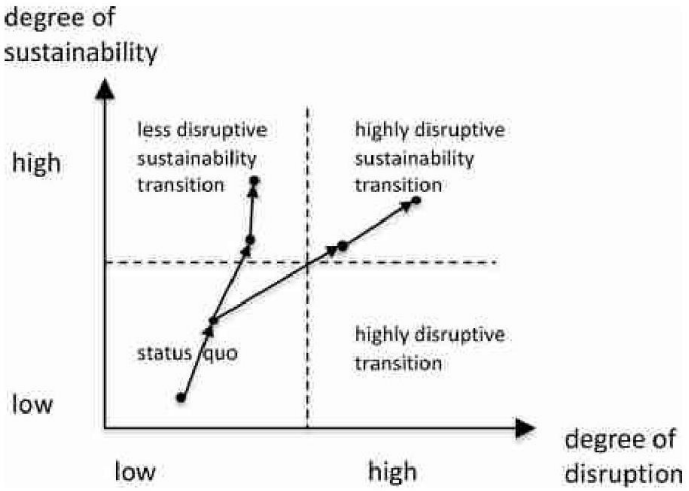


Fig. 1. Dimensions to analyze the politics of transition pathways.

Transition pathways perspective on regime destabilisation governance

- Foregrounds governance as a process of deciding on the speed and scale of disruption of dominant regimes
- Key framework: Lindberg et al. (2019)
  - Aim: Exploring “whether there will be more or less profound changes in the basic architecture of the socio-technical system” (p.3)
  - Concept: politics of sustainability transition pathways

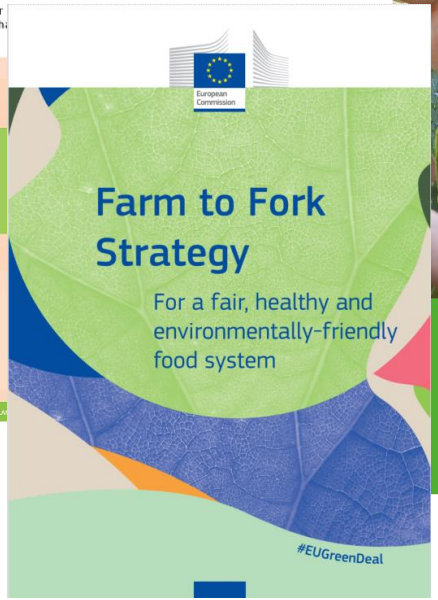
Research design

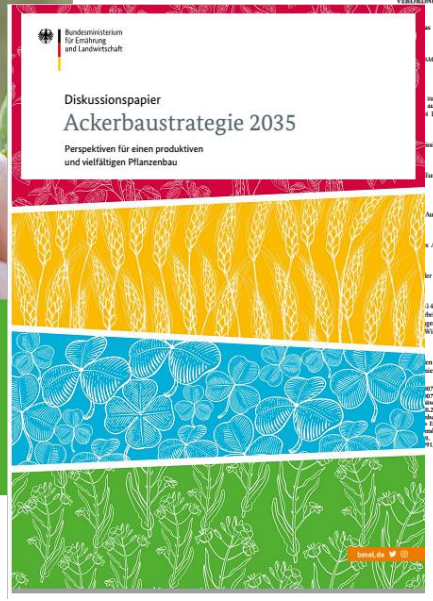
- Comparative application of three frameworks for regime destabilisation analysis to a single case (see Garud and Gehman 2012)
- Case: pesticide governance in Germany in the context of EU CAP

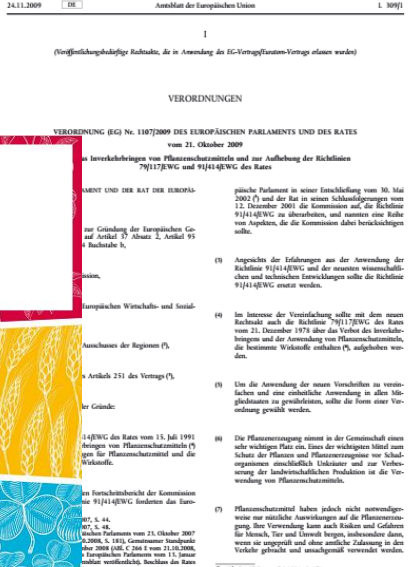
Method

- Policy mapping, according to methodological choices of three frameworks
- Data collection
  - Database search for policy instruments and policy process documents
  - Complement with government/EU websites
  - Validation of list by independent scholars
- Coding through coding schemes of frameworks
  - Degree of sustainability: biodiversity targets
  - Degree of disruption: pesticide reduction targets

Preliminary results






24.11.2009 DE Amtsblatt der Europäischen Union L 309/1

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(Veröffentlichungsbedürftige Rechtsakte, die in Anwendung des EG-Vertrags/Euratom-Vertrags erlassen wurden)

VERORDNUNGEN

VERORDNUNG (EG) Nr. 1107/2009 DES EUROPÄISCHEN PARLAMENTS UND DES RATES vom 21. Oktober 2009

über das Inverkehrbringen von Pflanzenschutzmitteln und zur Aufhebung der Richtlinien 79/117/EWG und 91/414/EWG des Rates

(3) Angesichts der Erfahrungen aus der Anwendung der Richtlinie 91/414/EWG und der neuesten wissenschaftlichen und technischen Entwicklungen sollte die Richtlinie 91/414/EWG ersetzt werden.

