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ABSTRACT

Given the linkages between natural resources and social conflicts, evidence increasingly shows that successful natural resource management requires conflict mitigation and prevention. However, there may be a gap in practice between knowing what processes and tools need to be used to manage conservation conflicts and how to actually implement them. We present learning from a practice-based case study of conflict management in the Amarakaeri Communal Reserve in the Peruvian Amazon that aimed to develop natural resource governance institutions and build stakeholder capacity, including of indigenous groups, to navigate existing conflict resolution mechanisms. Through applying good practices in conservation conflict management and collaborative governance, we generated important lessons on the practical considerations involved in collaborative conservation. These lessons, while specific to our case, could be applied to a variety of protected areas facing complex social-ecological systems dynamics and wicked problems.

Introduction

Areas of rich biodiversity face multiple anthropogenic threats, and protected areas have long been a cornerstone of conservation efforts (Geldmann et al. 2013; Mascia et al. 2014). While protected areas are intended as havens for biological resources, they may also drive social conflict from competing needs and interests of various stakeholders with land and resource claims in and around them (De Pourcq et al. 2015; West, Igoe, and Brockington 2006). A rich academic literature has explored the foundations, causes, and impacts of conservation conflicts given their potentiality to undermine conservation goals and erode social and political will to support protected areas and surrounding

buffer zones (Bragagnolo et al. 2017; Daniels and Walker 2001; Madden and McQuinn 2014; Soliku and Schraml n.d); Redpath et al. 2013). Indeed, this literature has developed important guidance on good practices in conservation conflict management (Davies, Bryce, and Redpath 2013; Lecuyer et al. 2018; Redpath, Bhatia, and Young 2015; Redpath, Bhatia, and Young 2015; Redpath et al. 2018).

Collaborative conservation and governance have emerged as powerful tools for conflict management by increasing both procedural and distributive justice (Vucetich et al. 2018) or by enabling what Emerson and Nabatchi (2015) describe as *principled engagement, joint capacity,* and *shared motivation.* Theory and evidence attest to collaboration's role in conservation success (Sterling et al. 2017), yet practitioners may find it difficult to move from the understanding *which* tools and practices should be implemented to manage conservation conflicts, to *how* to actually go about implementing them. Peer-reviewed, evidence-based literature has provided some guidance on how to practice participatory approaches to conservation, though its utility can be limited given the dynamic and idiosyncratic contexts and goals in which each collaboration occurs (Davies, Bryce, and Redpath 2013; Sterling et al. 2017). Gray literature provides a larger source of practical guidance (Ajroud et al. 2017; Hammill et al. 2009; UNDPA (United Nations Department of Political Affairs) and UNEP (United Nations Environment Programme) 2015), and the rise of practice-based published articles assists academics and practitioners in merging the two bodies of knowledge (Nel et al. 2015; Weber et al. 2014).

While practitioners and academics continue to build important knowledge around good practices, persistent questions remain around how to effectively design and foster collaborative governance in each context, and how to make collaborative governance regimes more successful beyond a "toolkit" approach (Reed 2008). This includes knowledge around how to overcome the practical challenges of navigating conflict, particularly when conservation managers themselves are active stakeholders. While collaboration ideally implies an integrated group of stakeholders working together to design and implement interventions and governance regimes, in practice this process can be more transactional than deeply collaborative (Balint et al. 2011; Madden and McQuinn 2014). Too often, collaboration occurs only when decisions need to be made or new actions need to be taken, rather than in an ongoing, integrated, and continuously engaged manner. In contrast, deep collaboration involves frequent interaction leading to the creation of shared understanding, purpose, values, and activities. This lends itself to collectively generated knowledge and reflection, leading to actions challenging the status-quo (Head 2003; McIntosh and Taylor 2013).

In reality, the transactional approach may be functionally more feasible than the aspirational goal of deep collaboration, given evolving contextual dynamics of many collaborative interventions as well as the complexities of any organization's overall portfolio. Yet, in collaborative initiatives, cultural differences among stakeholders (operational culture, indigenous culture, etc.) require the deep collaboration associated with principled engagement in order to develop shared understandings of the problems and management contexts to be addressed (Deutsch, Coleman, and Marcus 2006; Dickman 2010; Madden and McQuinn 2014; Sterling et al. 2017). This is particularly salient in complex contexts like social-ecological systems, which include various dynamics operating on multiple and asynchronous time scales, with change occurring at different rates in natural, indigenous, and bureaucratic sub-systems (Fisher 2014; Walker et al. 2006).
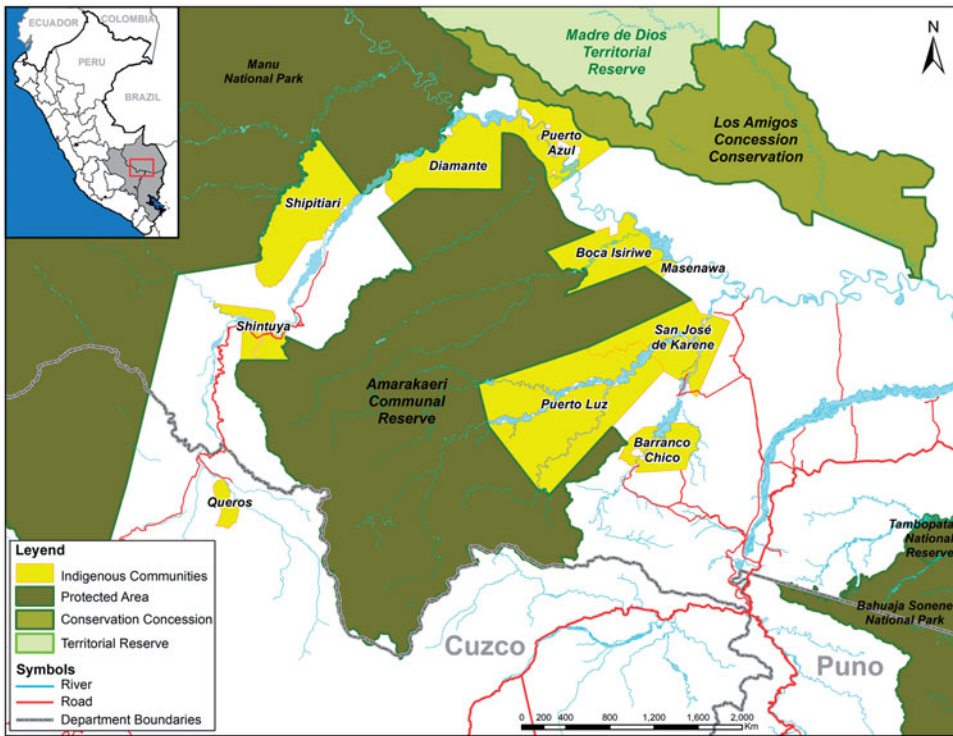
Figure 1. Map of the Amarakaeri Communal Reserve and surrounding areas in Madre de Dios, Peru, delineating its boundaries and land tenure of indigenous communities, concessions, and territorial reserves. (Produced by: Amazon Conservation Association).

