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Community in a "Conflict System": A Case Study of Facilitating Conflict in Nature Conservation

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Abstract

Forest conservation has long faced conflicts between traditionally-living indigenous peoples and other more modern stakeholders. Often such conflicts are rooted in differences between the perceived interests of indigenous peoples and other stakeholders, or in ineffective negotiations due to a power-disparity between involved stakeholders. Thus far conservationists have tried to overcome such conflicts by creating different types of collaborative management systems with indigenous peoples. Although co-management appears a good solution to guide all stakeholders towards a conservation target, in practice few such arrangements have proven successful. The co-management model offers a greater potential for success when it is approached as a conflict-prone system. This paper presents a methodology for aligning the interests of different stakeholders during the creation of a co-management system in Suriname. Using the Model for the Analysis of Potential Conflict in Development (MAPCID), we demonstrate that timely identification of conflict and balancing of power made the system preemptive and adaptive, two factors essential to the successful creation of the South Suriname Conservation Corridor.

Introduction

Forest conservation these days is increasingly plagued with conflict. The reason for the present high level of conflict is found in the very nature of the forest itself. Forests are comprised of complete ecosystems defined within a legal framework of ownership and thus are difficult to divide. Additionally, in many cases forests are strongly linked to people's identities and

livelihoods. Together these characteristics create a complex negotiation environment that commonly ends in a zero-sum outcome: the stakeholder with the most power wins and the low-power holder loses (Humpreys, 2005; Jones-Walters & Cil, 2011; Redpath et al., 2013).

Local communities, such as indigenous peoples, typically are low-power holders. Most indigenous groups possess relatively little western knowledge and thus have limited capacity to participate in and influence scientific and policy discussions. Historically, these people have been living in small forest-dependent communities far from mainstream society. With the introduction of western models for forest conservation, indigenous people have been impacted across many levels, sustaining economic losses, social instability, and environmental degradation (Carlsson & Berkes, 2005).

The potential for resolving forest conflict lies in creating a form of collaboration between the different stakeholders. A commonly-accepted idea is to develop institutions and practices for stakeholders to negotiate their interests. One popular collaboration model is co-management, in which stakeholders are involved in a continuous process of negotiation and decision-making over a resource targeted for protection (Armitage, Berkes & Doubleday., 2007). This practical model has been tried in several conservation undertakings where there is a need for resource management across multiple levels of organization (local, national and/or international). However, whenever something changes in the socio-economic or political setting, co-management agreements become vulnerable, necessitating re-negotiation to maintain alignment of the frequently changing interests of each stakeholder (Carlsson & Berkes, 2005).

In practice, co-management systems facilitate the creation of wide goals to which each stakeholder can commit. For example, by setting a wide goal of conserving an area, governments that typically aim to promote economic development and environmental protection can align with local forest users, who themselves are more interested in balancing their social system with the forest. Quite often alignment doesn't seem to work, and the co-management arrangement fails (De Pourcq et al., 2015). The main cause of a breakdown is that stakeholders have divergent, sometimes opposing, views about the forest. Absent a system for managing this gap, stakeholders may clash and end up in a conflict.

A second reason for the failure of co-management is the unwillingness of high-power holders to share power with stakeholders having little power, such as the indigenous peoples. These remotely located communities generally lack a western-oriented mindset to function within the co-management framework (Berkes, 2009; Gritten, Mola-Yudego, Delgado-Matas, & Kortelainen, 2013). After intensive indigenous advocacy, indigenous communities in 2003 were given rights to ensure adequate participation in co-management. In response, a new paradigm developed to respect the rights of indigenous peoples and local communities in protected areas (Davis & Kandel n.d.). Said so-called "rights-based" approach argues for a permission process before conservation actions are taken in forests inhabited by indigenous peoples.

Co-management systems should create enough room for all stakeholders to meaningfully participate. Generally, it is assumed that stakeholders have the ability to align interests with others when there are greater levels of participation (Chambers, 1997). This was demonstrated by De Pourcq and colleagues in a study of seven protected areas in Colombia (De Pourcq et al., 2015). These scholars showed that enabling participation of local groups was a way to prevent conflict and initiate collaboration. However, in cases featuring structural inequality or violation of human rights, it has proved difficult to align the interests of stakeholders and create a well-functioning co-management system (Redpath et al., 2013). Thus, another factor has emerged as

crucial to the success of co-management systems: maintaining a healthy power balance between the stakeholders.

Today scholars argue for bridging the power gap by opening space for mutual learning. This type of learning "accounts for social context (e.g. conflict and power imbalances), pluralism, critical reflection, adaptive capacity, systems thinking or interconnectedness, a diversity of approaches to conservation, and paradigm shifts" (Armitage et al., 2008, p. 98). To incorporate the learning dimension, the concept of co-management evolved into adaptive co-management. Here learning becomes a central activity with specific objectives, methods, and projected outcomes. Adaptive co-management holds on to "innovative strategies that explicitly foster collaboration and learning are emerging and contribute to trust building and the formation of social networks of researchers, communities and policy makers" (Armitage et al., 2008, p. 95). Setting up such a model requires stakeholders to alter their mind-sets; until now, success stories remain scarce.