(4) Im Interesse der Vereinfachung sollte mit dem neuen Rechtsakt auch die Richtlinie 79/117/EWG des Rates vom 21. Dezember 1978 über das Verbot des Inverkehrbringens und der Anwendung von Pflanzenschutzmitteln, die bestimmte Wirkstoffe enthalten (*), aufgehoben werden.

(5) Um die Anwendung der neuen Vorschriften zu vereinfachen und eine einheitliche Anwendung in allen Mitgliedstaaten zu gewährleisten, sollte die Form einer Verordnung gewählt werden.

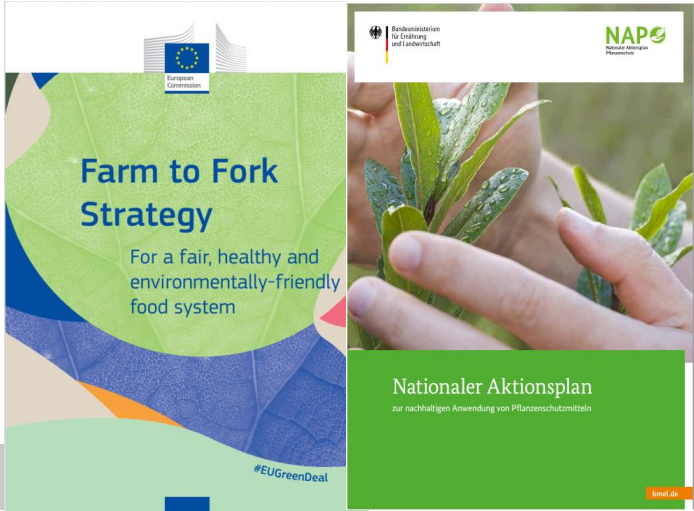
(6) Die Pflanzenerzeugung nimmt in der Gemeinschaft einen sehr wichtigen Platz ein. Eines der wichtigsten Mittel zum Schutz der Pflanzen und Pflanzenerzeugnisse vor Schadorganismen einschließlich Unkräuter und zur Verbesserung der landwirtschaftlichen Produktion ist die Verwendung von Pflanzenschutzmitteln.

(7) Pflanzenschutzmittel haben jedoch nicht notwendigerweise nur nützliche Auswirkungen auf die Pflanzenerzeugung. Ihre Verwendung kann auch Risiken und Gefahren für Mensch, Tier und Umwelt bergen, insbesondere dann, wenn sie ungeprüft und ohne amtliche Zulassung in den Verkehr gebracht und unsachgemäß verwendet werden.

(*) ABl. C 187 E vom 7.8.2003, S. 373.
(*) ABl. L 33 vom 8.2.1979, S. 36.

Preliminary results

- Starting point: German pesticide governance aims at ensuring safe pesticide use at the „necessary level“
- European Commission will „take additional action to reduce the overall use and risk of chemical pesticides by 50% […]“ (EC 2020, p. 9)
- Three perspectives offer complementary insights…
- … but their strengths play out differently as destabilisation governance evolves.



