

Collaborative learning to unlock investments for functional ecological infrastructure: Bridging barriers in social-ecological systems in South Africa

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ABSTRACT:

Maintenance of functional ecological (or green) infrastructure is threatened by habitat conversion, fragmentation and loss, water scarcity, invasive species, climate change, resource extraction, poor policy implementation and societal inequity. Using South Africa as a case study, our transdisciplinary team identified actions likely to be effective in scaling up research and development projects that support implementation of policy about ecological infrastructure by active adaptive management. Based on expert knowledge at three scales, we analysed South Africa's opportunity to active adaptive management and to unlock investments that enhance functional ecological infrastructure. Barriers included lack of trust among actors, limited collaborative governance and integrated planning, including local partnerships; as well as a poor inclusion of evidence-based knowledge based on monitoring of landscape restoration efforts and its social and ecological consequences. Bridges include practicing transdisciplinary knowledge production, enhancing social learning among actors and stakeholders, and advocacy based on improved understanding. We propose a portfolio of place-based actions that could help to facilitate unlocking investments for functional ecological infrastructure by prioritising conservation, management and restoration through integrated cross-scale, collaborative and multi-sector spatial planning. Understanding the structure and dynamics of social-ecological systems, identifying champions, framing key messages for different audiences, and sharing failures and success stories internationally, are crucial requirements to unlock investments.