Internal factors that contribute to adaptive co-management are the existing networks between stakeholders and the individual assets and functions they bring into the co-management arrangement (Plummer, 2009). Although these factors can portray a static view of the stakeholders, there exists a constant dynamic between them, which contributes to the success or failure of co-management. There are only a few studies available that detail the factors that may drive or inhibit stakeholders on an individual level (Schröter et al., 2014). This paper contributes to this literature gap by studying the interaction between indigenous communities and more powerful, western-oriented stakeholders in the establishment of a co-management system for the tropical forests of Suriname.

This paper presents a novel conflict-resolution approach to studying co-management. It begins with a brief introduction about forest conflict and how it has been conventionally studied. This is followed by the application of the conflict resolution approach in the case of Suriname, including an explanation of the conflicts and the interventions needed to resolve them. The paper's central argument posits a strong case for community-based conservation as a fluid and dynamic conflict-prone process as opposed to static steps and outcome.

The Context of Forest Conservation in Suriname

Understanding the difficulty of creating effective co-management systems, the government of Suriname together with international conservation non-governmental organizations (NGOs) initiated a co-management arrangement for the protection of forests, called the South Suriname Conservation Corridor (SSCC). Suriname is located along the northeastern Atlantic coast of South America; approximately 93 percent of its total land area is covered with forest, making it is the greenest country on earth in terms of amount of forest per inhabitant (Republic of Suriname, 2015).

The South Suriname region is comprised of vast, mostly untouched, tropical rainforest. In addition to high plant and animal diversity, the area features important water sources; it is categorized globally as having a relatively high amount of renewable water resources (World Wildlife Fund Guianas, 2012). Along the rivers in the forest live the Trio and Wayana indigenous peoples, in nine permanent settlements ranging from 10 to 750 members. While these traditional peoples are highly dependent on the forest for basic needs such as food, water, shelter, medicines, and building materials, there exists an increasing dependency on western goods. Both

Trio and Wayana live quite primitively in self-made huts with thatched leaf roofs, without running water or permanent electricity.

Since the 1950s, the Suriname Government has been on a mission to sustainably manage the country's forests. Until now, however, indigenous peoples' conservation efforts are carefully mentioned rather than fully supported in official settings, principally because the Government still positions itself as the sole authority responsible for forest management. This perception stems from the Government's ownership over all land, rendering Suriname the only country in South America withholding indigenous peoples' collective right to land use or ownership. The lack of land rights has been the main source of conflict between indigenous people and the Government (Haalboom, 2009).

The Government has another challenge in lining up its approximately 600,000 inhabitants for forest conservation. Suriname's multicultural society consists of over 15 ethnic groups originally coming from Europe, Asia, Africa, and the Middle-East. Maintaining balance between these groups has retained a peaceful society, one often showcased as an example to the world. It is common practice for the Government to carefully weigh every decision. When there is risk for jeopardizing the peace, the Government stalls decision-making and engages in further exploration and dialogue until an acceptable solution is found. This "peace-keeping" practice is the main reason why the land-rights issue has been unresolved.

The Government views forests primarily as a common good for biodiversity protection. Thus, concerns such as safeguarding headwaters and watersheds, mitigating climate change, and preserving indigenous cultures and livelihoods, all fall outside the Government's conventional thinking frame. Over the past five years the Government has gradually embraced such a multifunctional view of the forest; nonetheless, current forest governance law limits the Government's ability to utilize the many functions of the forest. Co-management is treated as just one experiment among others that might reveal more effective ways to manage forest resources.

Methods

Scholars from the fields of forestry, conservation, and environmental sciences traditionally study co-management systems. These scholars try to develop models to capture both the identified conservation goals and the socio-ecological complexity of the location where the co-management model should become functional. Promotion of mutual learning, legitimizing multiple types of knowledge, and linking goals at different scales are among the attempts to align stakeholders and "update" conservation science (Armitage et al., 2008; Gavin et al., 2015; Gritten et al., 2013; Scholtz, Dewulf & Pahl-Wostl, 2014).

Scholars recently started considering the field of conflict resolution to research co-management systems, because resolution of conflict is the second-best success of adaptive co-management, after the participation of relevant stakeholders (Plummer et al., 2012). The conflict resolution approach can add value to the field of conservation by zooming in focus on the stakeholders, assessing how they perceive and process information and decide to collaborate (Idrissou, Aarts,Van Paasen & Leeuwis, 2011). Scholars are using two types of conflict resolution approaches to research stakeholder alignment in co-management systems: the process management approach and the systems approach.

In the process management approach, the alignment of participating stakeholders is the result of a series of lined-up tasks. It is assumed that once the stakeholders follow these consecutive

actions, they become increasingly engaged and more amenable to the wishes of each other. Ultimately, the stakeholders collaborate. An example of a process model is the Management and Transition Framework (MTF) (Pahl-Wostl, Holtz, Kastens,& Knieper, 2010) and Gray's Collaboration Process model (1989).

Originating in systems theory, a systems approach (SA) allows "the study of the conflict as a whole, while at the same time it also allows for the investigation of details with regard to the interaction between parties" (Smith, Michaud, Bertuna Reynoso & Struss, 2014, p. 8). However, should something go wrong in the system, there may emerge an imbalance which likely will end up in a conflict. One hallmark study by Martin and colleagues (Martin, Rutugarama, Cascáo, Gray & Chhotray, 2011) shows how zooming focus into the system contributed to a better understanding of the negotiation context.

