

## Contested knowledge and expertise in sustainability politics

Informed political decisions for an ecologically sustainable development require new scientific knowledge in order to understand global interdependences, potential risks and consequences of political solutions, and to offer innovative options and approaches for sustainability politics. While reports of the Intergovernmental Panel on Climate Change (IPCC) demonstrate a growing overall consensus among the international scientific community regarding the urgency for political change towards sustainability, high levels of complexity and uncertainty pertaining to climate change and planetary boundaries of natural resources contribute to a very dynamic and controversial research environment. As a consequence, researchers are often contradicting each-other. They are providing information based on thoroughly established methods, theories and findings from their respective discipline and therefore –necessarily – limited scientific findings which cannot be automatically used by decision-makers for sustainability politics.

Taking the need for new information and political change as a starting point, the paper argues that the openness and independence of scientific research which is based on high academic standards can be considered as its strength although it may lead to complex results: It allows for reliable knowledge and for unforeseen findings which can be translated into innovative political solutions through the process of *integration* (Böcher/Krott 2016). At the same time, scientific expertise is increasingly challenged: The emergence of new information and communication technologies (ICTs) has contributed to new forms of *citizen science* and *transdisciplinary knowledge* which can be broadly disseminated and influence sustainability politics despite critical ethical and methodological questions underpinning that information (Nichols 2017). In addition, current tendencies towards populism and post-truth discredit established expertise and academic research on the environment, climate change and sustainability as the agenda of a powerful international elite (Lockwood 2018). The first part of the paper provides a comprehensive review of the literature on the science-policy interface in sustainability governance and examines different types of knowledge influencing sustainability politics.

Building on my theoretical discussion, the second part of the paper presents initial empirical results from a research project on approaches to dealing with contested knowledge and the understanding of expertise in Sustainable Development Solutions Networks (SDSN). Those networks which have emerged in different countries, regions and with different thematic foci seek to promote the integration of innovative knowledge on sustainability into political decision-making. At the same time, it remains questionable if – and under what conditions – they address the two main challenges to scientific knowledge in sustainability politics as identified in the first part of the paper.

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