Emerson and Nabatchi (2015) identify several areas of inquiry that need to be examined in order to unlock the potential and avoid the pitfalls of collaborative approaches. Key questions include, (1) How can elements that aid or frustrate collaboration be best identified? (2) What are the tools and methodologies that can advance the measurement of processes and productivity of collaborative governance? (3) How can scholars, practitioners, and students be prepared to step out of their silos and embrace deep collaboration? This practice-based knowledge article responds to these questions through the example of a 3-year pilot program aimed at improving collaborative governance of a protected area in the Amazon Basin through building stakeholder capacity in conflict and natural resource management. First, we present the project area and the social and political dynamics contributing to the complex management context. Next, we describe our intervention design and the adaptive management and learning process we implemented. We then discuss the key lessons learned from this experience for both practitioners and academics working to design tools, studies, and practices for evidence-based, collaborative conservation.

Project Area

The 402,336-hectare Amarakaeri Communal Reserve (Figure 1) was established in 2000 in the Madre de Dios Department of Peru to protect the Madre de Dios and Karene watersheds, ensure the stability of the area's forest ecosystems and biodiversity, and

safeguard the cultural heritage of the native Harakbut, Yine and Matsiguenka communities (SERNANP 2016). The reserve and surrounding buffer zone encompass a mixture of overlapping land tenure, traditional claims, and disparities in natural resource access that contributed to several conflicts in the region, including around mining (Bedoya 2004; Finer and Novoa 2017), oil and gas development (Haselip and Martínez Romera 2011), infrastructure (Gallice, Larrea-Gallegos, and Vazquez-Rowe 2017), and economic and natural resource access (Fisher, Arora, and Rhee 2018). There are several common drivers underlying many of the region's conflicts, such as issues of appropriate stakeholder consultation and ineffective inclusion of, and participation by, indigenous groups in natural resource governance (Álvarez et al. 2008; Haselip 2011).

The reserve has a complex management structure designed to integrate indigenous participation and decision-making from surrounding communities with managers from Peru's national protected areas service, *Servicio Nacional de Areas Naturales Protegidas* (SERNANP). Indigenous representatives create the management committee called the Executor of the Contract of Administration (ECA) and collaborate with SERNANP to make decisions regarding the reserve. In practice, this collaborative governance model has faced difficulties due to differences in operational culture between indigenous and state managers, community divergences on conflict issues, logistical challenges of working in a large and remote area, and financial shortfalls in funding the governance body. These barriers to effective collaboration delayed the creation, implementation, and update of reserve Master Plans that establish conservation priorities, provide management and action strategies, and delineate zoning uses.

This ineffectual governance context creates a feedback dynamic where existing drivers of conflict in the area are exacerbated, generating conflicts that present new challenges to collaborative governance (Derkye 2012; Fisher and Rucki 2017). Interventions designed to address either side of such feedbacks should yield dividends on both sides. In other words, by addressing either the conflict dynamic or the governance challenges, it should be possible to positively impact the whole social-ecological system.

Project Design

In response to the governance-conflict feedback dynamic in the region, we designed an intervention aimed at building both conflict management capacity and natural resource management capacity for stakeholders in the project area. The project arose from the intersection of three factors: escalating conflicts in the area, the expiration of the previous reserve Master Plan and the need for a new one, and the announcement of a competitive funding opportunity for conflict management and mitigation.

The project was led by a conservation organization managing protected areas and livelihoods projects in Peru and included research scientists specialized in conservation and natural resource conflict, a Peruvian non-governmental organization with experience in conflict management, and reserve managers from SERNANP and the ECA. As detailed below, the project team maintained close engagement with indigenous communities and indigenous civil society groups throughout the design, implementation, and evaluation of the project. For funding, the conservation organization interfaced with other partners to recruit and agree to a division of labor for the proposed design

Figure 2. Given the web of stakeholders (bottom left) active in the Amarakaeri Reserve, we aimed to achieve better management of social and environmental conflicts by following the project steps (descending from top right).

and subsequent work plan. The project team prepared a funding proposal based on a desk analysis of conflicts and provided an implementation methodology informed by good practice recommendations from relevant academic and practical literature cited above. The resulting project design sprung from the hypothesis that by supporting the development of effective, transparent, and adaptive governance institutions along with empowering indigenous and other stakeholder groups to engage in protected area and conflict management, actors in the reserve would have increased access to functioning institutions and possess the technical capacity to prevent and resolve conflicts over the governance and use of natural resources.

