



# Conflict, Complexity, and Conservation: The Mirador Roundtable of Guatemala’s Maya Biosphere Reserve

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## INTRODUCTION

Most early efforts to conserve natural resources were undertaken by authoritative decision making and the exclusion of humans from protected areas. However, such top-down protectionist strategies have been largely ineffective, especially in areas of high human pressure (Holling and Meffe 1996). More recent attempts to incorporate humans in natural resource conservation, usually billed as participatory approaches, have also received heavy criticism (Cleaver 1999, Schelhas et al. 2001, Berkes 2004). Many contend that they have been implemented incorrectly, not giving sufficient attention to the specific cultural and economic needs of individual communities (Chambers 2002, Mansuri and Rao 2004), and failing to create true participation and devolution of responsibilities to stakeholders (Murphree 2002). Others argue that economic development and conservation may be inherently incompatible (Redford and Sanderson 2000). The general dissatisfaction with both exclusionary and early participatory strategies has left conservationists with a serious quandary: *How can we make sustainable environmental decisions in systems influenced by complex social and ecological interactions?*

Recently, applied ecology has exhibited a major paradigm shift, with a new focus on holistic systems perspectives, the inclusion of humans within ecosystems, and participatory strategies for ecosystem management (Berkes 2004). In part, this shift is a response to growing recognition that ecosystems are not deterministic and homeostatic, but often express unpredictable or even chaotic behavior. At the same time, conservation has become more complex, with increased cross-scale interdependence between humans and the environment due to capital markets, new technology, and systems of governance (Folke et al. 2005). Salwasser (2002) argues that most large-scale natural resource problems today are “wicked”, characterized by complexity, fragmented stakeholders, scientific messiness, uncertainty, conflicting risks, and dynamic social, economic, knowledge, and technological systems. Furthermore, there is often latent or overt conflict and distrust of public institutions (Stewart et al. 2004, Haight and Ginger 2000). In order to deal with this complexity, environmental management has refocused on decision making processes that embrace uncertainty, social dynamics, and new governance structures.

Adaptive co-management (ACM) is “a process by which institutional arrangements and ecological knowledge are tested and revised in a dynamic, ongoing, self-organized process of trial-and-error” (Folke et al. 2002). The concept combines precepts of adaptive management (e.g. Holling 1978, Walters 1986), with the acknowledgment that complex environmental problems require unprecedented levels of public participation (e.g. Fischer 1993, Lee 1993, Schelhas et al. 2001). Adaptive co-management requires more than devolution of management rights; it requires the creation of flexible and resilient social networks (Folke et al. 2005). The five core components of adaptive co-management (Plummer and Armitage 2007) are:

- adaptive capacity to evolve and change in light of feedback;
- social learning by which actions are developed, tested, reflected upon, and revised, i.e., double loop learning, learning by doing;
- communication, i.e., sharing of information, shared understanding;
- sharing authority, i.e., power, between at least two groups of actors, usually, but not limited to, the state and civic actors and/or users; and
- shared decision-making.

Multi-Stakeholder Platforms (MSPs) have been widely proposed as resilient ACM structures capable of dealing with the complexity and uncertainty inherent in modern conservation and sustainable development problems (e.g. Reed 2008, Armitage et al. 2008a, Djalante 2012). MSPs have been defined as “decision-making bodies (voluntary or statutory) comprising different stakeholders who perceive the same resource management problem, realize their interdependence for solving it, and come together to agree on action strategies for solving the problem” (Steins and Edwards 1998). Several examples demonstrate that MSPs can function as powerful structures for ACM, creating high-quality, durable decisions, with emergent and spin-off benefits far superior to top-down management (e.g. Fischer 2000, Beierle 2002, Reed 2008). However, for every successful MSP process, there have also been many disappointments and failures (e.g. Manzungu 2002, Hirsch and Wyatt 2004, Faysse 2006, Reed 2008), and there are serious claims that MSPs can even lead to further inequity and manipulation of disadvantaged groups (e.g. Edmunds and Wollenberg 2001). There is debate about the true utility of MSPs for ACM, the conditions under which success is possible, and methods for achieving success (e.g. Edmunds and Wollenberg 2001, Faysse 2006, Plummer and Armitage 2007, Reed 2008). As Plummer and Armitage (2006) explain, “Adaptive co-management is a relatively new concept around which an idealized narrative has formed with relatively little empirical evidence and even less evaluative experience”.

In this paper, we critically evaluate the Mirador-Rio Azul Multi-sector Roundtable - an ongoing ACM effort in Guatemala’s Maya Biosphere Reserve that emerged from a complex and conflictive history and quickly attained a scale and scope seldom seen in the world of natural resource management. Specifically, the Mirador Roundtable is characterized by:

1. Significant participation of several societal sectors
2. Consensus-based decision making
3. An expansive geographical area (>800,000 ha) and wide range of range of issues (e.g. tourism, infrastructure, security, natural resource management)
4. Involvement of high-level officials (eg. Two Presidents of Guatemala, government ministers, NGO Directors)
5. Power to decide upon the allocation of tens of millions of dollars, and
6. More than six years of consistent participation and results

This paper is divided into four sections. First we describe methods for data collection and evaluation. Second, we describe the confluence of key events and actors that created the Mirador-Rio Azul Roundtable. Third, we describe the roundtable structure and evaluate its accomplishments and ongoing challenges after six years of existence. Finally, we compare empirical observations to ACM theory and extract practical lessons and insights applicable to complex natural resource conflicts around the world.

