

Communicative management of tensions by MSIs for water resilience

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Received 16 April 2017
Revised 16 November 2017
Accepted 24 January 2018

Abstract

Purpose – The purpose of this paper is to undertake a comparative case study (Stake, 2006) of two multi-stakeholder initiatives (MSIs) building resilient water systems to address how they communicatively frame and manage key tensions. “Glacier” is the North American convener of an MSI focused on developing reliable and measurable standards of water stewardship in catchment areas around the world. “Delta” convenes a MSI centered on the water economy, with the goal to connect and help diverse organizations around “the business of water.”

Design/methodology/approach – Qualitative data were analyzed using Tracy’s (2013) pragmatic-iterative method, which envisions ongoing cycles of theme generation and refinement, and draws on both induction and deduction to identify and sort themes. The “reflexive circular process” it involves helped trace how tensional poles were framed and managed.

Findings – For Glacier, the key tensions were: creating new and distinct standards while reiterating extant measures; collective decision making although privileging corporate interests; and fixed impact performance that is nevertheless fluid. Delta also displayed three tensions: focus on the ecological issue connecting the MSI or partner benefits; broader ethics of water stewardship *vis-à-vis* local considerations; and avowing a bipartisan agenda although politics remained central to its everyday work.

Research limitations/implications – The paper underlines how communicative framing and management of tensions are key to developing resilience for socioecological systems. It highlights how traditional organizational boundaries and collectives are disrupted in seeking resource system resilience, and suggests that texts and conversations might emphasize tensions differently.

Practical implications – First, MSI conveners and members working for resource system resilience should use visioning exercises to see how tensional poles might be dialectical, rather than focus on stark differences. Second, ongoing dialogue and evaluation can help trace alternative tension frames. Third, since context and MSI purpose matter in framing tensions, practitioners should be careful while transferring lessons learned across MSIs.

Originality/value – This paper contributes to resilience scholarship by underlining how the communicative management of tensions is vital to developing adaptive complexity and learning capabilities within broader socioecological systems – especially with MSIs working on complex wicked problems.

Keywords Stakeholders, Resilience, Tensions, Water

Paper type Research paper

The effective management of scarce or at-risk natural resources, like water, constitutes a key “wicked problem” (Rittel and Webber, 1973) worldwide, demanding creative collaborations, such as multi-stakeholder initiatives (MSIs), which are composed of different local and global organizations united on a common theme (Bäckstrand, 2006; Rasche, 2012). Building resilience – defined as the ability to withstand, recover, or repair from disaster or crisis situations (Folke, 2006; Lizarralde *et al.*, 2015) – in resource systems is a key concern for such MSIs, especially as climate change provokes unforeseen shifts in the natural and built environments. However, mobilizing multiple organizations and resources is not easy for MSIs, which often face complex mission and task conflicts, so that it becomes crucial to examine how they negotiate such tensions even as they seek to build resilient systems.

This paper undertakes a comparative study of two water-related MSIs, using qualitative methods, to address how they communicatively frame and manage such tensions. My focus on tension management stems from the realization that it is the very “stuff” constituting organizational and systemic resilience, since it enables actors to work through their conflicts



and build adaptive capacity (Handmer and Dovers, 1996; Lizarralde *et al.*, 2015; Sharma and Kearns, 2011). I argue, how actors communicatively frame these tensions influence their ability to manage them and find effective solutions to the wicked problems at hand (Tracy, 2004; Mitra and Fyke, 2017). This reasoning is in line with scholarship that emphasizes communication's role in reimagining a "new normal" for resilient systems, enacting sustainable modes of organization over traditional practices, engaging diverse stakeholder networks for systemic learning, and designing messages to effectively persuade broader publics (Buzzanell, 2010; Folke, 2006; Folke *et al.*, 2010; Long *et al.*, 2015; Norton *et al.*, 2011).

Resource resilience and managing tensions

In this section, I review some key literature on resilience (in the context of natural resources), before adopting an approach informed by the communicative practices at stake. I then describe some key tensions that require management to accomplish systemic resilience, and suggest how communicative framing might shape this process.

Resilience and natural resources

The interdisciplinary study of resilience theorizes how human and environmental systems respond to crisis, withstand risks, and renew themselves. This scholarship understands risk and uncertainty broadly – from organizational and social responses, to specific planned changes, to crises and other events not understood in their entirety (Agarwal and Buzzanell, 2015; Buzzanell, 2010; Folke, 2006; Handmer and Dovers, 1996; Long *et al.*, 2015; Powley, 2009). Scholars have studied various contexts – high reliability organizations, disasters, crisis interventions, climate change, physical abuse, personal trauma – and used different units of analysis, from individual propensity to system properties (Barbour and Gill, 2014; Barbour and Manly, 2016; Doerfel *et al.*, 2010; Seeger, 2006).

In the context of natural resources, theorists generally locate resilience at the systemic level, recognizing that socioecological systems are complex, adaptable, and open to a number of risks not very predictable in terms of frequency or eventual impact (Handmer and Dovers, 1996). For instance, Walker *et al.* (2009) used a resilience approach to assess the main issues, constraints, change drivers, and potential shocks in a water catchment area of the Murray-Darling Basin (southeast Australia), urging joint interventions for effective water governance. Broadly speaking, building resilience in the natural resource context requires attention to adaptability, or the capacity to formulate and adjust organizational responses to both internal and external drivers, along with transformational change (Folke *et al.*, 2010; Folke, 2006). Transformation is most effective when it connects local issues to broader mechanisms and institutions, and is able to "scale up" and "scale down" solutions (as required) across the system. Also crucial is the formation and framing of metrics for resilience and risk; for instance, Garfin *et al.* (2016) stressed not only merely the robustness of metrics across multiple scales of analysis, but also their systematic cross-comparison to validate reliability for adaptive capacity. Kerner and Thomas (2014) further averred that resilience metrics must be grasped and "owned" by system-wide stakeholders – not just metric designers – so that more theoretically sound allocation decisions can be made and progress tracked on the ground.

