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Presenter Information

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Co-produced research supports pastoralists to pursue transformative social and ecological change in rangelands

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Abstract

Over the last two decades, pastoralists and researchers have formed powerful alliances to transform how we think about and do research-with-action in rangelands. These alliances promote faster learning about problems and their potential solutions by bringing together diverse partners and their different ways of understanding important issues. They also ensure research is fully relevant to real problems, so it supports pastoralists to act on both old and new issues that they face. While these approaches can be contentious when perspectives and experiences do not align, team members are finding them transformative, if they commit to working together over the long term.

Based on a long history of participatory research approaches in the social sciences, these alliances are now inter- and trans-disciplinary, spread throughout the sciences. This paper uses six case studies to explore the experience of teams who have used this research-with-action approach in the rangelands of Kenya, Tanzania, Mongolia, Tajikistan, Afghanistan, Spain and the US. These teams developed and implemented this approach not in halls of academia, but in equal pastoralist-researcher partnerships by creating full co-learning and democratized processes together. These teams then purposely built the capacity of all stakeholders to act together to promote desired change. The case studies integrate diverse knowledges at multiple scales into collective ‘learning and doing’ teams composed of pastoral peoples, policy makers, scientists, business people, and others. This process ensures a broad range of understandings and interpretations form the foundation of the actions and adaptations taken by actors across landscapes and scales. The approach contributes to the resilience of place-based social-ecological systems in rangelands by avoiding top-down, one-size-fits-all approaches. Uniting these ideas and practices has allowed research-with-action to become truly transformative, by accelerating the capacity of all stakeholders to learn and act more effectively.

Introduction

Many scholars say today’s sustainability challenges are sufficiently large that they will only be solved with transformational change, or rapid leaps to a new normal (Moore et al. 2014). Here, a ‘transformation’ is a fundamental change in the purpose, function or structure of our ecological, economic, or social systems (Walker et al. 2004).

In rangelands, pastoralists and researchers are experimenting with long-term partnerships, meant to transform science so it fully supports pastoral needs. In the process, these alliances create ‘face-to-face’ democracy, transforming the participants (Brick, Snow, and Van de Wetering 2001). For example, the Blackfoot Challenge and the Malpai Borderlands are two rancher-led partnerships in the US that formed, in part, to slow the fragmentation of open, rural landscapes (Wilson, Bradley, and Neudecker 2017; McDonald 2002). In Africa and Asia, these initiatives are part of community-based rangeland management (Reid, Fernández-Giménez, and Galvin 2014) or, more broadly, community conservation initiatives.

The objective of this paper is to describe how these partnerships work and briefly describe some of their outcomes and impacts, largely based on ideas and cases in (Knapp et al. 2019; Reid et al. in press).

Methods

This paper is a summary of an in-depth review of 4 long-term and 2 short-term case studies in Kenya, Tanzania, Tajikistan, Afghanistan, Mongolia, Spain and the US from (Reid et al. in press). The Tajikistan/Afghanistan partnership worked in the Pamir Mountains to co-generate knowledge and create useful outcomes to help communities to secure their livelihoods and food systems (Kassam et al. 2018). The Mongolian case assessed the social and ecological impacts of community-based rangeland management (Ulambayar et al. 2017; Fernández-Giménez, Allegretti, et al. 2019). The Kenyan / Tanzanian case studies focused on drought in Samburu (Reid et al. in press) and balancing wildlife conservation and pastoral

development in the cross-border region of Maasailand (Reid et al. 2016). The Spanish case study looked at the role of women in Spanish pastoralism (Fernández-Giménez, Oteros-Rozas, and Ravera 2019). The US case focused on a ranch-scale participatory grazing experiment to test different grazing practices that would allow ranchers to sustain the land for future generations (Fernández-Giménez, Augustine, et al. 2019; Wilmer et al. 2018).

Results

We decided to call this type of science, ‘transformative science with society’ (TSWS) because the approach goes well beyond what is called ‘transdisciplinary science’ (see Reid et al in press for more details). These are then TSWS partnerships. Most of these partnerships aim to transform pastoral systems in a positive way, but they also focus on transforming how scientists work with pastoral peoples. They do this by ensuring that science is driven by the needs of pastoral people and their rangelands.