The project operated on an explicit theory of change and subsequent implementation plan (see supplemental materials) which assumed that conflicts are more likely to arise in situations where expectations are unmet, information is unavailable, stakeholder engagement is inequitable, or adverse impacts of weak governance are already occurring. Under these assumptions, the first identified step toward collaboratively identifying conflicts was to increase stakeholders' ability to understand them. By increasing stakeholders' conflict awareness and natural resource management capacity, they would be better positioned to constructively engage in collaborative conservation. Additionally, facilitating opportunities for communication and dialog was believed to encourage effective problem-solving. Based on these hypotheses, the intervention had the following programmatic objectives: (1) Increase understanding of conflict drivers among stakeholders; (2) Improve stakeholders' capacity to understand and mitigate conflict; and (3) Increase participation and communication related to conflicts through improved technical capacity for natural resource and protected area management (Figure 2).

The myriad conflicts in the area were seen as wicked problems, without a singly-defined management problem commonly shared by all stakeholders. This also meant no single intervention strategy could resolve the multiple grievances and stakeholder claims, nor satisfy all underlying needs (DeFries and Nagenda 2017; Mason et al. 2018). Any

attempts to manage conflicts create new dynamics that need to be considered in future resource and conflict management strategies. As such, the project's intervention strategy was based on a design that enabled joint problem definition through participatory conflict analysis (Nel et al. 2015). This process tailored programmatic interventions to address the specific technical gaps identified as underlying drivers of conflict; namely organizational administration, legal and technical knowledge related to road construction and mining, reserve planning and management, and environmental monitoring.

The theoretical underpinnings of this design approach were informed by the adaptive learning networks recommended by Balint et al. (2011). Adaptive learning networks, as applied in natural resource conflict management, emphasize elicitation of stakeholder preferences throughout decision-making processes, while also building technical knowledge and communicating priorities and uncertainties across actors. By establishing constant dialog even before defining the problem, and continuously incorporating feedbacks in an iterative fashion, adaptive learning networks attempt to overcome the challenges of wicked problems, build trust in processes, and create actionable strategies to move forward. In this project, the principal learning networks that were established included the core project implementation team, proximate stakeholder groups associated with reserve management, indigenous group leadership, and civil society organizations associated with conservation and indigenous advocacy.

Cognizant that any action in the system will have intended and unintended consequences, the project's adaptive management plan included both traditional monitoring and evaluation (M&E) as well as developmental evaluation to independently test the theory of change (USAID 2018). Regular M&E used traditional methods for summative evaluation of progress, focusing on process and productivity monitoring (Emerson and Nabatchi 2015). However, such approaches provide a limited understanding of what an intervention actually changes and why (Wilson-Grau 2013). To gain more sophisticated insight into outcomes and impacts, the traditional approach was supplemented with a developmental evaluation method known as "Outcome Harvesting" (Wilson-Grau and Britt 2012). Outcome Harvesting uses a participatory process within the implementation team to identify plausible outcomes, investigate them using mixed-methods, and triangulate data sources to verify reported outcomes. This enabled the team to develop a fine-grained understanding of how project activities interacted with external dynamics to produce changes in behavior among social actors and stakeholders. Together, the traditional M&E coupled with the developmental evaluation formed adaptive management and learning strategy useful for enabling the project team to understand a broader range of project outputs and outcomes than would have otherwise been measurable, and then integrate that knowledge back into the project implementation plan. Several of the M&E tools we used are included in the supplemental materials for this article, including biological and hydrological monitoring protocols, semi-structured interview guides, community/site visit questionnaires, and the developmental evaluation methodology guide.

Project implementation and results

The project was implemented over a 3-year period from November 2014 through January 2018. The implementation timeline and key milestones of the project are

included in the supplemental materials for this article, and the major outputs and results are described below.

Increasing Understanding of the Drivers of Conflict

Stakeholder mapping and conflict analysis were conducted by applying open access tools available in the *How to Guide to Conflict Sensitivity* (Conflict Sensitivity Consortium 2012) and the *Conflict Sensitive Approaches to Development, Humanitarian Assistance and Peacebuilding: Tools for Peace and Conflict Impact Assessment* (Barbolet et al. 2004). Stakeholder mapping in conflict management is a technique incorporating the participation of diverse actors, illuminating positionalities and thus potential drivers of conflict (Daniels and Walker 2001). These processes, led by the NGO partners, used a mixed method design of desk study, semi-structured interviews, focus groups, conflict mapping, and site visits. The NGO partner combined data from literature reviews and interviews with individuals directly involved in the reserve's management in order to produce a detailed review of the drivers of conflict and stakeholder relationships in the area (for the full conflict report, refer to: CARE-Peru 2017). It revealed multiple conflicts and related stakeholders, each with idiosyncratic internal structures and shifting relationships according to the conflict in question and over time.

Given the initial understanding of the region's complexity, the main challenge of the early implementation phase was for the team to learn how to work together effectively and develop common understandings of problems and the project theory of change, despite the broad range of organizational, indigenous, and ethnic backgrounds represented. Each of the institutions involved was accustomed to working independently and had complicated social relationships among them. In order for the implementation team to engage in deep collaboration, the project went through several rounds of pausing implementation to revise methods, practices, and procedures to ensure that the process aligned with the needs and organizational culture of each partner. This approach was important for generating the sort of learning network described by Balint et al. (2011). Lessons from this are outlined in the final section of this paper.