In this paper, we follow Martin and his team's approach to hone in on conflict. Conflict is here defined as the discrepancy between interdependent stakeholders in the co-management system. We assume that whenever conflict is handled effectively, the stakeholders will propel themselves towards collaboration. Our research relies on the Model for the Analysis of Potential Conflict in Development (MAPCID), which is specifically designed for analyzing conflict in systems with a large power disparity (Smith et al., 2014). MAPCID concentrates on the stakeholder(s) that has significantly lower power than the others; in the Suriname case, these are the indigenous peoples. By putting the indigenous peoples in the center of the analysis, MAPCID aims to balance the power that is usually the main cause of failing collaborative arrangements (Redpath et al., 2013).

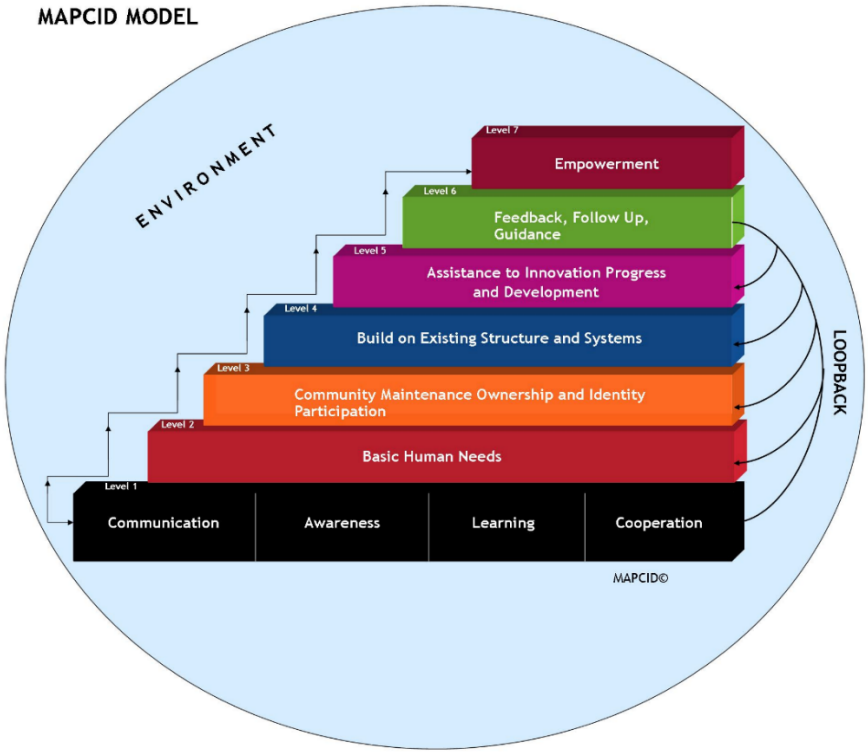

Figure 1. Model for the Analysis of Potential Conflict in Development.
Note. Reprinted from "MAPCID: A Model for the Analysis of Potential Conflict in Development", by Smith, G. et al., 2014, Journal of Conflict Management 2(1), p. 11.

MAPCID guides a researcher (also read: practitioner) to analyze the potential for conflict in the co-management system. The researcher goes through seven assessment levels by answering a set of guiding questions. These level-specific questions give a rich understanding of the causes of conflict and the possible interventions a researcher can facilitate.

In level 1, the researcher analyzes the quality of interaction between the stakeholders. For good interaction, stakeholders should have cultural awareness of the other (Avruch, 2006), have respectful and equal communication (Habermas, 1984), enough space for social learning (Lederach, 1995), and effective cooperation (Deutz, 2006).

In level 2, the focus is set on the lowest-power party: the community. Questions are targeted to understand the communities' access to basic needs and the strategies a community develops to provide for them (Maslow, 1943). Having basic needs is seen as a precondition to enter into a co-management arrangement.

In level 3, the researcher assesses the community's potential for participation. Communities participate effectively when they can keep their own identity and negotiate this in interaction with the other conservation stakeholders (Idrissou et al., 2011). The researcher can study the potential for participation, by assessing: 1) the structures which are present for community stability, 2) the community's preference for participating in conservation, and 3) ways the community takes responsibility and ownership for the conservation initiative (Chambers, 1997).

In level 4, the researcher studies how the community absorbs new concepts and integrates them in their social system. During this process, the community and other stakeholders are expected to bridge each other's ideas and define shared goals (Kriesberg, 2003). Level four sets the level playing field between community and the other stakeholders. From here on the community is suggested to be ready for co-management.

In level 5, the researcher examines how the system progresses towards reaching its goals in the co-management arrangement. Here it is important for the researcher to understand what types of innovative approaches the stakeholders can take to overcome barriers that will appear along the way.

In level 6, the focus is on studying on how the high-power stakeholders such as conservation NGOs and the Government should help the low-level stakeholders (community). Because the high-power parties possess knowledge, funds and/or authority, they can guide and support the community. This "helping out" concept is very important to sustain a co-management arrangement.

In level 7, the endpoint, the community and other stakeholders reach the shared conservation goals. In this stage, the community becomes empowered and thus is able to participate as an equal partner in the process.