## METHODS

It is difficult to standardize measures of success for ACM since goals, approaches, and desired outcomes vary according to specific project objectives and contexts (Armitage et al. 2008). By their nature MSPs may also have shifting goals and objectives, with unclear boundaries between process and outcomes (Plummer and Armitage 2007). Furthermore, it is sometimes difficult to

differentiate successes due to a MSP from achievements by the MSP's member organizations. Despite these challenges, several authors have developed generalized "process" and "outcome" criteria for monitoring MSPs and other participatory methods, derived from theory and case studies (e.g. Beierle 1999, Chess and Purcell 1999, Plummer and Armitage 2007).

To evaluate the results of the Mirador-Rio Azul Roundtable, we utilized Plummer and Armitage's (2007) framework for monitoring ACM efforts, including three broad indicators of success: 1) Tangible outcomes; 2) Process outcomes, and 3) Intangible outcomes, each with various sub-categories. The primary author participated directly in more than 50 meetings and events related to the roundtable between 2006 and 2013, observing and documenting meeting dynamics, interactions between participants, progress, and outputs. To measure perceptions of the Roundtable and the decision making process, in 2008 structured surveys with five-point Likert scale responses and open-ended questions were administered to 84 individuals selected based upon their participation in the Roundtable, decision-making authority, potential impact of decisions, and special expertise or knowledge. These included 32 representatives of 29 formal member institutions of the Roundtable including government Institutions, academic institutions, organized community groups, NGOs, and the private sector, as well as 27 community leaders and members from Carmelita and 25 from Uaxactún – the villages likely to be most affected by decisions. Due to high rates of illiteracy, interviews were administered orally. Participants were promised confidentiality following a protocol approved by the University of Florida Institutional Review Board (#2006-U-971). In addition, from 2007 to 2012, surveys were occasionally administered to participants after meetings to assess satisfaction with the deliberation and decision-making process and to gather ideas for improving facilitation methods.

## BACKGROUND

### **Maya Biosphere Reserve**

Until the 1960's, the lowland Petén region of Northern Guatemala was home to only a handful of small forest villages and timber companies dependent upon the extraction of forest resources such as mahogany and chicle (chewing gum) resin. Due to its isolation, the department was treated as a quasi-independent state, largely ignored by national politics, and governed by a parastatal authority, *Fomento y Desarrollo Economico de Petén* (FYDEP), with the responsibility of stimulating economic growth. In the 1970's and 80's, the policy began to take effect. Following the first paved road into the area, immigrants swarmed to the region from other parts of Guatemala with an individualistic frontier mentality. During the height of the civil war, Petén was seen as a place where land was free and where one could escape from the law and lawlessness of the highlands. For over thirty years, the population of the Petén increased nine percent per year (Fort and Grandia 1999). Slash-and-burn agriculture and logging threatened to destroy the entire forest in less than thirty years (Sader 1999).

In 1989 the Guatemalan park service, CONAP, was created. The following year, the Guatemalan government established the Maya Biosphere Reserve, a two million ha area covering half of Petén and nearly a fifth of Guatemala's territory, including the heart of Central America's largest remaining forest and many of the most important vestiges of the ancient Maya civilization

(Figure 1). The goal of the reserve was to prevent ecological disaster by balancing economic activity and conservation. The reserve was divided into three zones, including strictly protected areas, a buffer zone, and a multiple use zone. Later, as a response to weak institutional capacity, agrarian reform at the end of the 36-year civil war, and grassroots opposition to the initial conservation approach applied by CONAP, management of the multiple-use zone was contracted to third party organizations through concessions.

The centerpiece of the reserve was a bold new model for participatory natural resource management - the community forest concession. Resource and management rights to large swaths of forest, ranging from 5,000-83,000 ha, were devolved in legally binding 25-year contracts to organized community groups that had previously inhabited or extracted resources from the region. In order to build capacity, improve negotiating power on international markets, and fend off external threats from oil companies and mega-infrastructure projects, the community organizations banded together to form a second-level association, *Asociacion de Comunidades Forestales de Petén* (ACOFOP). International NGOs promoted community forest management in the concessions, largely supported by USAID.

At the height of funding, at least eight conservation NGOs shared the two million ha workspace. Despite 15 years of work and tens of millions of dollars of investment, illegal colonization, deforestation, fire, looting, hunting, and narco-trafficking continue unabated in many areas of the reserve, especially in the two western National Parks, Sierra del Lacandon and Laguna del Tigre. Community forest management has shown mixed success. Some concessions have remained free of fire and deforestation while others share the uncontrolled corruption and devastation rampant in the western parks (Radachowsky et al. 2012).