MSIs for (water) resilience

The complex scope of resilience in natural resource settings – as evidenced by adaptability, transformation, and metric robustness, among other factors – highlights the need for inter-organizational collaborations, or MSIs (e.g. Bäckstrand, 2006; Rasche, 2012). The Stockholm Resilience Center outlined seven principles for resilience in socioecological systems, all of which are centered on MSIs; these principles include: maintain diversity, manage connectivity, manage slow variables and feedback, foster adaptive systems thinking,

encourage system-wide learning, broaden participation, and promote polycentric governance (Biggs *et al.*, 2015). Walker *et al.*'s (2014) participatory approach to resilience in socioecological systems advocated stakeholder-led development of key concepts and metrics, identifying possible and potential change events, iterative scanning, and stakeholder evaluation.

For water systems – the focus of this paper – empirical work abounds on MSI efficacy. Becker and Caldwell (2015), for example, used a comparative case study approach to trace how institutional stakeholders and broader publics of two US ports jointly identified strategies and enacted actions for port resilience. Rather than the port operators making top-down decisions, broader stakeholder engagement created more efficient and long-term solutions, especially in the face of climate change risks. Cooren's (2001) study of the MSI (he calls them inter-organizational coalitions) in the Great Whale River contamination case (Canada) examined the dialogic communication process at stake – especially translation, to ensure stakeholders were speaking in each other's institutional "language," and were thus on the same page.

Nevertheless, MSIs do not operate without concurrent tensions. They require both loose and tight coupling of stakeholders, to ensure adequate flow, frequency, and exchange of information, materials, and personnel for systemic resilience (Joanna and Isabella, 2012; Rasche, 2012). There must be strict accountability of actions and also sufficient flexibility to act when existing legal or MSI guidelines are not relevant. Significant time, capital, and other resources must be invested in setting MSI standards and metrics to guide members through crises (Fransen and Kolk, 2007), but these standards must be sufficiently open to suit a variety of institutional stakeholders with little in common other than the underlying cause (Buttny, 2015). For instance, depleting water resources might bring together multinational companies, local communities, local and international nonprofits, third-party certification agencies, federal and global regulators, and representatives of oft-marginalized indigenous communities (Hopke, 2012). Because MSI members might mistrust each other owing to competing interests, conveners must encourage communication that emphasizes transparency and legitimacy. They must create forums for deliberation that recognize divergent customs, practices, and issues, use technologies that enable far-flung constituents to be heard, and allow equitable representation in managerial capacities (Novak and Sellnow, 2009). Sometimes, in MSI engagement with local communities, the more powerful corporate, governmental, or scientific entities further marginalize their voices (Sprain *et al.*, 2014). When MSI conveners ignore or inadequately address existing these power relations, they may perpetuate stakeholder suspicions, which jeopardize system resilience.

Communicatively framing tensions

Despite the preponderance of such potential conflicts, recognizing and managing tensions instead of seeking to eradicate them can be useful. The tensional approach to organization studies (often termed the paradox perspective) urges scholars to pay attention to how competing themes are also mutually compelling, so that a dialogic rather than dichotomous stance might be most effective (Lewis, 2000; Poole and Van de Ven, 1989; Putnam, 1986). For instance, rather than push for either stability or change, organizations must be stable and flexible, despite the seeming incongruence – thus valuing "stability/change." The 2004 special issue of the *Journal of Applied Communication Research*, edited by Trethewey and Ashcraft (2004), further cemented theorizing in the tensional approach and showcased different contexts whereby organizational members constantly "live with tension" as they accomplish collective goals, while meeting individual objectives. These scholars understood "tension" to be a broad category of simultaneous yet competing forces (e.g. paradox, dualism, dialectic) constituting social and organizational experiences, so that these experiences attained multiple meanings for members. Tensions are both constituted through communication – that is, members understand a situation to be tensional through

texts, conversation, and other modes of communication – and may be managed through communication; moreover, how members communicatively frame tensions influences how they are managed.

In the resource resilience literature, for instance, practitioners and policymakers are urged to manage multiple system-wide and organizational tensions, through social learning, mental model, vision, and scenario-building exercises (Folke, 2006). Examining how key actors engaged in the built environment (e.g. urban planners, architects) in the UK envision their work and agenda, Lizarralde *et al.* (2015) found significant tension – both conflict and overlaps – between resilience and environmental sustainability. The researchers thus concluded, “It is necessary to accept a ‘kaleidoscopic’ view of the agendas shifting, combining, dividing, etc. as the built environment changes” (p. 103). The importance of framing tensions for resilience is also underscored by Kerner and Thomas (2014), who urge the creation of an “approachable set of terms” both experts and lay publics may use to assess institutional actions on different parameters (e.g. learning capacity, dispersion, readiness). Thus, for natural resource MSIs to accomplish their goals, they must proactively identify and manage the underlying tensions of collaboration and systemic resilience. Importantly, Hopke’s (2012) study on protests against mining companies’ water pollution in El Salvador showed how tension frames are often influenced by deep-rooted power relations; she found that mainstream (expert-driven) frames urged holding companies accountable through existing legal and political systems, while grassroots media called for restructuring them altogether and privileged indigenous ways of life.

Drawing from Baxter’s (1990) work on negotiating relational differences, Tracy (2004) suggested that organizational members frame tensions in three broad ways – dialectics, contradictions, and double binds – that influence the strategies used to manage them. When tensions were framed as dialectical, the opposing poles of the tension were deemed complementary by members, so that members were able to accomplish multiple goals hitherto seen as competing. Members did not have to choose between tensional poles, but reasoned that by selecting one they were accomplishing both. However, when members framed tensions as contradictory, they were befuddled at what they perceived as paradoxical diktats by the organization, and thus used a confusing mixture of strategies in response. These tension management strategies ranged from vacillation across tensional poles, to inconsistent selection of the poled depending on the context, to source-splitting where different actors within dyads or groups chose opposing poles. Worst was when members framed tensions as double binds, because they could not perceive any viable action without violating a major rule. Then, members withdrew from the problem entirely, took it literally, rejected the underlying issue altogether, or over-analyzed it till it became moribund.

