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Transition pathways approach for transition towards a circular system

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Transition towards a circular bio-based and climate smart society calls for drastic and system-wide actions to transform and develop the current food systems into more sustainable forms. The transition involves a large variety of (gradual and rapid) developments, sometimes with unpredictable effects. Engaging and committing stakeholders during such transformations is essential but very challenging because of their different insights and interests, which often even are adapted during the transition. The process is further complicated by different perspectives on 'circular bio-based and climate smart society', potential solutions, agendas and transition pathways.

Typical approach for such challenges goes through add-on measures. In many cases, however, such measures create problems elsewhere. To address this more adequately requires more encompassing approaches in which problematic processes are not treated in an isolated way but seen as part of more encompassing 'systems'. "Transitions ... being evolutionary ... means that they are open ended, non-linear, fundamentally uncertain, and based on searching, learning, trial and error and experimentation. Surprises and unintended outcomes are likely. Such transitions depend critically on interpretations and social acceptance. They are also conflictual and deeply political, producing trade-offs, 'winners and losers', and related struggles, as politically influential and well-resourced incumbents often resist change." (EEA, 2018).

In 'Transition Pathways' approach, a wide ('socio-technical') systems perspective is chosen, which includes the production and the consumption side of food and non-food and related services, as well as the governance approaches related to this. Transitions are often analyzed from a multi-level perspective: analyzing radical socio-technical innovations (transitions) as an interplay between three levels: socio-technical niches (novel ideas are explored and implemented on small scale), a socio-technical regime (an incumbent socio-technical system of production and consumption, e.g. the agro-food system) and the socio-technical landscape (broader 'context' that may put pressure on a regime to change, e.g. the need to curb CO₂ or NO_x emissions). A transition pathway describes the interplay between these three levels. Solutions are initially used and explored at the niche level can be developed further and adopted wider at the regime under influence of pressure from the landscape level. Understanding why and how this process develops in concrete cases helps in better decision making and stakeholder commitment, dealing with different stakeholders' perspectives and agendas.

We will present learnings from (historic) transitions in agri-food systems, and show success and failure factors. We will reflect how this can stimulate transition toward a circular agri-food system.

Keywords: Food systems, transition, stakeholders, governance