## **El Mirador**

El Mirador, an archaeological site at the heart of the Maya Biosphere Reserve, was the center of a great pre-classic civilization that reached its apogee approximately 2,000 years ago (350 BC – 150 AD). The site is potentially the earliest city-state in the Western Hemisphere and has been dubbed the “cradle of Maya civilization” (Richard Hansen, pers. com.). El Mirador is a large, complex city with numerous monumental structures, including the largest pyramid in the world as measured by volume. It is the center of a kingdom of at least 26 other major cities, interconnected by a series of raised highways and united by a similar snake-king icon. The site has been featured in National Geographic Magazine and several documentary films, and inspired the film “Apocalypto”. Today, the Mirador area consists of a mosaic of protected areas including a national park, community and industrial forest concessions, and biological corridors.

Despite its globally renowned cultural and biological importance, most of El Mirador has yet to be excavated or developed for tourism. Currently, visitors to El Mirador must either hike two days through difficult and muddy forest trails from the villages of Carmelita or Uaxactún, or charter a helicopter from Guatemala City to reach the site. Tourism infrastructure is inadequate for large numbers of visitors and is in poor condition. The site is visited by approximately 2,000 tourists per year, but development proponents’ projections claim that visitation could eventually increase 100-fold to more than 200,000 tourists annually, providing gross annual revenue of \$320 million (Dardón 2007).

## The top-down approach to conservation and development

In 2000, Mirador archaeologist Richard Hansen and the Global Heritage Fund proposed the establishment and development of the “Mirador Basin Special Protected Area” covering a 210,000 ha triangle-shaped region containing El Mirador and all of its known Maya pre-classic satellite sites. Jeff Morgan, Executive Director of Global Heritage Fund, summarizes the group’s proposal, “What we have is a once in a lifetime opportunity, like Yellowstone, to establish a 600,000 acre roadless wilderness and archaeological preserve that will rival any park in the world.” (Global Heritage Fund 2004, unpublished report). The proposal included a \$10 million plan for protection, archaeological restoration, and infrastructure development. After Hansen and powerful Guatemalan private sector allies lobbied the central government, Guatemalan President Alfonso Portillo was convinced to support the proposal and a governmental decree was passed by Congress in 2002.

The proposal immediately created great uproar with community organizations, industrial loggers, and conservationists due to unclear and overlapping resource jurisdictions. The proposed reserve threatened to violate the forest concession contracts, limiting communities’ abilities to utilize and profit from forest resources. Conservationists worried that the proposal would open up protected areas laws to manipulation by interest groups. It was not clear who would make decisions about development or how benefits would be distributed. A vicious legal and publicity battle ensued, during which conflicts between archaeologists, investors, communities, conservationists, and government institutions escalated. The Association of Forest Communities teamed with industrial concession managers and lawyers from the Center for Social and Environmental Legal Action (CALAS) to demand the decree be reviewed in Constitutional Court. Finally, in May 2005, under the Berger administration, the new park was deemed unconstitutional because it overlapped a previously recognized protected area. The decree was rescinded.

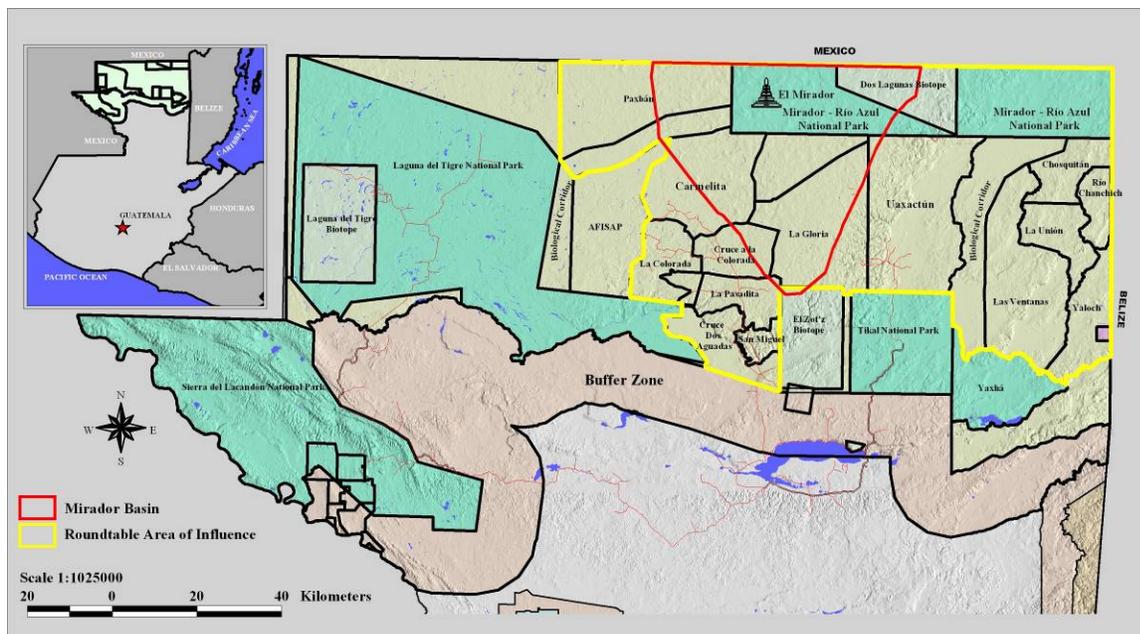


Figure 1. Maya Biosphere Reserve and areas under the decision making influence of the Roundtable.