While Tracy’s (2004) typology emerged through studying correctional officers’ negotiation of stigma and tension, it has since been applied in different organizational contexts. For instance, Sanders and McClellan (2014) used it to research the experience of organizational members in nonprofits pressured by their stakeholders to increasingly adopt corporate logics, and hold themselves accountable to for-profit standards. The framework was also used in Mitra and Fyke’s (2017) comparative case study of purpose-driven consultancy firms, to examine how both organizational members and their clients managed tensions. Interestingly, they extended Tracy’s (2004) work by finding that contradictory framing of tensions could actually help accomplish organizational goals (and not confuse members) when the contradiction was perceived to offer some form of competitive advantage (e.g. branding).

This study contributes to the literature reviewed thus far in several ways. First, it builds on extant resilience scholarship in the context of natural resources (especially: water), by tracing how communicative frames constitute the underlying tensions at hand. Second, it extends research on communicative tension-framing by studying MSIs, which are composed

of multiple institutional stakeholders working on a common “wicked” problem, rather than within single organizations or between organization-client pairs. Third, this study demonstrates how MSI actors’ tension management strategies are shaped by underlying power disparities – an issue that remains undertheorized in both resilience scholarship and the tensional perspective. Thus, the research question guiding this study is:

RQ1. How do water-related MSIs communicatively manage tensions central to systemic resilience?

Comparative case study

A comparative case study approach was used for this paper, because case studies enable situated, context-specific understandings about social phenomena (May, 2012). Stake (2006) further argued that comparative case studies allow researchers to contrast how issues may evolve in different situations. Approval for the study was obtained through the Institutional Review Board, and pseudonyms have been used for all individuals and organizations to minimize potential risks faced by participants.

Data collection

Both case studies address resilience of water systems, albeit in different ways, necessitating different forms of communication (see below). Data were collected as part of a larger research project on practitioner enactments of environmental resilience and sustainability.

Glacier. This is the North American convener of an MSI focused on developing reliable and measurable standards of water stewardship in catchment areas around the world. Glacier convenes roundtables, partnering with large and small companies, government agencies, nonprofits, regulators, and community groups. This case focuses on deliberations to create a universal water stewardship standard (WSS). The first meeting was held at Milwaukee in late 2012, to solicit feedback for the first draft, made available online. I attended three webinars, and three on-site meetings (Milwaukee, Toronto, Washington, DC, all of which had public audio recordings available). After each round of deliberation, drafts were released to solicit public feedback. Data for this case comprised of transcriptions of the public meetings, field notes, and WSS drafts, amounting to 150 pages, single spaced.

Delta. Located in the Great Lakes region, Delta’s stated mission is to connect companies, universities, nonprofits, and government agencies to capitalize on “the business of water” (from its website). It convenes a mid-sized MSI centered on the water economy, and recently set up a Global Water Center and outlined plans for global partnerships with different organizations. I conducted five in-depth interviews with Delta staff and MSI partners (each 30-60 minutes long), attended a two-day Water Conference for the MSI, visited its offices, and collected promotional material (e.g. brochures, newsletters). Interview questions addressed participants’ everyday work, perceived goals and mission of the MSI, engagement and outreach, and broader perceptions about water resilience. Data amounted to around 150 pages, single spaced.

Data analysis

Data were analyzed using the Tracy’s (2013) pragmatic-iterative method, which envisions ongoing cycles of theme generation and refinement, and draws on both induction and deduction to identify and sort themes. Moreover, the method is particularly attuned to tensions, conflicts and overlaps that might occur across themes, especially in “real world” data sets that pertain to wicked problems (like socioecological system resilience). During the first stage of primary-cycle coding, themes were generated on the basis of repetition of words, recurrence of meaning, and forcefulness of interpretation (Owen, 1984). These first-level

themes were at the surface level, denoting particular actions or concerns at stake (e.g. avoid redundancy of standards, produce concrete results, bipartisan work, place-based branding).

In the next, secondary cycle, the goal was to engage in “prospective conjecture” (Tracy, 2013, p. 194), which proceeds via both “fracturing” and “lumping” first-level codes in terms of alignment in meaning, to sort them and generate second-level themes. Fracturing involves fragmenting the data into “smaller slices” by lines or segments for coding, while lumping gathers these slices into “large bins” for more general categories (p. 190). Second-level codes build on first-level codes, establishing a hierarchy or other relational categories; here, owing to the theoretical framework and RQ that emphasized tension management, I was attuned to how first-level themes might reiterate or oppose others. Thus, secondary-cycle coding established broader sets (e.g. emphasize new metrics, not completely discard old metrics) from first-level themes, and theorized tensions among them. Finally, Tracy notes that these stages are cyclical, so that researchers may want to go through both the codebook and raw data multiple times, to theorize possible relationships and strategies, and further refine findings (p. 189). This “reflexive circular process” helped trace how tensional poles were framed and managed (e.g. MSI members framing a tension as contradictory engaged in vacillation or inconsistent selection, whereas double binds resulted in withdrawal oftentimes).

Findings

Owing to the different modes of communication emphasized by each MSI (i.e. Glacier prioritized discussion and deliberation, whereas Delta stressed networking and connections), the MSI tensions revealed vary, despite the underlying goal of water system resilience.

Glacier tensions

Glacier defined itself as “an MSI whose mission is to promote responsible use of fresh water that is socially beneficial, environmentally responsible and economically sustainable,” in the minutes of its first WSS meeting. Stakeholders were not only limited to formal members of the MSI, but also included interested observers, impacted communities, non-member nonprofits, and other institutions. The minutes (and ensuing WSS draft) also state that the WSS “is intended to provide water stewards with an approach for evaluating the existing processes and performances within their sites and watersheds, and ensuring that responsible water stewardship actions are in place to minimize negative impacts and maximize positive impacts.” This framework of stewardship to accomplish water system resilience underpinned the tensions it managed – beginning with old and new metrics.