This participatory process enabled the project team to understand how social dynamics have contributed to, and have been shaped by, environmental degradation and natural resource management practices. Through an iterative socialization process that involved a detailed review and discussion of findings, we validated the results of the analysis through workshops with members of indigenous organizations and other stakeholders. As a result, the stakeholders and project team jointly identified a few key areas that stakeholders were able to and interested in addressing, including mining conflicts, road and infrastructure development, and governance capacity. In order to ensure that results would be accessible and available to stakeholders in the region, the findings of the participatory conflict analysis were published in print and online (CARE-Peru 2017). We convened recurring engagement around the outputs of the analysis and subsequent programing through weekly core project partner meetings, monthly key stakeholder meetings (SERNANP and indigenous civil society organizations), occasional site visits to indigenous communities, and ad hoc meetings with regional and municipal government actors. Recurring meetings meant key stakeholders were kept aware of

conflicts and associated needs in the reserve in order to maintain the salience of these ideas when planning conflict-related interventions. This again was important for creating learning networks among the key stakeholders and project team.

Improving the Capacity of Stakeholders to Manage and Mitigate Conflict

From the initial conflict analysis, it was apparent that the lack of legal and technical knowledge had intensified tensions around road construction and hydrocarbon conflicts among indigenous leaders and government agencies. Common drivers in each of the conflicts were gaps in stakeholder capacity to analyze and utilize information in decision-making pertaining to: knowledge of legal rights for indigenous communities, available conflict resolution institutions in the area, rights and responsibilities of various stakeholders related to natural resource use and governance, and technical aspects of the resources in question, ranging from safe and legal mining to assessing and monitoring impacts on biodiversity and water quality. Because these gaps were highly specific, we recruited external expertise such as academics, NGOs, legal consultants, and other service providers to develop carefully crafted training modules tailored to various stakeholders' needs and learning styles, accounting for specific cultural dynamics of the indigenous communities and as well as the organizational culture and style of public officials. These capacity-building materials are publicly available online (ACCA 2016a).

Importantly, the design, format, and content of training were co-created with stakeholder representatives. As prior conflict analysis showed that insufficient and incomplete processes of community consultation were consistent drivers of conflict in the region; thus, our elicitive and deliberative approach sought to model a more complete consultative process and build a more principled engagement. Rather than *prescriptive*, the approach taken by the project was *elicitive* and *deliberative*, meaning that needs and themes were elicited from participatory engagement, and actual training and capacity building plans were co-designed in partnership with representatives of stakeholder groups (Nel et al. 2015).

For instance, the indigenous capacity development plans developed jointly with indigenous leaders focused on four themes: indigenous legislation, indigenous leadership, conflict management in communal reserves, and natural resources management. These capacity building plans were printed in Spanish and in four different indigenous languages (Harakbut, Matsiguenka, Yine, and Wachiperi). They were developed within a multicultural approach and widely distributed throughout local indigenous communities. They are publicly available online (ACCA 2016b, 2016c, 2016d, 2016e).

While capacity building for indigenous leaders focused on legislative proficiencies surrounding hydrocarbon extraction and reserve management, training for public municipal and regional officials focused on managing conflicts and natural resources. Two additional sessions of training events on territorial management and social-environmental conflict resolution skills were offered to regional government officials, to national entities associated with the reserve, and to the reserve's five overlapping municipalities. These were conducted in partnership with other NGOs in the area who focus explicitly on legal issues and training.

Training sessions gave stakeholders the ability to conduct, expand, and reassess conflict analyses iteratively to maintain an accurate awareness of shifting future contexts. For example, this initiative launched a pilot monitoring program with communities and local authorities to collect and track environmental data in the area. This program collected baseline information on water quality and biodiversity, provided hands-on experience to indigenous communities, and generated knowledge and lessons shared through annual technical forums with stakeholders working within the reserve in a process of knowledge exchange. Tools for biological and hydrological monitoring are included in the supplemental materials.

Increasing Participation and Communication Related to Conflict Management and Mitigation

From the initial conflict analysis, the project team realized that many of the macroeconomic and legislative factors contributing to conflicts in the area, including the demand for mineral and timber resources and overlapping legal frameworks, were beyond the range of project influence. Thus, of the main conflicts identified in the area, stakeholders jointly agreed to dedicate remaining project activities to two of the identified conflicts under the project's scope: (1) illegal mining formalization, and (2) new road construction in the area. Both conflicts took place in the buffer zone of the reserve, and project funding enabled team members to participate in deliberative processes where stakeholders could jointly discuss technical information, general and specific needs, and interests, and collectively design short- and long-term solutions. Dialog spaces took various forms in order to engage as many stakeholders as possible in culturally and politically sensitive ways. For example, the team held public dialogs in each indigenous community multiple times to introduce the Master Plan (SERNANP 2016), discuss conflict resolution training and biological monitoring, and listen to community concerns regarding issues in the conflict. The team also participated in pan-Amazon conferences and exchanges, in regional political negotiations on mining and road construction, and sponsored local municipal events aimed at awareness raising.

Such spaces for dialog proved to be key tools for building relationships, leveraging knowledge, coordinating efforts, and proposing solutions to complex issues. However, challenging political circumstances added a layer of complexity to project implementation. The dominant political narratives in Madre de Dios had become increasingly pro-mining and supportive of road construction, denouncing conservation as an obstacle to development. Despite this less favorable political context, we experienced a strengthening of partnerships with various stakeholders throughout the project implementation because of frequent, sustained engagement, evidenced by the participation of certain stakeholder groups in project activities who had expressed anti-conservation sentiment in the past (CARE-Peru 2017). Throughout the project, there was an increasing level of engagement across multiple stakeholder groups who had previously been loosely aligned or in conflict. For instance, the municipal government in one of the most-impacted areas from illegal mining participated in our training sessions for public officials. In the past, this municipality had been difficult to engage, but this intervention seemingly enabled a stronger and more constructive relationship with the municipal government.