However, the fallout of conflict persisted, including a total breakdown in trust between local communities and Mirador proponents, and divisive community dynamics in the village of Carmelita since some community members had allied with and received financial support from the proponents of Mirador's development. Tension between internationally driven efforts at protection and management and local autonomy was palpable. For years, the only dialogue concerning development of the Mirador Basin took place in the courtroom. At planning meetings it remained an unspoken elephant – ever-present but seldom acknowledged due to political consequences. Meanwhile, agricultural conversion backed by powerful drug traffickers looking to launder money and control territory moved deeper into the forest along the proposed development route.

When the government began negotiations for a \$34 million Interamerican Development Bank (IDB) loan for regional development, discussion could no longer be avoided. The central government created a special office in the Secretary for Coordination of the Presidency (SCEP) to deal with issues related to development in Petén, with special emphasis on coordinating the IDB loan. SCEP employed several Latin American consulting firms to help draft plans. Subsequent government-sponsored planning meetings were met with great local resistance, despite efforts at stakeholder inclusion. Many complained that the multi-stakeholder participation was just a ploy to manage conflicts and increase legitimacy for pre-designed development plans without any devolution of power. The Association of Forest Communities even video recorded meetings to secure legal evidence for potential future litigation. Rather than assuaging tensions and creating a unified vision, the top-down process had backfired and exacerbated latent conflict.

## BEGINNINGS OF THE MIRADOR-RIO AZUL ROUNDTABLE

Authoritative decision making and top-down government-led planning efforts had failed, and it was clear that a new strategy was needed. A stakeholder analysis conducted in 2005 by the Institute for Conflict Analysis and Resolution (ICAR) at George Mason University outlined process recommendations for stakeholder engagement and collaborative planning (Cobb, S., M. Goodale, D. Stillwagon, O. Kreimer, J. Portilla, and G. Tapia, unpublished report). Yet leading such a process entailed great personal and institutional risk that few wanted to take on. Even the study's sponsor, The Nature Conservancy, declined to take a proactive role in implementing the recommendations.

However, a recently established local NGO with close ties to Wildlife Conservation Society, *Asociacion Balam*, found itself in a unique position to assume a leadership role. First, Balam had been created with the mission of conservation and development of Mirador-Rio Azul National Park; thus it was territorially committed to the area at the center of the controversy. Second, the organization was relatively small and young, and had signed an agreement with the park service for pre-investment as a first step in co-administration of the park. Third, Balam's Executive Director, Bayron Castellanos, was a native of Petén Department with a dynamic personality and cross-sector experience.

Castellanos and colleagues at Wildlife Conservation Society contacted multiple key stakeholders

in the region through individual meetings and phone calls to see whether they would agree to participate in discussions regarding potential collaborative decision-making surrounding El Mirador. Members of the Association for Natural and Cultural Heritage (APANAC), a group of wealthy and well-connected Guatemalan businessmen with interests in the conservation and development of El Mirador, embraced the idea of the roundtable. APANAC had previously donated a fully equipped community visitor's center to the village of Carmelita, only to find their investment usurped by a few community members amidst internal disputes. Realizing the complexity of top-down development, they used their influence with President Oscar Berger to convince the upper echelons of the government that participation could help resolve the stalemate affecting plans for the area. In turn, SCEP began playing a major role in convening the diverse governmental representatives and helped organize a formal inauguration.

On October 25, 2006, bomb-sniffing dogs swept through the conference room of the Guatemala City Radisson. The President was running late and the room was filled with nervous stakeholders. Community members from Uaxactún and Carmelita, Archaeologist Richard Hansen, NGO directors, ACOFOP, businessmen, and numerous other organizations and individuals with interest in the zone waited anxiously. Finally, President Oscar Berger and several ministers entered to a standing ovation. After watching presentations describing the natural and archaeological wonders of the Mirador-Rio Azul zone and the precepts of the soon-to-be-inaugurated roundtable, representatives of 26 organizations, including the President himself, signed a letter of good intention, detailing the intent of the group to work collaboratively toward the balanced conservation and development of the region.

## ROUNDTABLE STRUCTURE AND COORDINATION

In order to allay public distrust and fears of process manipulation, the Roundtable structure was designed in a participatory fashion amongst all 26 member organizations. The first few monthly meetings focused heavily on developing mutually agreed upon statutes and methods for decision-making. Bayron Castellanos drafted an eight-page document containing 31 articles outlining the Roundtable's general objectives, guiding principles, rules of membership, methods of coordination, dialogue and decision-making, as well as incorporation of Roundtable decisions into institutional commitments. He facilitated the first meetings with major logistical support from SCEP. Castellanos' multi-faceted experience and civil society status allowed him to navigate between sectors, simultaneously helping to build trust between members and create confidence in Balam as a neutral "bridging organization". After a number of initially tense meetings, Roundtable members revised and approved the statutes by consensus.

