



ABSTRACT

Food system transformation: the role of Living Labs

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Ensuring the availability and consumption of healthy, affordable, safe and sustainably produced food for a growing population poses significant challenges to food systems. Key social, health and economic challenges include escalating levels of “food poverty”, with approximately 33 million Europeans unable to afford a sufficient meal every second day, highlighting the difficulties for some groups to access basic (let alone sustainable and healthy) food. Even those who can afford sustainable and healthy food lack sufficient incentives. Additionally, the rising prevalence of overweight or obese citizens — more than half of the adult population — contributes to a surge in diet-related health problems, such as diabetes, cardiovascular diseases and certain cancers. Urban food environments currently fail to consistently make the healthy and sustainable option “the easiest one”. Moreover, research indicates that existing dietary patterns and the broader structure of the food system pose considerable environmental challenges. The detrimental impacts on ecosystems, including soil, water, pollinator populations, and biodiversity, are exacerbated by the fact that one-fifth of produced food goes to waste. The food system is also a significant contributor to climate change, with agriculture alone responsible for 10 % of the European Union's greenhouse gas emissions and overall food practices contributing to 17 % of these emissions — a figure expected to rise significantly without changes in dietary patterns.

Research and innovation (R&I) have the potential to act as a catalyst for transforming food systems. While conventional R&I has successfully addressed issues within specific food system sectors, existing R&I systems fall short in contributing to overall food system transformation due to their inability to effectively navigate the complex dynamics of entire food systems. To address this complexity, R&I should adopt an inter-sectoral, multi-stakeholder, multifactorial, interdisciplinary, and transdisciplinary approach. These transdisciplinary processes aim to facilitate learning, problem-solving, and the co-production of knowledge between science and society, addressing complex societal challenges. Thus, in addition to traditional R&I, there is a crucial need for these innovative R&I efforts.

In recent years, a novel approach has emerged to address sustainability challenges through transdisciplinary experimentation, known as “Living Labs.” These labs enable experimentation that is relevant to real-life contexts, creating innovative ecosystems characterized by the

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engagement of diverse stakeholders. Their aim is to generate tangible and sustainable societal value through participatory methodologies and reflective learning. The underlying assumption is that these labs, with their unconventional methodologies (often challenging dominant ideas and practices), have the potential to influence transformative processes. However, implementing such transformative R&I approaches proves to be challenging in practice.

In this presentation, I will delve into the complexities of transdisciplinary research and the operation of Living Labs within the realm of food system transformation. I will draw upon examples from several EU projects in which I have been and am engaged, including FIT4FOOD2030 and FoodCLIC.