Measuring 16 Years' Evolution of a Collaborative Water Planning Network

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Abstract

To enable collaborative, networked governance approaches to be optimally effective, it's vital to understand how to create and sustain high-performing networks over their full lifecycle. This paper observes the evolution of the governance network involved in an externally mandated, highly collaborative process for licensing a hydropower dam in Washington state. We introduce a novel approach using text mining techniques and temporal statistical network analysis to observe meeting participation networks from meeting minutes for a 16-year period. We find that the network was remarkably stable over the 16-year period, with network conveners and other individuals who played leadership roles early in the process likely to remain in those roles over time. More active participants (measured as individuals who were speaking during meetings) were more likely to sustain engagement. Additionally, partway through the 16-year period, the external mandate to collaborate dissolved, leading to a more tumultuous network with higher turnover. These findings suggest that high-performing mandated networks evolve quite differently than grassroots networks, with much less turnover and a strong reliance on a constrained group of conveners to sustain interaction.

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