Reconciling old vis-à-vis new. A key tension for Glacier was encouraging the creation of new and distinct standards of water stewardship (like the WSS) for systemic resilience, while maintaining continuity with extant standards. Glacier largely framed this tension as dialectical; for instance, while compliance with legal regulations was stressed, and existing metrics cited as “inspiration” for the WSS, meeting participants noted that this process had to “philosophically” go beyond compliance and provide benefits hitherto unavailable. At Milwaukee, answering a query about the WSS being both a standard and scoring mechanism, the Glacier convener said:

Important to understand that just providing disclosure is not managing risk, or engaging in stewardship, and so it must be supplemented with other components of the standard. Each of these different tools is a piece of the puzzle, but not necessarily a comprehensive tool. The WSS pulls all of those together to comprehensively address water stewardship rather than a piecemeal approach.

Her comments clearly posed the old and new standards as complementary “pieces of the puzzle,” pointing out that the WSS was based on these extant metrics, even as it attempted something new in providing a “comprehensive” examination.

Reconciling old/new occurred via four stakeholder-led strategies: sorting principles, tightening definitions, renaming concepts, and bridging extant categories. First, in terms of sorting and weighing the guiding principles at stake, several examples abounded. Stakeholders at one of the webinars questioned the inclusion of “important water areas” as a principle in the first draft and urged for its definition to be defined further. They also suggested “transparency” and “community engagement” as new principles to be included, and reiterated the need for the WSS to be “standardized, repeatable and normative” to ensure “impacts [were] traced back to actions.” Both of these suggestions were embraced in the final draft.

Second, stakeholders sought to re-categorize definitions used in the WSS. Throughout local and online meetings, they emphasized contextual issues and warned against redundancy with existing measures, for instance, and urged centering of “impact” and “action,” rather than just “process” or companies’ “efforts.” Crucially, stakeholders urged a tighter definition of “indirect water use” (see below) and clarification on related supply chain issues, so that a “meaningfully relevant” standard could be drafted.

Third, stakeholders discussed renaming existing concepts utilized by the WSS draft. For instance, stakeholder complaints at Washington pushed Glacier to rename “areas of influence,” borrowed from the UN Global Compact, to “spheres of influence.” This change recognized separate hydrological and sociocultural impacts, leading to a more nuanced understanding of water stewardship. Glacier also refined its definition of “water stewardship,” following stakeholder observations at both Milwaukee and online that it focused too much on resource management, rather than accountability or long-term health. While it initially categorized “promoters” as those “trying to encourage uptake of the Standard,” stakeholders suggested alternative terms like “champions” that did not imply a financial stake.

Finally, the process involved bridging existing categories and actors, which were most evident in the longer excerpt posted at the start of this section. Other examples abound; for instance, webinar stakeholders pushed for clarification on how the WSS would define “indigenous people” (i.e. if it would link to the Global Compact definition), and how it might apply in different regions and draw on different national standards (so that stakeholders called for rigorous “implementation guidelines” for different regions and sectors).

Collective decisions, corporate interests. By framing the tension between old and new standards as dialectical, Glacier opened the WSS to dialogue with a diverse set of stakeholders and members, often with competing interests; however, this also meant that a contradictory tension emerged between collective decision making and corporate interests.

As per multiple drafts of the WSS and meeting minutes, the MSI was committed to “dialogue with local neighbors” (both small farmers and large companies) to produce “collective action,” sector-specific considerations (e.g. agriculture, beverages, manufacturing) and third-party verification. Description of small group breakout sessions in the Milwaukee meeting demonstrated how these sessions led to key insights, which were incorporated in the WSS:

Following presentations and a Q&A period, meeting participants broke out into small groups. Each group was tasked with addressing one or more of the following questions to help shape discussion around the work of [Glacier]. Feedback from the small group discussions will be shared with the international drafting committee.

Sure enough, the small groups reported on six key questions – most of them had time to address at least two of them – and their responses were circulated as part of the ensuing report. For instance, groups debated key challenges Glacier was likely to face, opportunities it could cultivate, recommendations for the WSS, unique characteristics of the Great Lakes region that might affect the WSS, value addition to stakeholder groups from the WSS, and critical stakeholders Glacier should always include. This example highlighted multiple

tactics Glacier used, speaking to the collective interests driving the MSI: engaging local stakeholders, joint problem solving, emphasizing shared interests, and hosting publicly accessible deliberations. At Toronto, the Glacier convener described the 15-member WSS drafting committee as “funnels” for distilling inputs from yet other stakeholders, who could not be physically present.

Nevertheless, a contradiction emerged between these collective interests and discourse markedly biased in favor of corporations, which was primarily managed in terms of source-splitting. In effect, Glacier allowed some stakeholders (notably community groups) to adopt grassroots language and hold larger companies (e.g. Nestle) to task more than smaller farmers, but in the end it adopted “the pragmatic path” that avoided heavily fining them. An economic lens was imposed from the start, as Glacier adopted cost-benefit language to explain why the WSS was important. Even as the Milwaukee small groups discussed various facets of “value” – itself a nod to cost-benefit language – accruing to MSI members, the formal report highlighted company-centric value in two of the five categories: “High value for communities, there is a public ethos of wanting to patronize companies who are good water stewards. High value as a framework, so companies do not have to start from scratch. Creates a benchmark for an organization’s practice. Also value as a brand tool.” These were also the most detailed categories in the eventual draft, suggesting that the effort was geared primarily toward corporate members, despite the stated collective interests. In another example, one of the webinars saw intense debate as to whether the WSS should emphasize “indirect water use” more, which would penalize companies for using excess water in their supply chain (i.e. by a third-party supplier), and proportionate (depending on size of the company) penalties, water offset credits, and sector-specific standards. These were, however, minimized in the meeting report produced by Glacier:

There was a lack of clarity between indirect water use and supply chain, and the drafting committee agreed they needed to be treated differently. However, the committee was cognizant of the need to make the basic level of certification achievable and appealing to the masses and prevent the indirect water use concept from being a barrier to uptake. Accordingly, the committee agreed that in order to make the WSS viable, indirect water use could not constitute a large part of the basic level of certification.