According to the statutes, the Roundtable's objectives are: 1. To serve as a space for dialogue and analysis among sectors in search of a common agenda for conservation and development in the zone; 2. To create integrated planning instruments to help coordinate current and future activities; 3. To support administrators in ordering and maximizing current and future investments; and 4. To promote projects that strengthen the area's protection and generate economic benefits for local communities.

The statutes stipulate that the highest leadership level of the Roundtable should consist of a five-party executive committee representing several societal sectors: the executive branch of government (SCEP), the two governmental institutions with legal authority over the MBR (CONAP and the Institute for Anthropology and History, IDAEH), the Association of Forest Communities, and a civil society coordinating secretary, Asociacion Balam. The executive committee is responsible for defining meeting agendas and coordinating activities.

The Roundtable consists of monthly plenary meetings in which all members participate. At least five plenary meetings have been held annually since 2006, with discussions ranging from topics such as security and governance to infrastructure development and internal community conflicts. There were also occasional special meetings, with participation of the President of the Republic and ministers. Commissions with more regular meetings were created to deal in depth with technical themes such as Mirador access, security, community dynamics, and drafting of the new Master Plan for the park. All interested parties from the Roundtable may participate in commission meetings, and results are reported in plenary meetings, where all decisions are taken. Decisions must be made by consensus amongst all members.

Membership to the Roundtable is open. However, all member organizations must be formally accredited, with a named representative and an alternate with decision making authority. New organizations can gain membership by submitting a letter of intent, naming representatives, and being accepted by consensus amongst existing members. To date, nine organizations have joined the Roundtable, for a total of 35 member organizations. Currently, the Roundtable consists of 7 governmental institutions, 4 municipal governments, 8 community organizations, 13 NGOs, 2 private companies, and one university (see Figure 2).

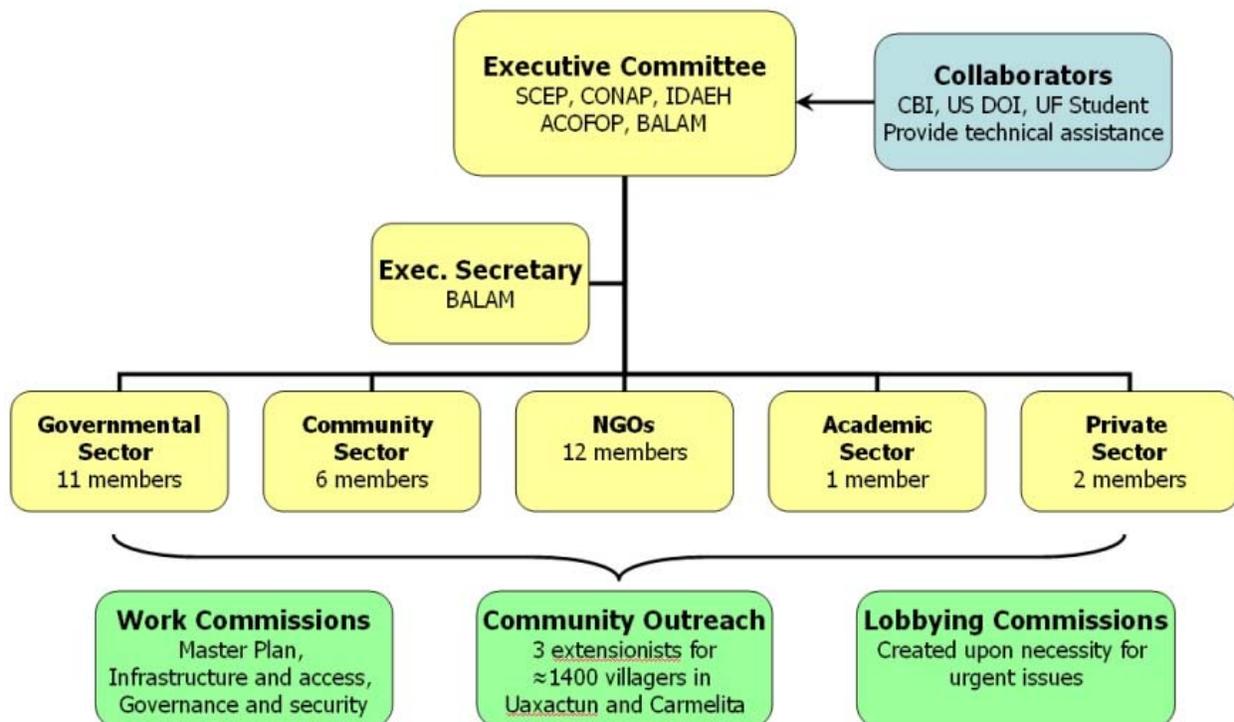


Figure 2. Roundtable organizational structure

The Roundtable is also accompanied by collaborating organizations with no direct stake in its outcomes. The United States Department of the Interior supported technical aspects of infrastructure design, interpretation, community organization, and master plan drafting. The Consensus Building Institute (CBI) and a graduate student at the University of Florida (the authors of this paper) supported and advised the Roundtable's executive committee in the design, facilitation, and leadership of the Roundtable, as well as monitoring and evaluating the process.