Table 1. Research Framework for Applying MAPCID into Nature Conversation

MAPCID level	Theme	Main scientific inquiry	Data collection method
Level 1. Support Structure	Communication	What are the drivers of and barriers to communication?	Information sharing workshops with inquiry: What is conservation? Where do you want to conserve?
	Awareness	What are the drivers of and barriers to awareness?	
	Cooperation	What are the drivers of and barriers to cooperation?	
	Social Learning	What are the drivers of and barriers to social learning?	
Level 2: Basic Human Needs	Provision of Water, Food, Security, Shelter, Clothing and Air	What promoters and barriers exists to obtain these basic needs?	
Level 3. Maintenance, ownership and identity participation	Maintenance	What drivers of and barriers do exist for community maintenance?	
	Ownership	What drivers of and barriers do exist for community ownership?	
	Identity Participation	What drivers of and barriers do exist for community participation?	
Level 4. Existing Systems and Structures	Shared goal(s)	What drivers of and barriers does the stakeholders see in planning towards a shared goal?	Consultation workshops with inquiry: How do we conserve?
Level 5. Innovation, Progress and Development	Innovation, progress, development	What innovative approaches/strategies are undertaken by the stakeholders to overcome barriers in development?	
Level 6. Follow up, Guidance and Feedback	Follow up, guidance, feedback	What are the drivers of and barriers to follow up and feedback?	
Level 7. Empowerment	Transformation, collaboration	What drivers of and barriers exists for the stakeholder to become empowered?	Multi-party negotiation with inquiry: How do we co-manage?

The MAPCID methodology was applied to the South Suriname context to get a better understanding of the ongoing dynamics between participating stakeholders. Stakeholders' engagement occurred between 2014 and 2015. Primary data for MAPCID was gathered through reports from workshops, participant observation, focus groups, and individual consultations. Secondary data was obtained from documents to complement primary data collection. Documents included lessons learned from previous conservation work in Trio and Wayana communities as well as individual documented experiences from our facilitation team who has been working in the area for over fifteen years.

Results

Case study: The South Suriname Conservation Corridor (SSCC)

In Suriname, forest conservation historically is carried out through the establishment of protected areas. Approximately13.3 percent of Suriname's land area falls under protection, either through a nature reserve, multiple use management area, or nature park (Republic of Suriname, 2016).

Creating a self-protected area in South Suriname meant bringing 16 stakeholders to the negotiation table with very different interests in the forest-human relationship: eight indigenous forest communities – Kwamalasamutu (Trio), Alalapadu (Trio), Sipaliwini (Trio), Peleletepu (Trio), Palumeu (Trio), Amotopo (Trio), Apetina (Wayana), Kawemhaken (Wayana) - and eight other stakeholders – Conservation International (NGO), World Wildlife Fund (NGO), Amazon Conservation Team (NGO), National Herbarium of Suriname (Academia), Indigenous platform (Indigenous Advocacy Organization), Organization of Indigenous Peoples in Suriname (Indigenous Advocacy Organization), the Foundation Kuluwayak (Indigenous Advocacy Organization), and the Ministry of Physical Planning, Land and Forest Management (Government) as observer.

The stakeholders engaged in a one-year engagement process with help from an experienced facilitation team. The perception of the stakeholders was sought with the help of a specially-designed data collection tool: pictorial puzzle pieces (10x10 centimetres in size) which each represent a conservation-related concept. The Trio and Wayana communities selected puzzle pieces which represented a holistic concept of conservation, one that included natural elements but also development-related elements such as school, water, healthcare, transportation, telecommunication, electricity, jobs, and so on. Puzzle pieces representing destructive activities, such as goldmining, logging, and road and dam construction were purposefully excluded or in one case, included under restrictions. Contrastingly, the non-indigenous stakeholders selected puzzle pieces which embodied global, non-tangible goals such as protecting the earth or respecting traditional knowledge.

The puzzle pieces of both groups were combined to respect the difference in perception between the two groups. The final mosaic became the official SSCC definition of conservation. This merge wasn't about validating the conservation concept per se but rather creating an atmosphere of respect. The combination of both views organically created awareness: the indigenous peoples were learning about the western views and the western stakeholders were learning about the indigenous cosmic vision. Although the puzzle exercise stimulated a thought process that, in the end, had given all stakeholders an improved understanding about the project's goals, the indigenous peoples were hesitant to fully engage in the project. They were remembering previous bad experiences with the Government and conservation organizations.

MAPCID Level 1,2 and 3 Analysis

The MAPCID levels 1, 2, and 3 analyses, demonstrated how indigenous peoples were dealing with a great number of internal problems that were linked to weak leadership, jealousy, face-saving, negative identity, and distrust. With strategic interventions the communities were empowered, which led to increased deliberation among the community members, which in turn was necessary to line-up internal issues of trust and leadership. Had these matters remained

unaddressed, they might have arisen later in the process and potentially limited the engagement of some indigenous communities.

After resolving these matters, we continued the process with reproducing the previously developed puzzle pieces in small stickers (3x3 centimetres). With a simple question, where to conserve?, the facilitation team solicited views about the preferred conservation area. Indigenous men, women, children, and elders would surround a map of the area to accurately place stickers at locations they chose to conserve, use, or develop. Most valuable were the indigenous people' discussions about which sticker to place and where to place it. Once completed, the stickered maps gave a tangible representation of their future interests, both in conservation and development.

