



Transformative Adaptation through Nature-Based Solutions: A Comparative Case Study Analysis in China, Italy and Germany

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This presentation explores how claims for transformative adaptation toward more equitable and sustainable societies can be assessed. We build on a theoretical framework describing transformative adaptation as it manifests across four core elements of the public-sector adaptation lifecycle: vision, planning, institutional frameworks, and interventions. For each element, we identify characteristics that can help track adaptation as transformative. Our purpose is to identify how governance systems can constrain or support transformative choices and thus enable targeted interventions. We demonstrate and test the usefulness of the framework with reference to three case studies of nature-based solutions (NBS): river restoration (Germany), forest conservation (China), and landslide risk reduction (Italy). Building on a desktop study and open-ended interviews, our analysis adds evidence to the view that transformation is not an abrupt system change, but a dynamic complex process that evolves over time. While each of the NBS cases fails to fulfill all the transformation characteristics, there are important transformative elements in their visions, planning, and interventions. There is a deficit, however, in the transformation of institutional frameworks. The cases show institutional commonalities in multi-scale and cross-sectoral (polycentric) collaboration as well as innovative processes for inclusive stakeholder engagement; yet, these arrangements are ad hoc, short-term, dependent on local champions, and lacking the permanency needed for upscaling. For the public sector, this result highlights the potential for establishing cross-competing priorities among agencies, cross-sectoral formal mechanisms, new dedicated institutions, as well as programmatic and regulatory mainstreaming.