After much analysis about whether to employ a local or non-local facilitator and consideration of potential candidates, the executive committee decided that no ideal candidate existed. Instead, a self-organized facilitation team emerged from Roundtable members and supporters, with coordination from Balam. The facilitation team attempted to publish all meeting minutes, proposals, and budgets on a basic webpage, but later opted for the development of bulletins and e-mails to keep participants informed.

From the outset, it was clear that community outreach would be important to the success of the Roundtable. Initially, the Roundtable employed three community members full-time to communicate basic information about the Roundtable and the proposals being discussed to the two communities most impacted by development decisions – Carmelita and Uaxactún. However, community liaisons were perceived as biased or unproductive by some community members. Consequently, extensionists from outside of the communities were employed instead and occasional meetings with Roundtable members were held within the communities.

The abovementioned structure was developed to:

- Create the reality and the perception of a fair and balanced process (multi-sector executive committee, consensus decisions)
- Build legitimacy by institutionalizing the Roundtable from a place of authority (formal inauguration)
- Ensure participation of members with decision making authority (accreditation)
- Allow broad and multiple types of participation (commissions, outreach)
- Increase transparency and proactive information sharing (web page, outreach)

While this structure has distinct advantages, it has also created process challenges. Below, we describe the power of the Roundtable structure to produce both tangible and intangible results, and follow this with discussion of the ongoing hurdles and costs of coordinating such a participatory process.

## RESULTS OF THE MIRADOR-RIO AZUL ROUNDTABLE

### **Tangible outcomes**

#### *1. Formalization and institutionalization of the Roundtable*

As mentioned above, the Roundtable was formalized as a new institutional structure. Internally, this was achieved with a letter of intent, statutes, and accreditation of members. In order to give the structure legal stature, the Roundtable members made a consensus decision to seek a CONAP

resolution, writing and signing a letter and sending a commission to lobby at a high-level meeting in Guatemala City. CONAP emitted a legal resolution recognizing the Roundtable on July 5, 2007 with a mandate to coordinate activities in the zone. In discussions about whether to further formalize the Roundtable through a higher level governmental decree, members realized that the 17-year old law creating the Maya Biosphere Reserve (decree 5-90) contained a clause stipulating the creation of a coordinating committee for the reserve that had never been realized. The Roundtable instigated the conception of the coordinating committee, which itself has served as a space for aligning institutional actions, and couched Roundtable activities within the legally recognized entity.

## *2. Regional planning*

When the Roundtable began, the master plan for Mirador-Rio Azul National Park had expired and needed renewal. The Roundtable created a commission to begin work on a new master plan and organized a joint learning trip to El Mirador to give participants an on-the-ground understanding of the area. During discussions, it became clear that the zone had three incoherent planning documents from three different institutions: CONAP's expired master plan for the national park, IDAEH's management plan for cultural and historical sites, and the Center for Conservation Studies' (CECON) master plan for Dos Lagunas Biotope. For the first time, IDAEH, CONAP, and CECON agreed to integrate their master plans in a joint planning effort. They held a formal evaluation of former master plans, created an integrated work plan for developing a master plan, and raised \$30,000 to begin work. The strategic planning process consisted of more than a dozen workshops which were intertwined with Roundtable meetings. The new legally binding master plan, including zoning and regulations for development, was published in 2009.

## *3. Tourism infrastructure and access*

Poor access and lack of infrastructure severely limit tourism development in El Mirador. However, infrastructure development, especially of access routes, has always been an extremely controversial issue. Tourists traditionally traveled to the site with mule tours, primarily benefiting local communities, and proposals for other modes of mass transit created uncertainty about the future distribution of benefits as well as ecological and archaeological impacts. To navigate amidst these concerns and avoid decision making stalemate, the Roundtable first created and approved plans for essential, non-controversial structures in and en route to El Mirador, enabling quick construction of park guard houses, bathrooms, and interpretive signs. For the more difficult issue of access, a commission was formed in order to analyze brainstormed options such as roads, a small-gauge train, bicycle trails, mule trails, airplanes, and helicopters according to a formal multi-criteria decision process. In the first stage of analysis, CONAP's lawyers ruled out construction of any new roads – one of the major latent fears that had caused distrust amongst Roundtable members for years. Civil engineers from DOI assessed the ecological impacts and construction costs of each option in a technical report. Finally, as with the master plan, Roundtable members jointly secured funds to develop a tourism development plan. Numerous workshops involving more than 300 people resulted in a stepwise development plan oriented primarily towards nature tourism and adventure trekkers, as well as a limited number of high-end visitors via helicopter tours. The plan respected the norms and zoning of the master plan, calling for a first stage of basic infrastructure development to slowly increase the number of trekkers without altering the historic means of access.

