Designing Sustainable Governance: Cross-Domain Comparison and Evaluation

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Background

The Workgroup on Designing Sustainable Governance was formed as a sub-group of the Sustainability Transition and Intervention Research Lab in the School of Sustainability at Arizona State University. This student-led initiative pools expertise, experiences, and resources of members to analyze, evaluate, and design governance structures that transform complex sustainability problem constellations.

Mission

The research goal is to conduct comparisons across several governance structures focused on sustainability problems to derive empirically informed design principles and strategic options for achieving sustainable governance both within and between critical sectors.

Getting Involved

Interested in collaborating with our team? Send us an email and we will add you to our mailing list!

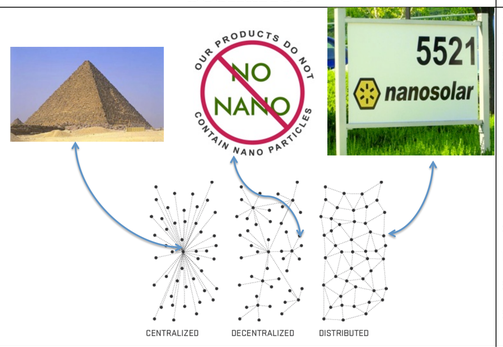
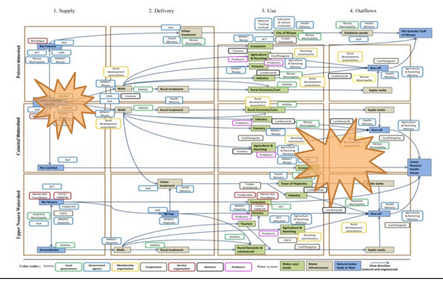
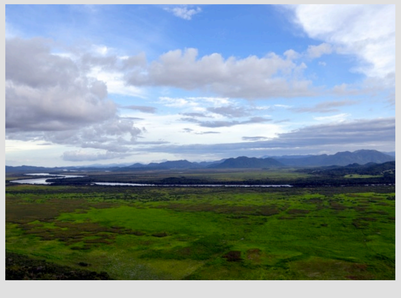
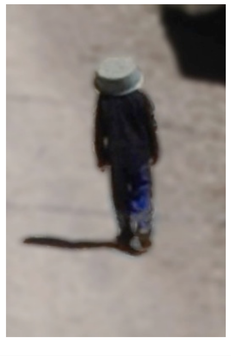
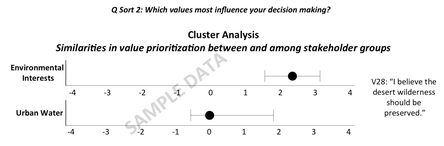
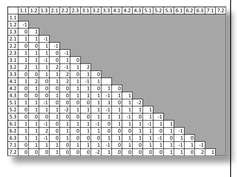
Contact: sustainablegovernance@googlegroups.com

What is sustainable governance?

Sustainable governance involves all stakeholder groups to coordinate the use of public goods in a way that optimizes economic and social welfare equitably without compromising the viability and integrity of supporting socio-ecological systems over time.

Expected Results

Outcomes will reveal similarities and incompatibilities between governance structures and provide initial insights for evidence-based designs of governance innovations. For example, a crucial design element for sustainable governance of water resources might be found to be less relevant or even counter-productive in sustainable governance of emerging technologies. We envision using these insights as a base for evaluating and designing sustainable governance strategies, elements, and terminologies that cut across various domains.

BASIC INFORMATION			METHODS		
Domain	**Where**	**Question**	**Scenarios**	**Vision**	**Governance Strategies**
Emerging technology in urban systems	Phoenix, AZ, USA 	Who is doing what & why to shape governance structures of nanotechnology and how does that align with sustainability today and in the future		Regional actors share problem understanding recognizing the role nano-technological interventions can play in the urban sustainability syndromes. 	**Current State**: Describe the phases, actors, activities, constraining and enabling as analytical elements describe nanotechnology innovation in an urban region – traditionally not technology focuses. **Foresight:** bring vision from draft General Plan, current governance state and participatory scenario methods to construct a small set of robust and valid future governance modes. **Reconciliation:** Assess nanotechnology's ability to intervene in complex urban sustainability challenges.
Water and conflict in tropical dry waters systems	Guanacaste, Costa Rica 	What are novel governance schemes and alliances for anticipating and mitigating violent conflict and climate change impacts in tropical dry water systems?	Interactive water system/dispute analysis & simulation 	Debilitating and violent conflict situations are avoided; smart governance alliances, which are beginning to be forged at local levels, steer water systems to sustainability 	Use scenarios to develop a suite of policy options and new governance alliances; test/estimate their effect on (1) risk of violent or debilitating conflict and (2) system sustainability criteria; ID barriers to implementation and possible clashes b/t (1) and (2) 
Infrastructure and adaptation in coastal wetland ecosystems	Guanacaste, Costa Rica/SE USA 	'Hard' public infrastructure and flexible governance are often at odds, as infrastructure 'locks-in' governance strategies. Can we overcome this and use infrastructure to build adaptive capacity in wetland ecosystems?	 How do different types of water infrastructure affect the SES? And what will the system look like in 30 years with respect to each type?	User groups understand the potential inequities created by different types of infrastructure, then overcome these inequities through sustainable adaptations. 	Critical timing for reflexivity The contrast between hard infrastructure and flexible governance requires user groups in wetland ecosystems to carefully plan adaptations using this infrastructure. Wetland managers must develop a Reflexive governance system ***before*** infrastructure projects create path-dependencies and inequities between user groups.
Water-Energy nexus	Navajo Nation, AZ/NM, USA 	What do tribe members value about water and energy and how do they envision the future of water and energy on the nation? How sustainable are these values?	Use Q Methodology to Prioritize, Cluster Values related to Water and Energy 	Value-based Future Scenarios of Water and Energy on the Navajo Nation • Shared values given high priority are used to "force" scenarios of Water and Energy. • Key internal and external variables are manipulated to show plausible impacts of value forcing and test sensitivity of scenarios 	Sustainability Assessment of Value-based Future Scenarios Sustainability Potential Analysis + Multi-criteria Assessment to determine sustainability of scenarios: How sustainable are community values?