Thus, concerns about “adding undue burden” on companies (voiced by the Glacier convener at another webinar) won the day, despite the MSI voicing apparent support for the indirect water use measure, to ensure buy-in for the WSS. Translating the WSS’ value in cost-benefit terms, overly emphasizing corporate benefits (relative to communities, say), and explicit avoidance of burdening companies created a sharp contradiction that was imperfectly managed by Glacier – leading to further interrogation over what the WSS was supposed to be, in subsequent meetings.

Fluid but fixed impact performance. Related to this ongoing interrogation of water system resilience and the WSS’ scope was the final tension: fixed *vis-à-vis* fluid meanings of what constituted “suitable” impacts. These meanings were along two broad axes – temporal and spatial – but in both cases, the tension was framed as dialectical.

In terms of timeline, Glacier’s emphasis on ongoing public critique and bottom-up feedback centered an ever-unfolding process of discovery, which was reiterated when stakeholders called for further guidelines, new standards, linkages with extant measures, and verification by third-party accredited bodies. However, the MSI knew that too much of an open-ended goal would make it vulnerable to criticisms that the WSS was merely smoke and mirrors, with few concrete outcomes, and so it pushed “review of the standard on a regular basis as per ISEAL rules (once in five years at least)” (Toronto meeting transcript). Having an overly fluid timeline and results schedule also made the entire process vulnerable to cost overruns. The tension between fixed and flexible impacts was evident throughout

the Toronto discussions, as stakeholders debated whether the WSS should focus on process or impact, cost estimates for field trials, timeline to decide how the WSS would understand areas of influence, and eventual third-party certification processes. For example, the meeting report stated on areas of influence:

This concept stems out of stakeholder engagement. The challenge is to make sure we have firm guidance on what is reasonable, because there will be different expectations based on whether we're talking about small farmers or multi-billion dollar industrial site. It's going to be somewhat subjective, that's just the nature of these things, but we need some good guidance on this and a reasonableness test by the certification body.

The Glacier convener attempted a balancing act here between tensional poles, which she accomplished by framing the subjective and fluid nature of the work as inherent to the “reasonableness test by the certification body,” which would confer an objective stamp of approval on the WSS. Even as stakeholder engagement was admittedly localized and thus fluid, it was also assumed to be “firm” and “good.”

On the spatial axis, the tension between fluid and fixed meanings was manifest in terms of locally specific and universal standards of impact, respectively. Even as the MSI acknowledged (and sometimes endorsed) the role of place-based characteristics in interpreting and enacting the WSS, its ultimate goal was to create a “universal and standardizable” metric, as one community group in the Washington meeting put it. This tension was managed dialectically by representing repeated and rigorous field trials in different locations (notably Latin America and Australia, described in the meetings and webinars I attended) as “test pilots” that forged “real world” inputs about the WSS. An Australian MSI member described his preliminary work in the Murray-Darling water basin on “how to engage farmers, bring them into the system so that it doesn't cause obstacles,” proposing a “whole farm plan” rather than top-down management. The final version of the WSS deemed such “bottom up” approaches as indispensable universal best practices for water stewardship and system resilience.

Delta tensions

Case 2, Delta, largely adopted the rhetorical and structural logics of networking. Through its “capital of water” mantra, Delta emphasized local and global entrepreneurial networks to build socioecological system resilience centered on water. As Wilma, the MSI's Director of Communication, notes, the collective was formed squarely out of a networking conference: “Delta was actually born in 2006 at the first Water Conference where there were 60-odd people together in a room for a couple of hours on an afternoon trying to discern and decide whether or not we thought that creating this group to promote the economic cluster – water cluster – would work.” Since then, the annual Water Conference had ballooned to become the centerpiece of the local cluster led by Delta; moreover, Wilma's telling of the MSI's origin story underpins the very first tension: whether it was water, or the economics of water, that tied MSI partners together.

Issue-based, but partner-oriented. Delta positioned itself as facilitator of key institutional connections around water in the local region, and gradually worldwide. It focused on drawing diverse members into the MSI, to help them connect, learn, and profit – both tangibly and in terms of intangibles, like reputation – through “the blue economy.” Nevertheless, the MSI resisted overly environmental frames, and its convener staunchly rejected an “environmentalist” label, which resulted in a curious contradiction: despite its “partner first” orientation, the MSI downplayed the natural resource issue (water) that formed the basis of this partnership agenda.

Tensions between issue and partner orientation were clear in my interview with Wilma:

We're really hard to have an elevator pitch for! [laughter] We've got our fingers in a lot of pies, and a lot of those are nebulous and difficult to describe. We consistently fight the perception we are an

environmental organization. A lot of people think that we're cleaning lakes and rivers, which we wholeheartedly support, but it's not our core mission. We have some members that that is their core mission to go in and directly protect the resource in that way.

Wilma engaged in source-splitting, so that while she underlined that environmental action (i.e. the issue) was not Delta's core mission, it included several nonprofit and community-based members who did make it their mission. Thus, Delta distanced itself from environmentalist labels, to protect its own identity as a capital-focused networking agent (although, it is "really hard"). Despite these efforts, the environmentalist label or issue orientation was often ascribed to the MSI by the media, general public, or potential members, suggesting that this tension was likely to intensify, rather than dissipate, as Delta grew.