We found seven processes that form the foundation of the partnerships (Reid et al. in press). First, these partnerships *build collaborative relationships* (1) that establish trust, build support for project outcomes, empower less powerful voices, and create a way to convene partners around a central problem. These partnerships then use *co-production* (2) ‘that iteratively brings together diverse groups and their ways of knowing and acting to create new knowledge and practices to transform societal outcomes’ (Wyborn et al. 2019):322. Partnerships then usually *integrate different knowledges* (like Indigenous, practitioner and scientific, 3) and create a robust practice of *social learning* (4), where the partnership experiments together, adapts and experiments again. The partnership also focuses on *capacity building* (5) to ensure participants develop and refine their leadership and partnering skills. Particularly in our East African and Mongolian cases, we found capacity building critical to long-term impacts on policy and practice. Most partnerships did deep *networking* (6) both within and outside the partnership. These partnerships also *implemented action* (7), like changing a management practice, restoring land, and helping to design policy and practice that lead directly to action.

Discussion and Implications

What kinds of outcomes and impacts did these partnerships have? We define *outcomes* as changes in knowledge, skills, attitudes and relationships that cause changes in behaviour of the partnership’s clients or the environment, and *impacts* as longer-term effects of the partnership’s outcomes on society and the environment (Belcher et al. 2019).

Partnership outcomes were abundant and diverse (Reid et al. in press). All the partnerships achieved the outcome of stronger trust and relationships, more inclusion and respect and empowered pastoral voices. Some of them changed the way the wider society talked about pastoralism, by, for example, debunking the tragedy of the commons narrative. The East Africa, Tajikistan/Afghanistan and US cases changed the way government and NGOs valued pastoral knowledge, leading to more inclusive projects that jointly identified problems and needed action together. In the US case, it was clear that all team members and ranchers made shifts in their mental models of how rangelands and communities work, opening the door to new concepts and solutions. Partnership capacity building efforts propelled pastoral community members to leadership positions. One of the pastoralists on the East Africa team described how the research allowed them to see problems from many different angles, a character seen as very useful by their communities (Reid et al. 2014).

Some of the larger impacts of these partnerships were more intangible, ‘sometimes occurring faster than expected and stretching far into the future’ (Reid et al. in press). Faster than expected impacts occurred in Kassam’s work, where maps co-generated in one community were used to establish their land tenure and stop a gold mine (Kassam 2009). In Maasailand, the partnership co-developed a land-use map that the community used to slow down rapid conversion of pastoral land into an urban development (Reid et al. 2016).

And can these outcomes and impacts be called *transformative*? In the Tajikistan and Afghanistan case, the lead scientist was able to have strong input into the new Afghani climate policy, precisely because he had worked closely with Afghani communities. In East Africa, it appears that the research may have helped catalyze and accelerate transformations already in process. Here, pastoral community leaders and researchers were invited ‘to participate in task forces to develop the new Wildlife Act associated with the new Kenyan constitution. The task force was able to put into place fundamental changes that now allow pastoral communities to lead and manage community conservancies for the benefit of pastoral livelihoods and wildlife conservation for the first time’ (Reid et al in press). In several cases, it is clear that one of the most transformative processes was capacity building, where decades later pastoral participants partially credit the

partnership with their success in becoming major leaders who now make substantial change in their communities (Reid et al. 2014).

In all partnerships, the researchers transformed the way they do their science, which many described as a permanent change. Here, they now find it impossible to do top-down science that creates conclusion without input from the pastoral community. Many are very committed to the process of co-generation of knowledge, with respectful blending of different knowledges.

These partnerships face recurring challenges for both scientists and pastoralists (Reid et al in press). They are complex and require significant time commitments. There is often hidden bias on the parts of scientists (particularly biophysical scientists) which must be recognized and mitigated. And finally, it is possible for a partnership to have unintended negative consequences. This can occur, for example, if the partnership inadvertently strengthens existing oppressive power structures.

Finally, we identified some needed change in these partnerships and the science they do for the future. First, there needs to be more attention to power dynamics in these partnerships. Partnerships need to pay close attention to the dominate western European cultural narrative and attempt to decolonize this science more fully, welcoming Indigenous science and ways of knowing. And lastly, it is just critical that these partnerships engage over the long term to achieve those much sought-after long-term (and sometimes intangible) impacts.

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