#### *4. Capacity building and Community Organization*

The two communities most central to management decisions in the Mirador-Rio Azul zone are Carmelita and Uaxactún - the only two entry points for overland tourist access to El Mirador. Outreach activities were directed at these communities to inform community members of the Roundtable objectives, structure, and decisions. However, due to fractured relationships within the communities and continued distrust of outside proposals, community organization and buy-in was a major challenge. In order to improve representation and administrative capabilities, Roundtable members prioritized strengthening internal cohesion and local governance structures. Balam hired a community extensionist to work full-time in Carmelita, helping to organize community groups, develop proposals for community development, and provide clear communication between community members, NGOs, and the Roundtable. Since tourism is subject to shocks and uncertainty, the Roundtable supported communities in a broad range of areas. Community Development Councils were strengthened, with several projects successfully funded and implemented, contributing to the communities' capabilities of managing their own development. Management procedures and profitability of community-based forest concessions were improved through the implementation of periodic audits, training of supervisory accountability committees, and the implementation of debt reduction plans in community organizations. Control and protection activities were improved by strengthening critical control checkpoints, providing basic equipment, and implementing a unified patrol form. Thirty community members were trained and certified as tourist guides through a local training institution, the tourism cooperative equipped, and a community "beautification day" was celebrated in Carmelita to improve village aesthetics while promoting community cohesion.

#### *5. Environmental protection and security*

Although the Roundtable was conceived around tourism development disputes, during early meetings it became clear that problems with environmental protection and regional security could undermine both conservation and development. Proponents and opponents of Mirador development agreed to prioritize the creation of an environmental protection strategy based upon two major lines of activities: 1) increasing institutional presence, and 2) strengthening the justice system. The Roundtable endorsed a \$2 million proposal to the UK Department for International Development (DFID) to be implemented by a consortium of Roundtable members. Since 2008, governmental capacity and efficacy has been improved through training of CONAP, IDAEH, CECON, natural resource police, and justice system officials in protected areas laws and natural resource protection. Six permanent Protection and Control Centers were established and multi-institutional patrols were increased with army, police, and CONAP park guards. Monitoring capacity for threat detection was improved using over flights, remote sensors, automatic cameras, and information management tools. These actions resulted the recuperation of 123,000 hectares of misappropriated state land, which was largely in the hands of illegal ranchers. More than 10,000 head of cattle were voluntarily removed from illegal ranches in the MBR due to fear of confiscation. Forest fires and deforestation from 2010-2012 were far lower than the historical average, and wide scale reforestation is being observed for the first time ever in the MBR. Furthermore, there has been increased efficacy of justice system, including improved inter-institutional coordination and injunctions against illegal ranches.

## *6. Lobbying and fund-raising*

The Roundtable has elevated the profile of the Mirador-Rio Azul zone and successfully used its influence for political lobbying and fundraising. The Roundtable has been able to influence the definition, prioritization, and coordination of investments in the MBR, raising more than \$9 million directly and supervising the allocation of a \$34.1 million Interamerican Development Bank loan and Global Environment Facility matching grant. The Roundtable itself has been funded by WCS, USDOJ, DFID, The Critical Ecosystem Partnership Fund, and Flora Family Foundation. In July 2008, President Colom publicly launched a government project called *Cuatro Balam* (Four Jaguars) centered on sustainable development of the El Mirador area, and named a presidential delegate with specific instructions to coordinate investments with the Roundtable. Roundtable declarations have helped set the stage for policies enabling community conservation incentive agreements and a REDD+ initiative.

## **Process outcomes**

### *Pluralism and linkages*

The structure of the Mirador-Rio Azul Roundtable brings together multiple types of stakeholders, including high-level government officials, local government, civil society organizations, private businessmen, academics, donors, and *campesinos*, representing a diversity of interests and worldviews. The Roundtable has also created connections across multiple scales by linking leaders at the regional, national, departmental, municipal, and village level, each with some autonomy over management decisions and actions, but also with some shared and overlapping responsibilities. These cross-scale linkages have led to discoveries of shared goals and opportunities, eventually producing synergies between donors, politicians, and local managers. The most poignant example of such a synergy was the development and funding of the abovementioned strategy to improve governance along the route to Carmelita, a region dominated by illegal ranching and rampant forest conversion.

### *Communication and negotiation*

The Roundtable is predicated on the principle of respectful dialogue. As such, facilitators have focused on promoting equity and efficiency of discussion to arrive at universally acceptable proposals. However, striking the correct balance between maintaining a diversity of inputs by allowing all members to voice opinions and feel heard, and keeping meetings concise and productive has been a major challenge. Facilitators allow more opportunity for participants who do not speak and have used timers and colored cards to limit interjections of dominating individuals. Of Roundtable members surveyed on four separate occasions from 2007-2011, 96-97% consistently reported that they had opportunities to express their opinions, with the remaining 3-4% reporting little or no opportunity. When asked whether all members had equal opportunity to express their opinions during meetings, 73-100% of members responded “yes”. The wide variation likely evidences variability in discussion dynamics between meetings. Besides meetings, informal conversations during coffee breaks, lunch, and other spaces have been vital to sharing knowledge and building relationships.

