



Sustainability, Innovation, and Regional Development

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Research on spatial dimensions of transformations towards more sustainable modes of production and consumption, including the role of innovation in driving such transformation processes, has received much scholarly attention in recent years (Truffer and Coenen 2012; Losacker et al. 2023; Hansmeier and Kroll 2024; Binz et al. 2025). Particularly important conceptual and empirical contributions on this matter stem from spatial innovation research, mapping and explaining the uneven spatial landscape of "sustainability-oriented innovations" (Mazzanti, 2018). The latter can be viewed as a broad taxonomic category including several widely used concepts: eco-innovation, environmental innovation, sustainable innovation, green innovation, clean innovation, among others. Moreover, an understanding of innovation and development has been put forward that sees the innovative capacity of regions not only in terms of their economic output, but especially in terms of the contribution to the development dynamics of all social structures on the path to citizens' well-being and ecological sustainability, much of which is conceptualised as "transformative innovations", "challenge-oriented" and "mission-oriented" regional innovation systems (Capellano et al. 2024; Tartaruga et al. 2024; Tripli et al. 2024; Castellacci et al. 2025).

While many relevant contributions have already been made in this regard (among others: Hansen and Coenen 2015; Grillitsch and Hansen 2019; Strambach and Pflitsch, 2020; Jolly et al. 2020; Kanger, 2022), further research is needed to better understand the role of regional factors (e.g. agglomeration effects, cluster formation, transregional production and knowledge networks, labour mobility, infrastructure and accessibility, roles of key local actors and governance structures) that lead to the emergence and spatial diffusion of sustainability-oriented innovations, providing an overarching understanding of the (regional) geography of sustainable innovation.

This Special Session aims to bring together researchers studying the emergence and diffusion of sustainability-oriented innovations in clearly defined spatial contexts, using quantitative methods (e.g. econometrics, modelling, GIS) to address the above-mentioned gaps.