The discussion noticeably elevated when the maps were brought into the exercise. Except for one, all indigenous communities engaged in serious discussions. The one exception was Kawemhaken, a community with internal leadership problems and increasing pressure from small-scale goldmining. Men and women from this village camouflaged their planning incompetence by changing the instructions of the exercise; they placed stickers at random until the map was completely covered. While half of the villagers interpret the 'stickering' exercise as a children's game, another group was furious about this indifferent behavior (South Suriname Conservation Corridor, 2015). With an openly divided village, the leader spoke freely to the facilitation team about his lack of control and leadership. His confession created space for future empowerment.

MAPCID Level 4,5 and 6 Analysis

The stakeholders had formed a solid position once the idea of co-management became tangible with the mapping exercise. Indigenous leaders saw the facilitation team as the primary representative of the conservation project and initiated a hard-ball negotiation. After the team clarified their role as facilitator rather than project representative, a shift occurred. The indigenous leaders retracted from their negotiation positions, making it easier for the team to begin discussions with community members about their real interests.

A different negotiation style was observed with the western-oriented stakeholders. The most powerful among them– conservation NGOs – began making self-favoring suggestions. Because the NGOs were also donors to the conservation project, they were operating with the mindset of the donor. The facilitation team intervened by switching the donor's role back to that of stakeholder. In this way then power was balanced: each stakeholder had an equal opportunity to negotiate their interest, an important aspect in effective forest negotiations as described by Gritten and colleagues (2013) in their global review on forest conflicts.

Once the power was balanced, stakeholders were asked to answer the question: How do you conserve? This inquiry opened space for a discussion on what resources (human, financial, technical) were necessary for culturally acceptable ways of forest management. The facilitation team consulted with the stakeholders on five topics identified in the previous discussions: leadership, protection, sustainable development, balance between conservation and development, and finances. Soon it became evident that the indigenous communities were reluctant to answer and wanted to collectively discuss the five topics first. Although this hesitant behavior could be labeled as negative, the team relied on the MAPCID analysis to identify it as a way for the community to seek ownership. Our intervention enabled the indigenous leaders to meet and have an internal discussion. During this discussion, the team mobilized the relatively strong leaders to

empower the weaker leaders, even when the latter were hiding behind a mask of disappointment in NGOs. Differences were straightened out, opinions were respected, and an environment was created in which all indigenous leaders were able to define shared goals for the future.

Non-indigenous stakeholders were invited for individual consultations but participated poorly. Members of these organizations were more interested in deliberating amongst each other about reaching the goals they promised to deliver to their donors. The conservation organizations wanted to have at least two-million-hectares of forest under a co-management regime and were worried that this goal couldn't be met. The facilitation team was aware that these relatively powerful stakeholders might bring in resources to tip the power balance in their favor. Excessive use of power was prevented by laying out how much space they would have in the negotiations to reach the quantitative goal.

Bringing the Stakeholders Together

Stakeholders were brought together to negotiate in a three-week dialogue, where they were respected and had enough social space to effectively negotiate. The following safeguards were built into the negotiation process:

Mutual learning. Formal negotiations were interrupted with exercises to learn about the complexity of the topic under negotiation. In that way the facilitation team could build the capacity of the stakeholders, which was especially important for the indigenous peoples as the low-power holders.

Time. The dialogue was designed around five themes that emerged from the earlier phases of the process. The themes were designated to a specific day, to so-called discussion days. Rest days were inserted in between the discussion days to give stakeholders enough time to elaborate among themselves on the topic of interest. This was especially appropriate because indigenous communities usually replay past experiences before linking them to the present and future, as indicated by Avruch (2006).

Transparency. Stakeholders met in a large exhibition hall with white walls upon which dialogue results were displayed for everyone to see. Transparency was vital to cross-pollinate ideas between the stakeholders.

Equality. Equality was promoted by setting up tables and chairs in the form of a half-circle and stakeholders could sit where they preferred. This setting gave each stakeholder an equal place at the negotiation table.

Inclusiveness. Negotiations occurred in an inclusive and structured process, meaning that each stakeholder was included and could fully participate. The facilitation team facilitated in such a way that the group could move forward each day.

Interference. The team purposefully chose to keep the dialogue conditioned with limited interference from the outside public, a strategy usually deployed in public disputes (Carpenter & Kennedy, 2001).

MAPCID Level 7 Analysis

The team continued using the MAPCID analysis to assess how indigenous people interacted with the other stakeholders, by posing the following question: What drivers and barriers exist for indigenous people to become empowered and engage in co-management? The team identified

numerous issues of concern that were immediately managed to prevent conflict and deadlock in the negotiations.

Issue 1: Transparency. Every day, at the end of the negotiations, a handout was assembled with a summary of the day's outcomes. The one-page summary was disseminated in hard-copy to the stakeholders who were present and sent electronically to stakeholders who were absent during the dialogue. Besides summaries, the team promoted transparency by displaying all negotiation outcomes on the walls of the room. When indigenous stakeholders became disoriented or overwhelmed, they could self-restore by focusing on the outcomes on the walls.