Practice-Based Knowledge and Lessons Learned

As described in the introduction, this case study is intended to build practice-based knowledge around *how* to implement good practices in collaborative conservation in a complex context. Our project provides useful insight into the application of recommendations in both the gray and scientific literature in three aspects. First, it demonstrates a method for designing and implementing a collaborative conservation project that is informed by good practice theory and provides a roadmap to increasing collaboration through learning networks. Second, the case study includes references to supplemental materials that provide useful and accessible data for stakeholders in the area and tools and materials that can be utilized by other practitioners facing similar conservation problems. Third, by merging traditional M&E with developmental evaluation techniques, it demonstrates a process for building adaptive management capacity into project design and thereby encouraging a less siloed approach to collaborative conservation. Three important lessons emerged from our experiences outlined above that we believe are useful for conservation practitioners and protected area managers in similar complex contexts.

Lesson 1: Principled Engagement

A foundational principle for this project was the importance of project design in partnership with stakeholders and joint implementation of programmatic activities to build trust and cooperation among actors in the area. Initial conflict analysis demonstrated that infrequent contact with indigenous reserve managers and incomplete community consultation was a source of misunderstanding related to reserve management. The project was able to raise funds to overcome the logistical constraints that had previously impeded such consultation, and further incorporated community stakeholders as critical decision-makers as members of the project team. Moreover, emphasizing deep collaboration created shared motivation within the project team, including important stakeholders in the reserve, to conduct more principled engagement in the socialization of the Master Plan (see supplemental materials). Encouraging the normalization of cooperative interaction among stakeholders was not only imperative to addressing existing conflicts, but also helped build a framework for addressing contentious issues in the future.

　　While this alone is not novel, we found that the ideas of principled engagement, consultation, and collaborative interaction need to begin inside the project team before interfacing with other stakeholders. Each of the partners brought its own history, organizational culture, assumptions, and agendas to the project. Rather than seamless integration, the project team spent several months designing and redesigning the project framework in order to co-create a set of strategies that aligned with each partners' needs, experience, and agendas (Nel et al. 2015). There is a tendency inside multi-party project teams to divide labor and work independently. However, the project team found that, while efficient for accomplishing tasks, such a transactional approach can impede trust-building and lead to internal tensions that then later need to be resolved and mitigated. As discussed earlier, the social-ecological system of the Amarakaeri Communal Reserve is complex and the resulting governance context resembles a wicked problem, meaning that each stakeholder operates on a unique understanding of the governance

problems to be managed. Moreover, any change in the system creates new dynamics that need to be addressed, which are in turn understood idiosyncratically. Through trial-and-error, our team learned that unless constant dialog and reflection were maintained, our own internal understandings of the context would begin to diverge and give rise to discrepancies around what we were trying to achieve and the appropriate strategy for accomplishing project goals. As the project team became more closely integrated, we moved to a model of co-creation and internal dialog across the life cycle of various activities, which enabled us to identify such points of tension early and creatively problem-solve as a team. Rather than taking partnership for granted, this needs to be actively built across a project lifecycle.

Lesson 2: Adapting to a Dynamic Context

As conservation practitioners know, local political, social, economic and ecological contexts are highly dynamic and changing across a project life cycle. Likewise, conservation organizations and protected area management bodies are typically simultaneously focused on multiple projects. Dynamic contexts mean that adaptive management is critically important to project success. However, the multiple, and often competing, priorities for each partner organization as well as for each external stakeholder limit the time and resources that a well-intentioned collaborative governance project can devote to collect, process, and integrate monitoring data back into project design and implementation. This is a particularly important point, as the timelines and priorities of each partner may not match. For instance, our team had to navigate multiple, asynchronous timelines: the funder operated on a timeframe with a singular focus on the outputs of this project, whereas the internal team needed to negotiate timelines between multiple organizations with multiple priorities each, and the indigenous stakeholders operated along with a deliberative and highly participatory decision-making structure. We found that having a combined an annual plan and budget agreed amongst partners with pre-determined meetings dates, while also making bi-weekly or monthly short-term plans to adapt to new agendas, can aid in balancing both rigid (external) and adaptive (internal) timeframes. This project brought essential funds to SERNANP and ECA activities that had previously been deprioritized. By agreeing in advance to a detailed, multi-year budget with the funding organization, there was little room to postpone activities, and high incentive among implementers to complete the project in order to be able to spend the project resources lest they are forfeited.

Despite the funding incentives, dynamic and asynchronous organizational priorities made the feedback and learning processes of adaptive management very challenging. The project was designed to capture and integrate near real-time monitoring data into programing through elicitive and deliberative design, a traditional M&E, and additional developmental evaluation. Flexibility, while prioritizing participation and stakeholder input in the design and execution of project activities, was critical to illuminating conflicting agendas and priorities, and jointly developing a strategy that worked for each partner.

Nevertheless, frequent, accessible, and inclusive dialog around data and analysis also entailed higher required time investments from each group. Especially in the dynamic

context of a protected area facing conflicts, it can be extremely difficult for stakeholders to maintain such investment and involvement. We found that it is crucial to collect data in ways that various stakeholders understand and trust, and to collect data that stakeholders view as relevant to their own contexts (Sterling et al. 2017).

Lesson 3: Designing for Lasting Impact

Interviews during the developmental evaluation with project implementers and partners consistently raised the issue of securing additional funding as a necessary pre-requisite to sustain project activities and outcomes beyond the initial project. After the end of project funding, local stakeholders and managers of the reserve must now generate other funding to continue the work that the project started including replicating the project's pilot models for capacity building and providing spaces for dialogs and other meetings. Furthermore, sustaining the initial enhanced capacity depends on the various local counterparts designing strategies to institutionalize knowledge and capacity to manage conflicts, natural resources, and protected areas.

