

WHAT HAVE WE LEARNED ABOUT SOCIAL LEARNING IN ECOLOGICAL ECONOMICS?

BERND SIEBENHUENER^{*1}; ROMINA RODELA²

1. UNIVERSITY OF OLDENBURG; 2. WAGENINGEN UNIVERSITY.

Social learning studies have been part of the ecological economics research agenda for some time. Numerous studies have been conducted delivering a rich body of knowledge often connected to other related research traditions in environmental and sustainability studies. Thereby, they contribute to a thriving debate about the role of knowledge and learning in change processes towards sustainability (Blackmore et al. forthcoming).

Until a decade ago, only a few studies looked deeper into the processes of knowledge generation, knowledge communication and their impacts on collective decision making in relation to global environmental change. Within a predominant focus on technology and conventional governance as the prime drivers of change in environmental policy, knowledge and learning were often neglected be it on local, domestic, regional and global levels. By contrast, fields such as climate change, biodiversity, water basin management and ecosystem management rely heavily on scientific knowledge on problem dimensions, causes and possible solutions. Only recently the question how, when and why this knowledge and learning can become relevant for societal decision making has been addressed more thoroughly (Social Learning Group 2001, Mitchell, et al. 2006). This was also nurtured by a turn in governance research towards reflexive governance approaches (Voss et al. 2006) which acknowledges the crucial role of knowledge and learning in societal decision making contexts. Subsequently, more and more studies focused on the dynamics of learning and knowledge-related change processes. Current studies highlight that in order for knowledge co-creation and knowledge integration processes to be productive these need to be underpinned by an approach that allows for transdisciplinary engagements, for learning, and methodological pluralism (Reed et al., 2010; Raymond et al., 2010; Armitage et al., 2011). These debates are of particular interest for ecological economics as a field that aims at bringing together bodies of knowledge from economics and ecology into transdisciplinary processes with stakeholders, decision-makers, resource users, and citizens, this with the objective of improving our understanding of complex issues (Kastenhofer et al., 2011).

Given the fact that amid a great number of studies and cases the overall synthesis in the field of social learning is scarce, it is time to take stock and look forward in the field. This survey paper thus analyses the emergence and thematic foci of social learning studies in ecological economics and related fields. It develops a set of guiding questions to allow for a systematic review of the heterogeneous contributions and studies. It will consider and distinguish the different definitions and conceptualisations of social learning. It will analyse the normative dimensions, process dynamics, causal factors and hindrances of social learning processes across the different contributions from the past 10 years. In this, it analyses key fields, levels and places of study, it deduces a research map and identifies key discussions, knowledge gaps and future challenges with regard to the scientific landscape and practical solutions.

References:

Armitage Derek, Berkes Fikret, Dale Aaron, Kocho-Schellenberg Erik, Patton Eva (2011), Co-management and the co-production of knowledge: Learning to adapt in Canada's Arctic, *Global Environmental Change*, 21(3):995-1004.

Blackmore, Chris; Ilan Chabay, Kevin Collins, Heinz Gutscher, Heila Lotz-Sisitka, Steve McCauley, Daniel Niles, Ellen Pfeiffer, Christoph Ritz, Falk Schmidt, Miranda, Schreurs, Bernd Siebenhüner, J. David Tàbara, Josee van Eijndhoven (forthcoming): *Knowledge, Learning, and Societal Change: Finding Paths to a Sustainable Future*. IHDP Science Plan, Bonn: IHDP.

Kastenhofer, K., Bechtold, U., Wilfing, H., (2011). Sustaining sustainability science: The role of established inter-disciplines. *Ecological Economics* 70, 835–843.

Mitchell, Ronald B., William C. Clark, David W. Cash and Nancy M. Dickson, Eds. (2006). *Global Environmental Assessments: Information and Influence*. Cambridge, MA, MIT Press

Raymond, Christopher; Ioan Fazey, Mark S.Reed, Lindsay C. Stringer, Guy M. Robinson, Anna C. Evely (2010). Integrating local and scientific knowledge for environmental management, *Journal of Environmental Management*, 91(8):1766-1777

Reed, M. S., A. C. Evely, G. Cundill, I. Fazey, J. Glass, A. Laing, J. Newig, B. Parrish, C. Prell, C. Raymond, and L. C. Stringer. (2010). What is Social Learning? *Ecology and Society* 15:4.

Social Learning Group (2001). *Learning to manage global environmental risks: a comparative history of social responses to climate change, ozone depletion and acid rain*. Cambridge, USA, MIT Press.

Voss, Jan-Peter, Dierk Bauknecht and Rene Kemp, Eds. (2006). *Reflexive Governance for Sustainable Development*. Cheltenham, Edward Elgar