

## LEARNING AND INNOVATION IN NETWORKS: THE CASE OF BIOGAS PRODUCTION IN LATVIA

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### Abstract

In this paper we explore how learning is framed in multifunctional and hybrid networks that simultaneously deal with market exchange, knowledge transfer, policy making and technical innovation. Following Erving Goffman we define frames as shared understandings (ways of thinking and ways of doing) that actors develop jointly as they encounter each other for a common purpose. We analyse this process in two hybrid agricultural networks that are studied in SOLINSA project: the Latvian fruit growing network and the biogas production network. Both networks consist of diversity of actors and sub-groups: farmers, researchers, policy makers, technological companies, investors, retailers, consumers, etc., and they perform various functions that redefine urban-rural relations. In introduction we review network and social learning theories to position learning in complex networks. Social learning happens in social context which forms a social frame. In the second part we provide description of both networks – their composition, functions, actor relations and knowledge flows using SNA tool (smart network analyser). In the final part we discuss how common frames of learning are built. What are learning challenges and solutions in hybrid networks and how are conflicts overcome? We test hypothesis that frames of learning are constructed according to field of operation (food, non-food production), and this happens differently according to the type of learning (formal, informal, nonformal), operational level of learning (from local to global) and network cohesion. Local and international contexts both influence frames of learning. We argue that in networks there are various frames co-existing and overlapping: intro-group frames, inter-group frames, the network-level frames, and extra-network frames. We also examine what boundary issues of economic nature (e.g. common market interests), technical nature (e.g. adoption of new technology), cultural nature (e.g. protection of local varieties) and cognitive nature (e.g. use of common learning tools) stipulate knowledge framing.

**Key words:** frames of learning, hybrid networks, innovation, boundary interaction.