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A THREE-DIMENSIONAL STUDY OF BROKERAGE IN COLLABORATIVE RISK GOVERNANCE NETWORKS: THE CASE OF FLOOD RISK MITIGATION IN HÖJE Å CATCHMENT AREA IN SWEDEN

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ABSTRACT

Governing risk entails a network of many diverse and interacting actors. Brokerage is essential for such actors to coordinate. It is defined as the process by which an actor serves as an intermediary between two otherwise unconnected actors. Brokerage is central to understanding both the influence of individual actors in a network and the capacity of the network to perform as a whole. How brokerage may differ across different types of actors governing risk together has attracted limited attention. This paper aims to investigate brokerage in collaborative risk governance networks, focusing on flood risk mitigation in a river catchment area through a novel three-dimensional approach.

Höje Å catchment area in southern Sweden was selected using the logic of the extreme case. It involves not the most extreme flood hazard but a profound complexity of flood risk. It is exposed to all types of floods. It comprises three dynamically developing municipalities with significant changes in population growth and urbanisation, exploitation of new areas, and densification of existing areas. Over the last two centuries, intense human activity has altered its hydrological connectivity considerably, resulting in upstream activities having substantial effects on downstream river flow.

Case study research based on social network analysis was suitable for the study. Data were collected using structured interviews. Since the network boundary was initially unknown, the participants were selected through snowballing. 217 participants were identified as actively contributing to flood risk mitigation in the selected catchment area, representing various types of organisations. Data were collected on different personal and professional attributes and the importance of inputs from other actors. The resulting social network data were analysed with the assistance of a range of packages in the programming language R, with the methodological innovation of studying brokerage in three complementing dimensions; brokerage activity, exclusivity and role diversity.

The results suggest that studying these three dimensions of brokerage simultaneously provides a sharper lens that picks up important nuances that other available approaches may fail to reveal. The results identify a clear distinction between active brokers operating on a higher organisational level versus technical experts and distinguish between brokers who are similar in terms of brokerage activity and exclusivity but occupy markedly different brokerage roles in the network. Further, the actors' formal responsibilities within their organisation only partly explain their brokerage activities. Thus, the results provide evidence of the importance of individual agency in turning organisational roles and responsibilities into brokerage. The three-dimensional approach offers a theoretically relevant analytical device that facilities investigations of brokerage in collaborative risk governance networks.

Keywords: Flood, risk, brokerage, governance, social network analysis.