Others at the MSI engaged in vacillation across the tensional poles. For instance, Aaron, Delta's President, emphasized, "We do not do water research. We're connectors [...] our job is to be able to connect people who've got ideas with those who are looking for answers." However, during the same interview, he also cited the importance of safeguarding water in fairly environmentalist terms, stressing that this was a local issue: "So it depends on where you're located, but ultimately it's the respect of that resource, and it's a resource we need to survive [...] It's not just humans. It's animals, it's vegetation. All are reliant on water." He compared water to oil, claiming that although oil scarcity would have severe repercussions on our way of living, it would not be as catastrophic if we had no oil (rather than water) left. His environmentalist rhetoric was thus inconsistent with Delta's preferred frame of pragmatic connection making.

Most Delta members focused on the partner-oriented nature of the MSI, when describing why they were affiliated with it. Delta did not require members to commit to any water stewardship agreement (public or otherwise), like the WSS, so there were no specific standards or clauses members had to abide by. Communication with MSI members was also partner oriented, rather than issue-themed for water. Mort, who worked in Member Relations for Delta, noted, "We wouldn't necessarily push something that was water-related just because it was water; if it didn't have any even mild benefit to our members as a piece of information, probably not something we'd push." Thus, for members like Fred's site remediation company, which was starting to explore "green" remediation techniques, joining Delta was a good way to "dip the toe in the water" and gauge the benefits of this public alignment. At the same time, Fred reiterated that membership was not only merely about reputational benefits, but also learning from other MSI partners to shape long-term strategy: "We are trying to think of how we can best set this company in the long-term [...] we want to be at the forefront of research and technology both from the business perspective and giving back to our community, and partnering with Delta is sort of the strategy we're putting together." Several attendees at the annual Water Conference highlighted Delta's recent global partnerships, and looked forward to learning more about R&D initiatives, water resilience measures, and community engagement structures that had proven successful elsewhere (notably India, South America, and Australia).

Broad ethics, local action. Along with the partner/issue orientation, Delta grappled with another scope-related tension – outlining a broader global ethics of water resilience, *vis-à-vis* local considerations and actions – which it successfully framed as dialectical. The MSI's home base was described as the "hub" of the new "water economy," as when Aaron said, "We could raise the visibility of Delta and the water cluster, and with that then comes spreading that message across not only the country but the entire world [...] and that you are considered that world hub of water technology." Despite these global aspirations, he noted that resource resilience was rooted in local meanings and material availabilities: while a lot of water-based messaging worldwide focused on scarcity, this was largely ineffective in the Great Lakes region:

[Scarcity's] not necessarily reality for this area, because we have a lot of water, and why not use that? It's there as a great resource and a commodity. Now I will also say when we use it, use it very

wisely and return it back to the lakes so we can continue this very important natural resource [...] Use the least amount necessary to accomplish whatever you're seeking to do, whether it's manufacturing or brewing beer, and make sure it's clean when you put it back.

In this excerpt, there were intersections of various tensions – broad ethics of resilience *vis-à-vis* local contextual particularities, and partner-oriented economic drivers *vis-à-vis* the ecological issue (i.e. water) tying them together. Key for systemic resilience was engaging with local contexts, in terms of resource availability, usage patterns, and social relevance, to build a broader framework of what water resilience should look like – and how the resource could continue to be used sustainably, without depreciating its stock or quality. Aaron broadly echoed the “pragmatic” business case of environmental conservation – focused on safety, reliability, and community resilience – to advocate for Delta’s programs.

The complementary reframing of this tension was accomplished in two, interrelated ways. First, Delta staff and members often used the word (or variations of) “evolution” to explain its growth and expansion from a small Midwestern cluster to its global avatar-in-the-making. For instance, Wilma described recent changes to the MSI’s name, which involved deleting its home city, as Delta increasingly saw itself as global:

The scope is not really changing so much as just continuing to evolve along the same path that it has been evolving. Very quickly, this confluence of the water sector gained a lot of momentum, from a local and national standpoint, but also from an international standpoint. So the name shift was a recognition that while [City] is our home, and we will always be based out of here, in a sense we’ve kind of grown past that as well.

Thus, for Wilma and the MSI, it was a natural evolutionary process, or movement, that shaped Delta into a larger collaboration, involving partnerships and branding ties with entities far from its origin, to enable “confluence of the [global] water sector.”

Second, as part of this evolution, the MSI would benefit from having both local action and global spread, connecting institutions hitherto too small for meaningful impact, so that they could learn from each other, and “scale up.” For instance, a partner from Central America noted at the Water Conference the advantage of networking with policymakers and universities for technical expertise, and averred that he was hoped to learn more about local field tests to help build the global water economy. As another member noted, the collective focus on “capacity building” had to go beyond infrastructure development (e.g. building turbines, R&D investments), to create “integrated water management [through] small scale networks” that were attuned to local particularities and stakeholders.

Bipartisan but (a)political. Delta’s partner/issue-orientation tension also shaped a final tension, related to politics: specifically, while the MSI avowed a bipartisan agenda to accomplish water resilience, with diverse partners, individuals privately acknowledged that the natural resource context was inherently political. MSI partners were largely uncomfortable with this tension, which was framed as either a contradiction or double bind.

Political connections were vital for Delta’s work, and several partners and Water Conference attendees praised it for solidifying meaningful ties with policymakers across the political aisle to accomplish water system resilience. At the Water Conference, Delta’s home city mayor announced the renaming of a major thoroughfare to reflect the city’s focus on water resilience, after the newly opened Global Water Center, and several local politicians from both the Democratic Party and Republic Party were present. Aaron emphasized:

Certainly, politics and government play a huge role, whether it is delivery of water, cleaning, policy issues, or use of water [...] There is a role for government in being able to move it forward. We wanted to be able to bring those elected officials into the discussion, so that we’re all working towards the same goal [...] It is bipartisan. They all understand that value of water

both as a resource, but also as value from an economic development standpoint, for not only [City] but the entire state. So we want to be able to talk to them a lot. We want them to talk to us as well.