Issue 2: Time. When the indigenous people were placed in the company of the non-indigenous stakeholders, a natural awareness process began. The indigenous people were discovering the interests of western-oriented stakeholders and vice versa. Besides awareness, the indigenous people felt overpowered and abruptly fell back on their position: they wanted to have land rights as a precondition to moving any further in the negotiation process. After noticing this sudden switch in discourse, the team intervened by focusing on the interests of the indigenous people. The team changed course by highlighting a recent incident of Chinese intrusion into indigenous lands. Everybody at the negotiation table worked together to find a practical solution to this incident. The team thus moved the discussion from an unsolvable, large land rights problem towards a smaller problem of Chinese intrusion for which solutions could be sought.

Issue 3: Mutual learning. Internationally linked nature conservation organizations possess expert knowledge and funds, which makes them large powerholders in comparison to other primary stakeholders (e.g. indigenous peoples, academia, and small local NGOs) who don't have such resources at their disposal. These organizations tried to influence the negotiations about the area to be protected. By hiring an expert, they wanted to generate a digital map beforehand and then present this map as the goal at the negotiations. They had made a promise to a donor to have two million hectares under a protection regime as an outcome of the SSCC project.

The team then redesigned the negotiations to promote mutual learning. For the demarcation of the area to be protected, a special 5 x 4 meter-sized map of South Suriname was created on the wall. Stakeholders were asked to use a marker to delineate the area to be protected. After collaboratively demarcating the area, the stakeholders agreed on protection of 7.2 million hectares, 5.2 million hectares more than was anticipated.

Issue 4: Inclusiveness. Some stakeholders did not participate every day and then they came in by being off-topic and thereby disturbing the ongoing dynamic. The facilitation team created a special day for "outstanding issues" which helped all to keep on topic while respecting the opinions of those stakeholders that brought off-topic issues to the negotiation table.

Issue 5: Interference. Nowadays there is a strong international movement advocating for indigenous rights which extends into Suriname. These advocates seek to halt conservation efforts until the indigenous groups possess their lawful rights to land. However, Trio and Wayana indigenous people were more comfortable with a synchronically-aligned and dual process of conserving nature and fighting for land rights.

Just before the end of the dialogue, one indigenous advocacy organization intercepted the ongoing negotiations and wanted to stop the negotiations if the land rights issue wasn't put back on the table. Re-opening the discussion about land rights gave the South Suriname indigenous peoples an opportunity to speak up and explain their thoughts on the issue. The Trio and Wayana people were frustrated with the intervention and stressed their progress during the three-week talks, thereby disagreeing with the position of the advocacy organization. At that time here was a

substantial risk for termination of the talks. Yet, the Trio and Wayana peoples stayed committed and took a stance against the advocacy group.

The negotiation ended in a collaborative agreement outlining the basis for collaboration and signed by Trio and Wayana village leaders and conservation NGOs, indigenous advocacy NGOs and academia. This momentous agreement is just a first step towards a long-term co-management system, which is currently in the process of building and testing governance structures and implementing community projects.

Discussion and Conclusion

The case study discussed here revealed the constant presence of conflict in the co-management system. From the outset, the indigenous people had internal conflicts; were this not addressed there would a be a slim chance of their participation in the SSCC. Moreover, conflict was constantly present when the indigenous people were brought together with non-indigenous stakeholders in the negotiation room. The existence of conflict thus is inherent to co-management and can be better classified and anticipated as the status quo rather than as an incidentally occurring phenomenon.

The study also showed how stakeholders had a natural drive for resolving conflict, although small interventions were necessary to bridge discrepancies between them. The facilitation team intervened only to remove roadblocks for stakeholders to collaborate. After elimination of the roadblocks, notably the stakeholders had enough ownership of the process to self-manage conflict, as exemplified in the intercession by the indigenous advocacy organization. It therefore would be safe to conclude that in this study, conflict was transformed into a condition that was necessary for stakeholders to test each other's commitment and interest before alignment between them could occur.

The study further demonstrates that a key contextual factor for creating a functional co-management system is maintaining the power balance. When this balance is kept between acceptable benchmarks, the stakeholders feel they operate in a trustworthy environment. As a result, they can effectively participate and exchange ideas. But when the power balance is about to tip – as for example it was because of differences in conservation concepts between indigenous peoples and western stakeholders – it is necessary to restore it and re-establish a trustworthy atmosphere.

In addition, case study findings argue for a continuing analysis to see how power is distributed among the stakeholders in the system. Because the system is constantly facing challenges from the inside and outside, small interventions are needed to balance power and align the interests of the stakeholders. Applying MAPCID, the facilitation team could scientifically assess the situation from a conflict lens and identify conflicts in advance. The team could also see how stakeholders transitioned from individual towards mutual benefits. MAPCID methodology offered distinct and unique features for tracking and managing the South Suriname negotiation process.

First, the MAPCID analysis assessed the capacity of each stakeholder at the time of entry in the negotiations. The analyses levels 1, 2 and 3 focused on the community's ability to communicate, learn, cooperate, maintain itself, and participate in co-management. For example, a few indigenous leaders had intra-community conflicts which inhibited participation. The team intervened by bringing in legitimate mediators, increasing information exchange between villages, and boosting the indigenous people's self-esteem and worth. Thus the MAPCID

analysis allowed for assessment of the stakeholders' "entry state" in terms of capacity to engage in the SSCC.