One of the project's strongest attributes was the use of a nontraditional funding vehicle to enhance collaborative conservation. The grant that funded the project was explicitly intended for conflict mitigation, not conservation management. However, because the linkages between collaborative conservation and conflict management are so direct, the project was able to secure funding that enabled a team with niche expertise in conservation, indigenous representation, protected area management, and conflict management to design and implement a project that utilized the principles of conflict management to strengthen conservation efforts. Furthermore, we attempted to build institutional capacity within partner and stakeholder organizations as well as provide direct experience in project management and conflict engagement. Both enhanced capacity and practical experience elevate the potential for these organizations to tap into a wider range of traditional and nontraditional funding opportunities.

Conclusion

There are three central points that this intervention illuminates corresponding to the key issues presented by Emerson and Nabatchi (2015) around collaborative conservation. On the question of the factors that help or hinder collaborative dynamics, this case study illustrates that principled engagement requires deep, non-transactional collaboration among core stakeholders. Across project implementation, we utilized the strengths and expertise of each partner organization to manage specific processes but learned early-on that the deep collaboration associated with principled engagement was just as crucial inside the core team as it was in working with external stakeholders.

Regarding methods and tools for evaluation, we found that a mixed-method approach to M&E that utilized traditional logical frameworks as well as developmental evaluation methods was very useful for capturing information on both performance and process. While the more traditional tools of logical frameworks and biodiversity assessments enabled us to collect the performance level data that Emerson and Nabatchi (2015, Ch. 9) discuss, our understanding of performance was strengthened when coupled with

Outcome Harvesting methods. This developmental evaluation provided a nuanced understanding of how the project team, project participants, and the wider operating context were being influenced and impacted by the intervention, enabling adaptation at various points across project implementation. Importantly, the evaluation and associated tools were developed and conducted entirely in Spanish to avoid the complications of translation between multiple languages and the potential for important information to be lost or misunderstood. While there are standard techniques available to mitigate such risks, the project team operated in the native language of the majority of the core project team and commonly spoken in the region.

Finally, with regard to breaking down silos and enabling scholars and practitioners to work together to enhance collaborative governance, we highlight the balance required between the rigor sought after by scholars and the adaptivity that dynamic contexts necessitate. While researchers and academics require a more controlled process to test and refine hypotheses, the nature of a wicked problem or complex social-ecological system makes that control extremely difficult in practice. In order to balance between adaptivity and rigor, we had an explicit theory of change that guided the intervention at the strategic level and had joint problem definition and adaptive management built into the operational design and implementation phases. This allowed us to negotiate the needs of indigenous reserve managers, civil society partners, and academic partners to co-create implementation plans addressing distinct agendas.

References

ACA. 2017. Strengthening indigenous capacity in conflict resolution and sustainable resource management in the lot 76 hydrocarbon concession and Amarakaeri Communal Reserve in Madre de Dios Department, Peru (revised): Final outcome evaluation. Produced for USAID under cooperative agreement AID-527-A-14-00006, The Amazon Conservation Association, Washington, DC.

ACCA. 2016a. Material sobre contenido para la capacitacion de funcionarios de gobiernos locales y el regional de Madre de Dios vinulcados a la Reserva Comunal Amarakaeri. [Training materials for capacity building workshops local and regional government personnel in the Department of Madre de Dios who are associated with the Amarakaeri Communal Reserve], Conservacion Amazonica, Washington, DC. https://www.scribd.com/lists/21765008/Proyecto-Amarakaeri (accessed on May 21, 2019).

ACCA. 2016b. Manuales de contenidos de capacitacion para indigenas – Version Espanol. [Training manual for capacity building workshops for indigenous communities: Spanish version] https://www.scribd.com/lists/21765008/Proyecto-Amarakaeri (accessed on May 21, 2019).

ACCA. 2016c. Manuales de contenidos de capacitacion para indigenas – Version Matsiguenka. [Training manual for capacity building workshops for indigenous communities: Matsiguenka version] https://www.scribd.com/lists/21765008/Proyecto-Amarakaeri (accessed on May 21, 2019).

ACCA. 2016d. Manuales de contenidos de capacitacion para indigenas – Version Yine. [Training manual for capacity building workshops for indigenous communities: Yine version] https://www.scribd.com/lists/21765008/Proyecto-Amarakaeri (accessed on May 21, 2019).

ACCA. 2016e. Manuales de contenidos de capacitacion para indigenas – Version Harakbut. [Training manual for capacity building workshops for indigenous communities: Harakbut version] https://www.scribd.com/lists/21765008/Proyecto-Amarakaeri (accessed on May 21, 2019).

Ajroud, B., N. Al-Zyoud, L. Cardona, J. Edmond, D. Pavitt, and A. Woomer. 2017. *Environmental peacebuilding training manual*. Arlington, VA.: Conservation International.

Álvarez, A., J. Alca, M. Galvin, and A. García. 2008. The difficult invention of participation in the Amarakaeri Communal Reserve, Peru. In *People, protected areas and global change: Participatory conservation in latin america, africa, asia and Europe. Perspectives of the swiss national Centre of competence in research (NCCR) North-South*, ed. M. Galvin and T. Haller. Bern, Switzerland: Geographica Bernensia.

Balint, P. J., R. E. Stewart, A. Desai, and L. C. Walters. 2011. *Wicked environmental problems: Managing uncertainty and conflict*. Washington, DC.: Island Press.

Barbolet, A., R. Goldwyn, M. Lange, C. Moyroud, A. Sherriff, and L. C. Werleigh. 2004. Conflict sensitive approaches to development, humanitarian assistance and peacebuilding: Tools for peace and conflict impact assessment. Chapter 2, pp 1-40. *Saferworld* http://local.conflictsensitivity.org/wp-content/uploads/2015/05/Conflict-Sensitive-Approaches-to-Development-Humanitarian-Assistance-and-Peacebuilding-Resource-Pack.pdf.