In this excerpt, while recognizing and encouraging political connections to accomplish water resilience, Aaron focused on bipartisanship, or reaching across to various political stakeholders regardless of traditional support for environmental causes. Delta's dual emphasis on entrepreneurial connections and resource conservation helped it make the case to both Republicans and Democrats, while resisting the position of being a political actor itself. The MSI honored an outgoing Republican US Senator with a commemorative plaque for his support of regional water resilience and opportunities, and both Democratic and Republican candidates for the US Senate were invited to address the gathering. Claiming bipartisanship afforded Delta legitimacy to push for environmentally resilient management of water; for instance, the attending Republican Senate candidate charged that the USA was woefully inadequate on water policy, and he vowed to significantly overhaul the system and add new R&D investments, while holding Delta as worthy of emulation: "This is how Washington needs to work, in a bipartisan manner, solving problems by working together."

Despite this preferred narrative of bipartisan but apolitical networking, there were several slippages – some more overt than others, with differing consequences. Perhaps, most common were reflections like Fred's, who noted that, despite being able to convey Delta's narrative of entrepreneurship and resilience to his shareholders, he was unconvinced that it was entirely tangible or that further radical action was not required. Politics was centered in his reflection:

It's a value judgment on where's the best place to put our money in the long and short-term for the overall benefit of society. We have a bit of disconnect in our industry, where you have business maybe wanting [it], but rather not spend quite so much [...] But if we set up a system where we put some resources to cleaning up the sites, and then pay another portion for the betterment of society [...] I see a responsibility for us to be at the forefront of what the issues are. One of the best ways we can do that is to align with something like [Delta], the potential this group has. I'm tasked with articulating this for our organization, and I'm having a hard time. It's not tangible right now.

The inconsistent selection and uncertainty in this excerpt were palpable, stemming from an uncomfortable recognition of the contradictory politics and values at stake. First, the company wanted to invest in water resilience, yet the broader industry did not (especially if it was expensive); then he talked of possible public-private partnerships to accomplish this goal (and how Delta might help), but he was nevertheless stumped about how this case was "tangible" and whether his fiduciary stakeholders would buy it. His uncertainty may be owing to a contradictory framing of business interests *vis-à-vis* "society," which he tried to (but was unable to) resist.

Even more discomfort was expressed by Delta staff, when confronting the radical transformations required for meaningful water resilience. Mort observed:

I call myself a realist. My wife calls me a pessimist. [LAUGHTER] I see films like Last Call at the Oasis, and I think, oh man! We're really screwed, and we've screwed ourselves, to the point where our water consumption is not sustainable [...] There needs to be radical change, plain and simple; it can't be the kind of thing where we slowly work into it [...] There's a lot of hesitation to do what needs to be done, because it's viewed as too extreme, when it needs to be viewed as extreme but necessary.

Mort realized how political change was crucial to building resilient water systems, and he acknowledged how it was unlikely with Delta's brand of bipartisan entrepreneurship. On the one hand, his nervous laughter and resigned answer suggested withdrawal from the underlying tension, which was framed as a double bind (necessary, but "too extreme"). On the other hand, he suggests reframing the tension in a way that does not ignore "extremity," but sees it as "necessary" – an action requiring concerted political action.

Nevertheless, public slips of such misgivings or political affiliation were problematic, and led to loss of legitimacy among MSI partners, because of the perceived double bind between ecology and economic opportunity. New member Jenna recounted an episode where a Delta worker's overt Republican leanings dismayed her:

If you go macro level, with the state elections and in general, it seems like there was a lot of tension between [political] parties, and it came up that she's just a hardcore Republican, and she said several times in the process [things] like that [...] Water seems to be one of those issues where everyone can come together, because it doesn't matter if you care about it from an environmental perspective, or as a business opportunity. This is a beautiful spot where everyone can come together and make money doing the right thing. I wholeheartedly believe that's a way everyone can win politically, but she was going on and on about "all the Democrats in the room" and "the bleeding hearts" [...] honestly, this email she sent out, that's why she wrote "I'm disappointed."

Jenna echoed other MSI partners, noting that resilient water resources was a common concern for people of different political affiliations. However, this bipartisan façade was disrupted when an individual made her political loyalties clear. In the e-mail Jenna referred to, this individual excoriated participants at a workshop for focusing on environmental conservation and crisis-related missions, rather than economic opportunity and talent development – and connected this disconnect from Delta's preferred narrative to their alleged political (i.e. Democrat) commitments. Jenna continued, "[This is not] how you talk to people, and I think it was politically motivated at that macro, policy level, and then there's also politics in the organization [...] I don't know in what environment you can operate like that and say that kind of thing on behalf of your organization." She was not alone in her interpretation, as this individual was eventually censured and Delta received several complaints about her e-mail. This example demonstrated the careful balancing act that MSI actors must engage in, and the consequences of framing political affiliation and resource resilience in stark double bind terms; partners simply withdraw from the relationship, and the MSI suffers.

Discussion

This comparative case study examined the tensions faced by MSIs enacting systemic resilience in the context of water resources. Specifically, it argued that MSI members' communicative framing of these tensions shapes the strategies to manage them. I examined two MSIs, Glacier and Delta, which worked to accomplish water system resilience, demonstrating how different tensions were framed as dialectics, contradictions, and double binds. In this section, I consider some key theoretical and practical implications that follow.