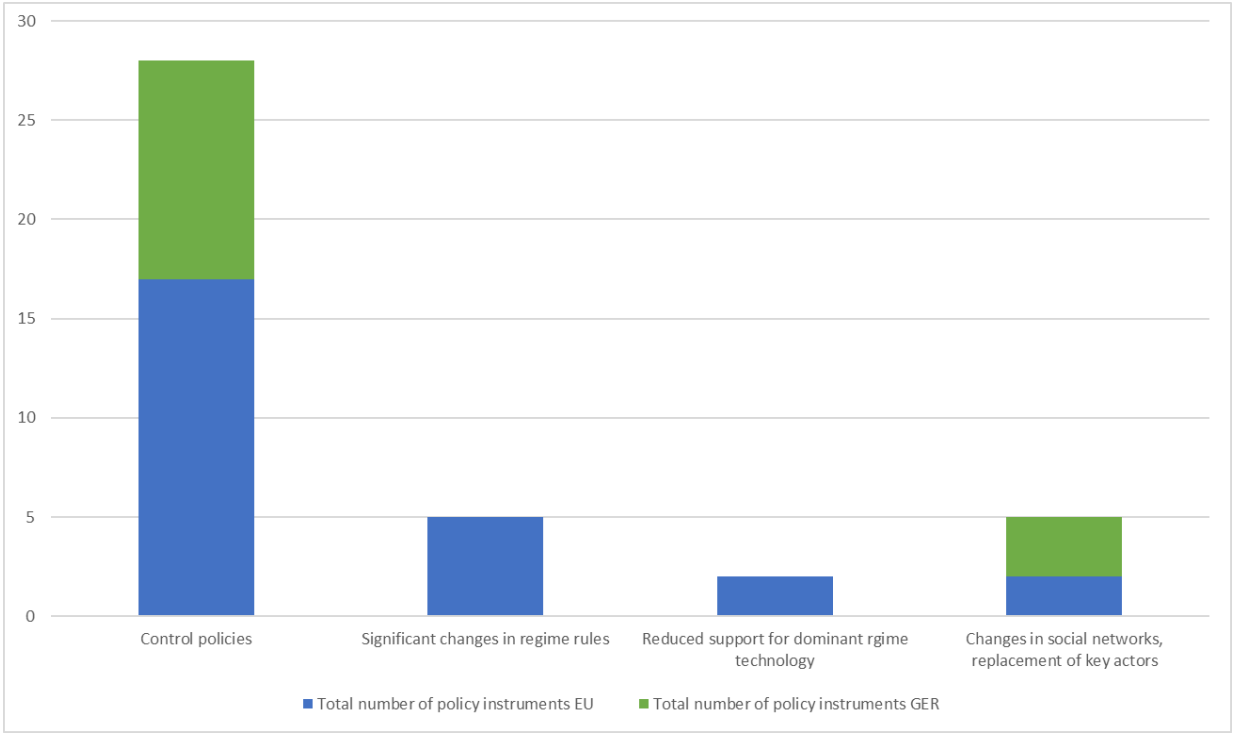
Preliminary results: Deliberative perspective

Table 2 The governance dimensions and the trade-offs on EU level

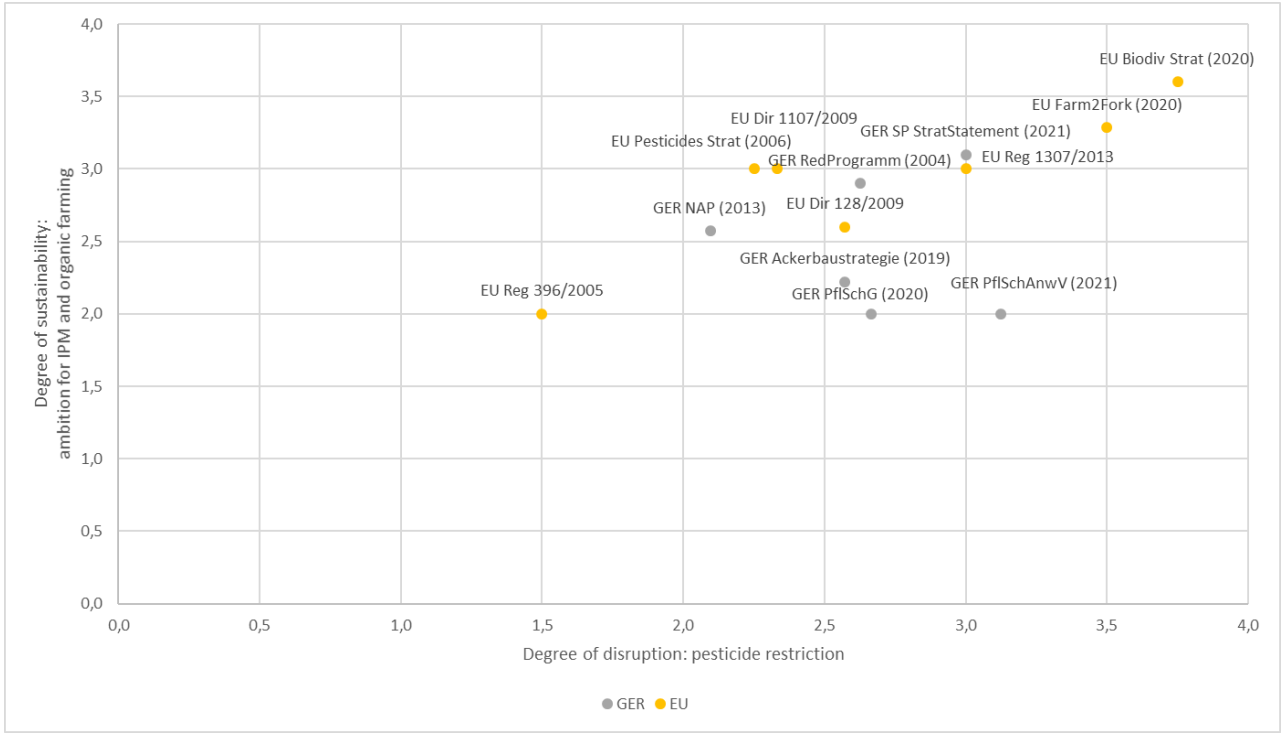
Governance dimensions of discontinuation	Trade-offs
Policy instruments	Efficacy requirements vs. additional requirements
Implementation	Immediate ban vs. gradual transition
Strictness	Exceptions for use vs. no exceptions for use
Monitoring	Business as usual vs. additional regulations
Policy level	National vs. supranational