Bedoya, M. 2004. Gold mining and indigenous conflict in Peru: Lessons from the Amarakaeri. In *Beyond silencing of the guns*, ed. C.K. Roy, V. Tauli-Corpuz and A. Romero-Medina. Baguio City, Philippines: Tebtebba Foundation.

Bragagnolo, C., R. Correia, A. C. M. Malhado, M. de Marins, and R. J. Ladle. 2017. Understanding non-compliance: Local people's perceptions of natural resource exploitation inside two national parks in northeast Brazil. *Journal for Nature Conservation* 40:64–76. doi: 10.1016/j.jnc.2017.09.006.

CARE-Peru. 2017. Informe de Conflictos Socioambientales de la Reserva Comunal Amarakaeri. [Report on Social and Environmental Conflicts of the Amarakaeri Communal Reserve] https://www.scribd.com/document/363654076/Informe-de-Conflictos-Socioambientales-en-la-Reserva-Comunal-Amarakaeri (accessed on May 21, 2019).

Conflict Sensitivity Consortium. 2012. How to guide to conflict sensitivity. http://local.conflictsensitivity.org/wp-content/uploads/2015/04/6602_HowToGuide_CSF_WEB_3.pdf (accessed on May 21, 2019).

Daniels, S. E., and G. B. Walker. 2001. *Working through environmental conflict: The collaborative learning approach*. Westport, CT: Praeger.

Davies, A. L., R. Bryce, and S. M. Redpath. 2013. Use of multicriteria decision analysis to address conservation conflicts. *Conservation Biology* 27 (5):1–9. doi: 10.1111/cobi.12090.

De Pourcq, K., E. Thomas, B. Arts, A. Vranckx, T. Léon-Sicard, and P. Van Damme. 2015. Conflict in protected areas: Who Says co-management does not work? *PLoS One* 10(12): e0144943. doi: 10.1371/journal.pone.0144943.

Defries, R., and H. Nagendra. 2017. Ecosystem management as a wicked problem. *Science* 356 (6335):265–70. doi: 10.1126/science.aal1950.

Derkye, M. A. A. 2012. *Fighting over forest: Interactive governance of conflicts over forest and tree resources in Ghana's high forest zone*. Oxfordshire, UK: African Studies Centre.

Deutsch, M., P. T. Coleman, and E. C. Marcus. 2006. *The handbook of conflict resolution: Theory and practice*. San Francisco, LA: Jossey-Bass.

Dickman, A. J. 2010. Complexities of conflict: the importance of considering social factors for effectively resolving human–wildlife conflict. *Animal Conservation* 13(5):458–66. doi: 10.1111/j.1469-1795.2010.00368.x.

Emerson, K., and T. Nabatchi. 2015. *Collaborative governance regimes*. Washington, DC.: Georgetown University Press.

Finer, M., and S. Novoa. 2017. MAAP #71: Gold mining threatens the Amarakaeri Communal Reserve, again. https://maaproject.org/2017/amarakaeri_cusco/ (accessed on May 21, 2019).

Fisher, J. 2014. Managing environmental conflict. In *The handbook of conflict resolution: Theory and practice*, ed. M. Deutsch, P. Coleman, and E. Marcus. 3rd ed. San Francisco, LA: Jossey-Bass.

Fisher, J., and K. Rucki. 2017. Re-conceptualizing the science of sustainability: A dynamical systems approach to understanding the nexus of conflict, development and the environment. *Sustainable Development* 25(4):267–75. doi: 10.1002/sd.1656.

Fisher, J., P. Arora, and S. Rhee. 2018. Conserving tropical forests: Can sustainable livelihoods outperform artisanal or informal mining? *Sustainability* 10(8):2586. doi: 10.3390/su10082586.

Gallice, G. R., G. Larrea-Gallegos, and I. Vazquez-Rowe. 2017. The threat of road expansion in the Peruvian Amazon. *Oryx* 53 (2): 1–9. doi: 10.1017/S0030605317000412.

Geldmann, J., M. Barnes, L. Coad, I. D. Craigie, M. Hockings, and N. D. Burgess. 2013. Effectiveness of terrestrial protected areas in reducing habitat loss and population declines. *Biological Conservation* 161:230–8. doi: 10.1016/j.biocon.2013.02.018.

Hammill, A., A. Crawford, R. Craig, R. Malpas, and R. Matthew. 2009. *Conflict-sensitive conservation practitioners' manual*. Winnipeg, MB: International Institute for Sustainable Development (IISD). http://www.iisd.org/pdf/2009/csc_manual.pdf.

Haselip, J. 2011. Transparency, consultation and conflict: Assessing the micro-level risks surrounding the drive to develop Peru's Amazonian oil and gas resources. *Natural Resources Forum* 35(4):283–92. doi: 10.1111/j.1477-8947.2011.01404.x.

Haselip, J., and B. Martínez Romera. 2011. Peru's Amazonian oil and gas industry: risks, interests and the politics of grievance surrounding the development of block 76, Madre de Dios. *International Development Planning Review* 33(1):1–26. doi: 10.3828/idpr.2011.2.

Head, G. 2003. Effective collaboration: Deep collaboration as an essential element of the learning process. *Journal of Educational Inquiry* 4(2):47–62.

Lecuyer, L., R. M. White, B. Schmook, and S. Calmé. 2018. Building on common ground to address biodiversity conflicts and foster collaboration in environmental management. *Journal of Environmental Management* 220:217–26. doi: 10.1016/j.jenvman.2018.05.014.

Madden, F., and B. McQuinn. 2014. Conservation's blind spot: The case for conflict transformation in wildlife conservation. *Biological Conservation* 178:97–106. doi: 10.1016/j.biocon.2014.07.015.