Second, empowerment of low-power stakeholders is central to the co-management system. The Suriname case study presented a situation where stakeholders hold different power and worldviews: the powerful scientifically-oriented conservation organizations, academia and other stakeholders holding western worldviews, and the indigenous peoples holding a local view closer to nature and livelihood. The goal was to boost self-esteem of the indigenous peoples. Because MAPCID puts the low-power party at the heart of the analysis, the team could observe the power disparity at work and subsequently empower the indigenous peoples towards the point where they took ownership over the process.

Third, the analysis gives information which allows a researcher to manage or reset stakeholder expectations. With constant assessment, the team could check whether the previously set outcome for co-management would be reachable. To illustrate, during the process the team explained the possibility for non-agreement as an outcome; this set the stage for an open, non-pressured environment in which no one had real expectations. The facilitation team followed Edmunds and Wollenberg's (2001) advice to create social space for communities and other stakeholders to gather information, test ideas (Scholtz et al. 2014), and learn, making temporary or partial commitments rather than acting on pressure to immediately achieve full consensus. Facilitation was focused on reaching a small agreement each day, as opposed to a large agreement over the entire three weeks of negotiation.

The outcome of the MAPCID analysis guided the facilitation. Facilitation was supported by the trust the team received from the indigenous communities that was built on over a decade of shared activities. The tools used for interventions were drawn from the theory of negotiation (break problem into small bits, celebrate outcomes, bridge interests into shared goals, bring in mediators) (Lewicky, Barry & Saunders, 2007) and of facilitation (create transparency, share information, listen to the needs of the group, empower groups, conduct mutual learning exercises) (Schwarz, 2002).

In conclusion, adaptive co-management models emphasize mutual learning as a way to balance power between stakeholders (Armitage et al., 2008). In the case of large power differences, as in the instant study, mutual learning is not enough to overcome a power disparity. For instance, here the mutual learning exercise of joint mapmaking didn't prevent the right-to-land-ownership conflict from arising later in the process.

This paper demonstrates how important timely bridging of interests as well as balancing of power are in making the system preemptive and adaptive, two factors that were crucial in the successful creation of the South Suriname co-management system. The conflict resolution approach to understanding the dynamic between stakeholders revealed how there was a constant mismatch between the stakeholders. This research contributes to the field of conflict resolution by presenting another case study demonstrating how a conflict-resolution approach can lead to better understanding of contextual factors at play, thereby allowing for useful and timely interventions.

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References

Armitage, D., Plummer, R., Berkes, F., Arthur, R., Charles, A., Davidson-Hunt, I., Diduck, A., Doubleday, N., Johnson, D., Marschke, M., McConney, P., Pinkerton, E., & Wollenberg, E. (2008). Adaptive co-management for social-ecological complexity. *Frontiers in Ecology and the Environment 7*(2), 95-102. https://doi.org/10.1890/070089

Armitage, D., Berkes, F., & Doubleday, N. (Eds.). (2007). *Adaptive co-management: collaboration, learning, and multi-level governance*. Vancouver, Canada: UBC Press.

Avruch, K. (2006). *Culture and conflict resolution*. Washington DC, USA: United States Institute of Peace.

Berkes, F. (2009). Evolution of co-management: role of knowledge generation, bridging organizations and social learning. *Journal of Environmental Management 90*(5), 1692-1702. https://doi.org/10.1016/j.jenvman.2008.12.001

Carlsson, L., & Berkes, F. (2005). Co-management: concepts and methodological implications. *Journal of Environmental Management 75*(1), 65-76. https://doi.org/10.1016/j.jenvman.2004.11.008

Carpenter, S., & Kennedy, W. (2001). *Managing public disputes: a practical guide for government, business and citizen's groups*. New York, USA: John Wiley and Sons.

Chambers, R. (1997). *Whose reality counts? putting the last first*. London, United Kingdom: Practical Action Publishing.

Davis, A., & Kandel, S. (n.d). Conservation and community rights: lessons from Mesoamerica. Prisma, Rainforest Foundation and Clark University. Retrieved from http://www.prisma.org.sv/uploads/media/Conservation_and_Community_Rights.pdf.

De Pourcq, K., Thomas, E., Arts, B., Vranckx, A., Leon-Sicard, T., & Van Damme, P. (2015). Conflict in protected areas: who says co-management does not work? *Public Library of Science One 10*(2), 1-15. https://doi.org/10.1371/journal.pone.0144943

Deutsch, M. (2006). Cooperation and competition. In M. Deutsch, P. T. Coleman & E. C. Marcus, (Eds.), *The handbook of conflict resolution theory and practice (*pp. 23-42). San Francisco, California, USA: Jossey-Bass.

Edmunds, D., & Wollenberg, E. (2002). A strategic approach to multistakeholder negotiations. *Development and Change 32*(2), 231-253. https://doi.org/10.1111/1467-7660.00204

Gavin, M., McCarter, J., Mead, A., Berkes, F., Richard Stepp, J., Peterson, D., & Tang, R. (2015). Defining biocultural approaches to conservation. *Trends in Ecology and Evolution 30*(3), 140-145.