Stegmaier et al. (2021), p. 7

Preliminary results: Regulatory perspective



Preliminary results: Transition pathways perspective




Thank you!
Questions? Comments?

Diskussion:

- Welche Vor- und Nachteile ergeben sich aus der parallelen Betrachtung von Wandel in Landwirtschaft sowie in anderen Systemen?
- Beispiele für gezielte Regimedestabilisierung als Erklärungsansatz für landwirtschaftlichen Wandel?

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Land use system change from pesticide reduction

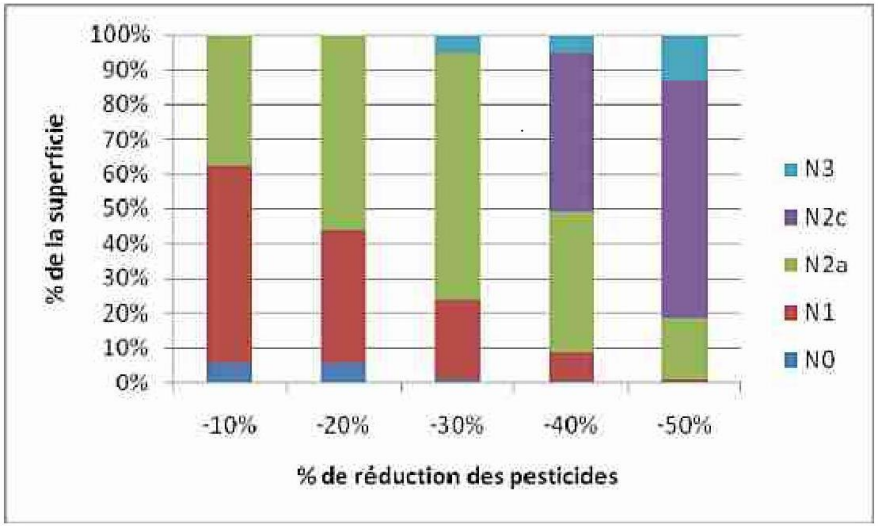

Figure 4-1.Combinaison de niveaux de rupture permettant d'atteindre un objectif de réduction des pesticides allant de -10% à -50% (aux prix de 2006)

Tableau 1-1. Les niveaux d'utilisation étudiés

Abréviation	Niveau d'utilisation dans l'exploitation agricole	Appellation retenue dans l'étude
(NA)	Situation actuelle	Niveau actuel moyen
N0	Pas de limitation du recours aux pesticides	Agriculture intensive
N1	Limitation du recours aux pesticides par le raisonnement des traitements en fonction de seuils d'intervention	Protection raisonnée
N2a	N1 + mise en œuvre de méthodes prophylactiques et alternatives à l'échelle (annuelle) de l'itinéraire technique d'une culture de la rotation	Protection intégrée
N2c	N1 + mise en œuvre de méthodes prophylactiques et alternatives à l'échelle (pluriannuelle) de la succession de cultures	Production intégrée
N3	Mise en œuvre du cahier des charges de l'Agriculture biologique (suppression de tout traitement avec des pesticides de synthèse)	Agriculture biologique

Le double trait marque que les niveaux 2c et 3 correspondent à une modification profonde des systèmes de culture.

Source:
Butault et al. (2010)

Operationalisation Degree of Sustainability and Disruption

level	Degree of Sustainability	Degree of Disruption
1	Current farming practices are sufficiently sustainable and/or necessary	Current pesticide use is sustainable and/or necessary
2	Integrated Pest Management or organic farming should receive some support	Risks from pesticide use should be reduced, e.g. through technical and administrative requirements
3	Strong support for Integrated Pest Management or Organic Farming, including qualitative targets	Qualitative goals for Pesticide reduction (including clear restrictions of application, e.g. in particular areas)
4	Quantitative targets and/or considerably increased funding for Integrated Pest Management or Organic Farming should be strongly increased	Quantitative reduction targets and substance bans