Mascia, M. B., S. Pailler, R. Krithivasan, V. Roshchanka, D. Burns, M. J. Mlotha, D. R. Murray, and N. Peng. 2014. Protected area downgrading, downsizing, and degazettement (PADDD) in Africa, Asia, and Latin America and the Caribbean, 1900–2010. *Biological Conservation* 169: 355–61. doi: 10.1016/j.biocon.2013.11.021.

Mason, T. H. E., C. R. J. Pollard, D. Chimalakonda, A. M. Guerrero, C. Kerr-Smith, S. A. G. Milheiras, M. Roberts, P. R. Ngafack, and N. Bunnefeld. 2018. Wicked conflict: Using wicked problem thinking for holistic management of conservation conflict. *Conservation Letters* 11(6): e12460. doi: 10.1111/conl.12460.

McIntosh, B. S., and A. Taylor. 2013. Developing T-shaped water professionals: Reflections on a framework for building capacity for innovation through collaboration, learning and leadership. *Water Policy* 15(S2):42–60. doi: 10.2166/wp.2013.011.

Nel, J. L., D. J. Roux, A. Driver, L. Hill, A. C. Maherry, K. Snaddon, C. R. Petersen, L. B. Smith-Adao, H. Van Deventer, and B. Reyers. 2015. Knowledge co-production and boundary work to promote implementation of conservation plans. *Conservation Biology* 00(0):1–13. doi: 10.1111/cobi.12560.

Redpath, S. M., S. Bhatia, and J. Young. 2015. Tilting at wildlife: Reconsidering human–wildlife conflict. *Oryx* 49(2):222–5. doi: 10.1017/S0030605314000799.

Redpath, S. M., R. J. Gutiérrez, K. A. Wood, and J. Young. 2015. *Conflicts in conservation: Navigating towards solutions, ecological reviews series*. Cambridge, UK: Cambridge University Press.

Redpath, S. M., A. Keane, H. Andrén, Z. Baynham-Herd, N. Bunnefeld, A. B. Duthie, J. Frank, C. A. Garcia, J. Månsson, L. Nilsson, et al. 2018. Games as tools to address conservation conflicts. *Trends in Ecology and Evolution* 33(6):415–26. doi: 10.1016/j.tree.2018.03.005.

Redpath, S. M., J. Young, A. Evely, W. M. Adams, W. J. Sutherland, A. Whitehouse, A. Amar, R. A. Lambert, J. D. C. Linnell, A. Watt, et al. 2013. Understanding and managing conservation conflicts. *Trends in Ecology and Evolution* 28(2):100–9. doi: 10.1016/j.tree.2012.08.021.

Reed, M. S. 2008. Stakeholder participation for environmental management: A literature review. *Biological Conservation* 141(10):2417–31. doi: 10.1016/j.biocon.2008.07.014.

SERNANP. 2016. Plan Maestro de la Reserva Comunal Amarakaeri, 2016-2020. Lima, Peru. http://old.sernanp.gob.pe/planes-maestros (accessed on May 21, 2019).

Soliku, O., and U. Schraml. (n.d.). From conflict to collaboration: The contribution of co-management in mitigating conflicts in Mole National Park, Ghana. *Oryx*, 1–11. doi: 10.1017/s0030605318000285.

Sterling, E. J., E. Betley, A. Sigouin, A. Gomez, A. Toomey, G. Cullman, C. Malone, A. Pekor, F. Arengo, M. Blair, et al. 2017. Assessing the evidence for stakeholder engagement in biodiversity conservation. *Biological Conservation* 209:159–71. doi: 10.1016/j.biocon.2017.02.008.

UNDPA (United Nations Department of Political Affairs) and UNEP (United Nations Environment Programme). 2015. A guide for mediation practitioners natural resources and conflict. http://postconflict.unep.ch/publications/UNDPA_UNEP_NRC_Mediation_full.pdf (accessed on May 21, 2019).

USAID 2018. Program Cycle Discussion Note: Complexity Aware Monitoring. USAID Collaborative Learning Lab. https://usaidlearninglab.org/sites/default/files/resource/files/cleared_dn_complexity-aware_monitoring.pdf.

Vucetich, J. A., D. Burnham, E. A. Macdonald, J. T. Bruskotter, S. Marchini, A. Zimmermann, and D. W. Macdonald. 2018. Just conservation: What is it and should we pursue it? *Biological Conservation* 221:23–33. doi: 10.1016/j.biocon.2018.02.022.

Walker, B., L. Gunderson, A. Kinzig, C. Folke, S. Carpenter, and L. Schultz. 2006. A handful of heuristics and some propositions for understanding resilience in social-ecological systems. *Ecology and Society* 11(1):13.

Weber, E. P., J. M. Belsky, D. Lach, and A. S. Cheng. 2014. The value of practice-based knowledge. *Society and Natural Resources* 27(10):1074–88. doi: 10.1080/08941920.2014.919168.

West, P., J. Igoe, and D. Brockington. 2006. Parks and peoples: The social impact of protected areas. *Annual Review of Anthropology* 35(1):251–77. doi: 10.1146/annurev.anthro.35.081705.123308.

Wilson-Grau, R. 2013. Performance monitoring's three blind spots. In *USAID complexity-aware monitoring discovery launch*. Washington, DC.: USAID Learning Lab. https://usaidlearninglab.org/sites/default/files/resource/files/MEs-3blindspots-091714.pdf.

Wilson-Grau, R., and H. Britt. 2012. *Outcome harvesting*. New York, NY: Ford Foundation MENA Office. https://usaidlearninglab.org/sites/default/files/resource/files/Outome%20Harvesting%20Brief%20FINAL%202012-05-2-1.pdf.