

**Abstract of Contribution 139****ID: 139 / PC-1.4: 5****Pre-crafted contributions**

Topics: Integrative TD

Keywords: actionable knowledge, social learning, sustainability, professional knowledge, narratives

**Fostering actionable knowledge for sustainability via social learning: roles of professional knowledge and narratives****Kristina Hondrila, Ariane König**University of Luxembourg, Luxembourg; [kristina.hondrila@uni.lu](mailto:kristina.hondrila@uni.lu)

This contribution discusses why TD sustainability research would benefit from devoting more attention to professional knowledge and narratives. It presents concepts, empirical insights and methods on how this could be done. They are based on transdisciplinary case studies on governance and social learning processes in two river basins in Luxembourg (post-2000) that have concerned challenges at the nexus of water, environment and agriculture.

TD research has developed a wide range of concepts and methods to integrate local (or experiential) knowledge with scientific 'expert' knowledge and to co-create actionable knowledge for sustainability. Integration and co-creation have been conceptualized in relation to systems, normative/target and transformation knowledge (Pohl & Hirsch Hadorn, 2007). However, occupation-based understandings and skills are rarely recognized as a knowledge type in its own right. Furthermore, what makes knowledge meaningful to practitioners is at present still underresearched. Most inquiries into metaphors and paradigms are conceptual; roles of narratives are rarely analysed beyond TD processes.

This contribution shows how narratives can cast light on connections between professional cultures and paradigms (or "mindsets"), knowledge and practices. An analytical framework on actionable knowledge is presented that draws on the above concepts, on transformative sustainability science (König, 2018, Chabay, 2020), adaptive governance and management (Pahl-Wostl, 2015), professional learning (Schön, 1983) and Science & Technology Studies (Jasanoff, 2006). The framework serves to analyse contradictions and convergences that may emerge between diverse professionals in social learning processes: in terms of *purposes* (normative dimension), *factors* considered (systems dimension) and preferred *strategies* and *means* of social and material engagement (transformation dimension).

Case study methods have built on narrative and walking interviews, collaborative conceptual systems mapping, timelines and contradiction mapping. Actors included public authorities and water facility operators, farmers and conservationists.

Knowledge that is to foster joint action and changes in professional practices needs to resonate with and, at the same time, challenge professional knowledge and identities. Empirical findings suggest that personal meaning-making is interwoven with professional cultures that have been co-produced historically with technologies and infrastructures, with organizational and regulatory frameworks. The narratives of actors (interlinking present-past-futures) have revealed assumptions concerning human-human and human-environment relations that could be attributed to, respectively, productionist, command-and-control and managerial environmentalist paradigms. Changes in narratives along the above-mentioned dimensions thus served as indicators of social learning. Self-organised experiments - in interplays with *formal* governance processes - have been particularly conducive to fostering reflexivity, a shared sense of purpose, trust and converging understandings. Narratives of participating actors provided evidence of openings and *expansions* of established paradigms towards adaptive and integrated approaches.

Those actively engaged displayed particularly strong attachments to their professions, local contexts and/or nature in general. However, the case studies also suggest that many professionals feel confronted with growing regulatory, ecological and economic strains that reduce perceived spaces for learning and experimentation. Narratives of "being at the limit" or of having "no influence" hamper social engagement. Therefore, the contribution concludes by stressing that explicitly considering professional knowledge and strengthening narratives of self-efficacy among practitioners are key challenges for TD research – and beyond.