Theoretical implications

This paper contributes to resource resilience scholarship by underlining how the communicative management of tensions is vital to developing adaptive complexity and learning capabilities within broader socioecological systems. While several scholars have noted that the crucial role played by communication in helping actors collaborate, learn, network, and reimagine new ways of being and organizing with each other (e.g. Agarwal and Buzzanell, 2015; Barbour and Gill, 2014; Buzzanell, 2010; Doerfel *et al.*, 2010; Seeger, 2006; Sprain *et al.*, 2014), few studies have focused on the difficult tensions, conversations, and negotiations that inevitably occur in such situations – especially, at MSIs. Table I summarizes my findings, demonstrating how the specific frames used to interpret these tensions shape how they are addressed. For instance, Glacier – which emphasized discussion and deliberation of water stewardship – framed key tensions of old/new standards and fluid/fixed impacts as dialectical, which resulted in six different strategies enacted by stakeholders to build resilience in the water system. However, the MSI seemed unable to get beyond a contradictory framing of collective action *vis-à-vis* corporate

interests, and used source-splitting strategies that merely deepened stakeholder dissatisfaction and the contradiction at heart. Meanwhile, Delta, which prioritized networking and connecting diverse partners for “the business of water,” succeeded in framing only one of its underlying tensions (namely, broad ethics *vis-à-vis* local action) in dialectical terms – stressing the MSI’s evolutionary growth, and helping its constituents scale up. Its other two key tensions – issue/partner orientation and bipartisan/political commitments – were framed either as contradiction, or worse, as double bind, which caused stakeholders to vacillate, engage in source-splitting, inconsistent selection of options, or even withdraw from the MSI.

These findings suggest two major implications. First, tension frames are deeply contested, and with MSIs, as traditional organizational boundaries get blurred, and stakeholder missions, networks and actions overlap on the ground (e.g. Bäckstrand, 2006; Cooren, 2001; Rasche, 2012; Walker *et al.*, 2014), the significance of different tensions can be hotly debated. For instance, although Delta staff sought to frame the issue/partner tension in dialectical terms, MSI members saw it as a contradiction, and even the staff ended up making statements contrary to the “preferred” frame. At Glacier, meanwhile, efforts to manage the collective/corporate tension through source-splitting merely enhanced the central contradiction, pitting small scale and local entities against more powerful capitalist interests – but never entirely erasing voices protesting corporate dominance. This suggests that MSI members ascribe different meanings – both positive and negative, broad and narrow – to the overarching initiative, based on their geographical location, administrative authority, and ideological commitments. Tension frames might be contested even more energetically in more diffused social movements (e.g. Standing Rock protests in the USA), as opposed to formal and elite MSIs, like Delta and Glacier.

Second, the findings suggest that texts and conversations act in different ways, to frame MSI’s resilience tensions, and how they are managed. For example, at Delta, water resilience was largely framed as bipartisan in all texts and formal conversations (e.g. speeches), and the tension with political affiliations only became apparent in confidential interviews. Meanwhile, at Glacier, while the tension of corporate/collective interests appeared in both meetings and reports, the latter seemed to minimize the nuances of joint problem solving and collective dialogue, especially when it came to liability, and favored cost-benefit logics and business-friendly positions instead. These examples warrant deeper investigation into ongoing shifts of meaning betwixt and between texts and conversations, tracing when and why certain elements get “lost in translation” as MSIs deliberate, network, reimagine, and implement systemic resilience. As with contested frames, the intersection of texts and conversations is also characterized by power relations and expectations. For instance, private conversations among Delta staff members about the political nature of resource

Table I.
MSI tension frames
and management
strategies for water
resilience

MSI	Goal	Resilience tension	Frame	Strategy employed
Glacier	Deliberating water stewardship	Old/new standards	Dialectical	Sorting principles, tightening definitions, renaming concepts, and bridging extant categories
		Collective/corporate interests Fluid/fixed impact	Contradictory	Source-splitting
Delta	Connecting members for the business of water	Issue/partner orientation	Contradictory	Stress temporal and spatial continuity Source-splitting, vacillation, and inconsistent selection
		Broad/local action	Dialectical	Stress evolutionary growth, and helping scale up
		Bipartisan/political	Contradictory Double bind	Inconsistent selection Withdrawal

reliance strategies elicit nervous laughter and self-introspection, but when these musings bleed into the public realm – via angry retorts or e-mails to MSI members – retribution is swift and potentially fatal for MSI relationships.

Practical implications

Some practical implications for MSI conveners and members – companies, nonprofits, government agencies, policymakers, and community groups – can also be outlined. First, practitioners should not be quick to focus on stark or overly simplistic meaning making when confronted with alternatives, nor should they feel stymied when facing seemingly polar options. Rather, visioning exercises and mental mapping might enable them to see how tensional poles relate, might be dialectical, or at the least, may be framed as contradictory without causing enervating confusion among MSI members (Lewis, 2000). Second, ongoing stakeholder dialogue and evaluation can trace alternative frames of meaning for conflicting options (Mitra and Fyke, 2017) – as in Mort's framing of radical political action as "extreme but necessary." Finally, context matters in terms of what and how tensions come to the fore, even when MSIs operate in similar spaces. Their different goals (e.g. standard development, networking) might center different tensions, so that practitioners should be wary of simply assuming universal transference of lessons across the board. Instead, they might benefit from drawing best practices from proven strategies for dealing with tensions specifically identified in that context (e.g. using "evolution" as a frame to address the dialectical tension of broad/local action).

Limitations

While comparative case studies enable a holistic understanding of social phenomena, by simultaneously studying multiple contexts, a key limitation is that they may preclude details into any one of the cases in favor of the "bird's eye" view (Stake, 2006). Thus, this paper has not delved into minute contextual elements, such as conversation sequences or thick description, because this would have distracted from the thread connecting these cases – namely, how tensions are inherent in resource-based MSI work, and how they are framed and thereby managed in similar (but not the same) situations. Another limitation of this study is its absence of longitudinal or quantitative data. Future research should thus include both quantitative and qualitative, and single and multiple case study methodologies, to further unpack the findings reported by this study. Finally, while the tension-framing approach adopted here generally takes the communicative frames employed as constituting management strategies, scholars might consider using alternative theoretical perspectives, such as sense-making or structuration, to probe how the reverse may or may not be true – that is, whether (and how) particular routines and actions might reiterate communicative frames for MSIs. Nevertheless, in tracing how MSIs manage various tensions to accomplish resource resilience, and noting the interplay of power relations across these strategies, this paper has made an important contribution to the communicative study of resilience.

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