Transition theory, our role in BIOSMART, and experiences from large projects

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Transition theory and our role in **BIOSMART**:

- Part of WP3: Understanding bioeconomic valuechain transitions
- Objectives: to understand transitional processes for new biotech innovations in Norway using case study examples of early biotech, and explore how the introduction of these has influenced different parts of the value chain from producer to consumer
- As a tool for understanding the move towards a bioeconomy in Norway BIOSMART will use a transition theory framework

Transition theory: provides a general theory at the heart of which lie general principles, patterns and processes applicable across different fields, sectors and disciplines (Martens and Rotmans, 2002; Wilson, 2007; Rotmans and Loorbach, 2010; Wilson, 2012)

- From a social science perspective, transition theory can be seen as a theoretical framework that attempts to understand and unravel socio-economic, political, cultural and environmental complexities of societal transitions (or sub-systems of society) from one state of organisation to another (Pickles and Smith, 1998; Rotmans et al., 2002)
- Transition theory has now developed into a relatively coherent approach: recent emergence of the new journal *Environmental Innovation and Societal Transitions* (e.g. Geels, 2011)
- Several common concepts across transition theories such as 'path dependency', 'lock-ins', 'networks', 'momentum', 'cycles; and 'system memory' (Lachman, 2013)
- Within BIOSMART application of these concepts will enable transition approaches to map and understand complex interactions between technological systems and society and to identify which parts of the system need to be 'unlocked' to produce desirable changes in bioeconomic value chains



Experiences of applying transition theory in 3 recent large EU projects:

- 2000-2005: EU MEDACTION project: understanding how vulnerable communities address land degradation issues (10 EU countries) €2 million
- 2009-2014: EU LEDDRA project: analysing resilience and transitional processes in communities affected by land degradation (3 EU countries, China, Morocco) €3.2 million
- 2010-2014: EU FARMPATH project: understanding transitions towards sustainable agriculture in 24 EU case study regions (10 EU countries) €2.2 million

Transition theory and community resilience





Source: Kelly et al., 2015

Transitional corridors

Strong economic, social and environmental capital (resilient communities)



Time

Transitional corridors (cont.)



Path dependency



Source: Wilson, 2012

Transitional ruptures



Time

Recovery pathways

Source: Wilson, 2012



e.g.: Transitions to relocalised communities: community resilience and 'foodsheds' (SW UK)



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