Gritten, D., Mola-Yudego, B., Delgado-Matas, C., & Kortelainen, J. (2013). A quantitative review of the representation of forest conflicts across the world: resource periphery and emerging patterns. *Forest Policy and Economics 33*,11-20.

Haalboom, B. (2009). *Encounters with conservation and development in Suriname: how indigenous peoples are trying to make things 'right' through scalar politics, identity framing, and hybrid governance arrangements*. (Doctoral dissertation). Retrieved from https://dukespace.lib.duke.edu/dspace/bitstream/handle/10161/1301/D_Haalboom_Bethany_a_200909.pdf?sequence=1

Habermas, J. (1984). *The theory of communicative action*. Boston, Massachusetts, USA: Beacon Press.

Humpreys, M. (2005). Natural resources, conflict, and conflict resolution: uncovering the mechanisms. *Journal of Conflict Resolution, 49*(4), 508-537.

Idrissou, L., Aarts, N., Van Paasen, A., & Leeuwis, C. (2011). The discursive construction of conflict in participatory forest management: the case of the Agoua forest restauration in Benin. *Conservation and Society 9*(2), 119-131.

Jones-Walters, J., & Cil, A. (2011). Biodiversity and stakeholder participation. *Journal for Nature Conservation 19*(6), 327-329.

Kriesberg, L. (2003). *Constructive conflicts: from escalation to resolution* (2nd ed.). Oxford, United Kingdom: Rowman and Littlefield Publishers.

Lederach, J. P. (1995). *Preparing for peace: conflict transformation across cultures*. Syracuse, California, USA: Syracuse University Press.

Lewicki, R. J., Barry, B., & Saunders, D. M. (2007). *Essentials of negotiation* (4th ed.). New York, New York, USA: McGraw-Hill.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review 50*(4), 370-396.

Martin, A., Rutugarama, E., Cascáo, A., Gray, M., & Chhotray, V. (2011). Understanding the co-existence of conflict and cooperation: transboundary ecosystem management in the Virunga Massif. *Journal of Peace Research 48*(5), 621-635. https://doi.org/10.1177%2F0022343311412410

Pahl-Wostl, C., Holtz, G., Kastens, B., & Knieper, C. (2010). Analyzing complex water governance regimes: the management and transition framework. *Environmental Science and Policy 13*(7), 571-581. https://doi.org/10.1016/j.envsci.2010.08.006

Plummer, R. (2009). The adaptive co-management process: an initial synthesis of representative models and influential variables. *Ecology and Society 14*(2): 24.:

Plummer, R., Crona, B., Armitage, D.R., Olsson, P., Tengö, M., & Yudina, O. (2012). Adaptive co-management: a systematic review and analysis. *Ecology and Society 17*(3): 11. http://dx.doi.org/10.5751/ES-04952-170311

Redpath, S., Young, J., Evely, A., Adams, W., Sutherland, W., Whitehouse, A., Amar, A., Lambert, R., Linnell, J., Watt, A., & Gutiérrez, R. (2013). Understanding and managing conservation conflicts. *Trends in Ecology and Evolution 28*(2), 100-109.

Republic of Suriname (2015). Intended nationally determined contribution to the United Nations Framework Convention to Climate Change. Paramaribo, Suriname: Office of the President. Retrieved from http://www4.unfccc.int/submissions/INDC/Published%20Documents/Suriname/1/INDC-2-Suriname%20300915.pdf

Republic of Suriname (2016). Second national communication to the United Nations Framework Convention on Climate Change. Paramaribo, Suriname: Office of the President. Retrieved from https://unfccc.int/resource/docs/natc/surnc2.pdf

Scholtz, G., Dewulf, A., & Pahl-Wostl, C. (2014). An analytical framework of social learning facilitated by participatory methods. *Systemic Practice and Action Research 27*(6), 575-591. https://doi.org/10.1007/s11213-013-9310-z

Schröter, B., Sessin-Dilascio, K., Meyer, C., Matzdorf, B., Sattler, C., Meyer, A., Giersch, G., Jerico-Daminello, C., & Wortmann, L. (2014). Multi-level governance through adaptive co-management: conflict resolution in a Brazilian state park. *Ecological Processes 3*(6), 1-13. https://doi.org/10.1186/2192-1709-3-6

Schwarz, R. (2002). *The skilled facilitator: a comprehensive resource for consultants, facilitators, managers, trainers and coaches.* (2nd Ed.). San Francisco, USA: Jossey-Bass.

Smith, G., Michaud, G., Bertuna Reynoso, S., & Struss, P. (2014). MAPCID: a model for the analysis of potential conflict in development. *Journal of Conflict Management 2*(1), 7-38.

South Suriname Conservation Corridor (2015). *Final Report*. Paramaribo, Suriname: Conservation International/Attune.

World Wildlife Fund Guianas. (2012). *Living Guianas report 2012: state of the Guianas, drivers and pressures towards green economies*. Retrieved from http://wwf.panda.org/?207255/living-guianas-report-2012

Zachrisson, A., & Beland Lindahl, K. (2013). Conflict resolution through collaboration: preconditions and limitations in forest and nature conservation controversies. *Forest Policy and Economics 33*, 39-46. https://doi.org/10.1016/j.forpol.2013.04.008.