### *Decision-making*

The Roundtable statutes state that decisions must be reached by consensus amongst members, raising facilitation challenges to adequately balance power between participants with very different backgrounds, experiences, and capacities. Issues are usually brought to decision after thorough technical analyses, presentations, and debate, when there is apparent widespread support. Of surveyed Roundtable members in 2008, 67% felt that their ideas were incorporated fairly well in decision making. However, while about 75% of NGO and government members reported incorporation of ideas, only 38% of community members felt that their ideas were being taken into account. This discrepancy of perceived equity between community members and other Roundtable members was also reflected in fairness of the decision making process and resultant decisions. Approximately 90% of NGO and government members felt that the decision making process was fair, while only 50% of community members responded favorably. Similarly, 100% of government officials and 88% of NGO members felt that the resultant decisions would be fair, while only 50% of community members responded so. Interestingly, reported perceived power showed the opposite pattern. Nearly 90% of members of all sectors reported a fair to strong ability to influence decisions. However, while 73% of NGO members and 57% of government members reported having the power to block decisions that they didn't agree with, 100% of community members reported such power. The perceived blocking power within communities is likely the product of empowerment due to successful obstruction of previous projects promoted by powerful actors including oil exploration, road building, and the development of the Mirador Basin Special Protected Area. Over the years, perceived decision-making fairness has remained stable, with 0-8% of participants reporting dissatisfaction in post-meeting surveys.

### *Social learning*

Social learning is a complex and difficult-to-measure concept. The greatest evidence for social learning may be seen in the adaptive measures taken by the Roundtable. For example, access infrastructure discussions were postponed in order to attend to stakeholders' urgent concerns about governance and environmental security. The shift in objectives represented a joint learning experience blending local field experience and knowledge, conceptual and theoretical ideas, and varied interests and motivations, and deeply changed collective and individual understanding of the situation, as well as behavior. When participants were asked what they had learned through participation in the Roundtable, 61% mentioned that they had a better understanding of the roles and interests of other Roundtable members, and 55% responded that they had broadened their knowledge of the situation and its context. Sixty percent of participants responded that different Roundtable members had different underlying understandings of the situation. However, 88% of surveyed members felt that they had a fair to excellent understanding of other members' interests, and 73% felt that the other members understood their interests. When asked the open-ended question, "Do you think the Roundtable members learned anything as a group?", 58% of participants responded that they had learned the importance of dialogue and consensus building and 39% responded that they had learned that they could get more done through teamwork than alone.

## Intangible outcomes

### *Social and human capital*

In 2008, 67% of participants reported that their involvement in the Roundtable had led to *improved personal relationships* with other Roundtable members, while 33% reported no change. Several participants reported that the Roundtable had led to *new friendships*, even amongst members of formerly polarized groups. Furthermore, 85% of Roundtable members reported that they were *collaborating with other Roundtable members* outside of the Roundtable meetings. Although many of these collaborations began before the creation of the Roundtable, several notable collaborations were a direct result of dialogue and relationships created through the Roundtable. In general, 81% of Roundtable members reported a relatively high level of *trust* in other Roundtable members. It is noteworthy to mention that a significantly smaller proportion of community members reported trust of other participants (67%) than NGO employees (81%) and government employees (89%). Conversely, 100% of community members, 94% of NGO employees, and 89% of government employees reported that they were willing or very *willing to share their knowledge*. Participants from all sectors unanimously reported a *willingness to negotiate other conflictive issues* with Roundtable members.

### *Enhanced legitimization for policies and action*

The Roundtable has created greater oversight, accountability, and transparency of decision making and policy implementation. Nearly 95% of members reported *hope* that the Roundtable would lead to a desirable outcome – this level of reported hope has remained consistent in post-meeting surveys over six years. Expectations for *public support of Roundtable decisions* varied between sectors. One hundred percent of government officials, 94% of NGO members, and 75% of community members who participated in the Roundtable reported expectations of relatively high levels of public support. A survey of 50 community members from Uaxactún and Carmelita showed that 75% of village members were satisfied with the decision making process, 15% had no opinion, and 10% were unsatisfied. Amongst Roundtable members, greater than 85% of participants have consistently responded that they were satisfied or very satisfied with the Roundtable in post-meeting surveys.

## INSIGHTS AND CONCLUSIONS

Development of El Mirador is a complex and conflictive problem, not unlike many natural resource problems around the world. For several years, proponents of top-down decision making and management of El Mirador were backed by the unwavering political support of the presidency, members of congress and tens of millions of dollars. However, their efforts were thwarted at the planning stage, resulting in little on-the-ground progress and an increase in social tension and conflict.

The Roundtable – an adaptive co-management structure - was a last-ditch attempt to reconcile the conflict caused by top-down management and served as an antidote to decision making stalemate (see Table 1). Despite challenges, it has produced substantial tangible and intangible results, and still survives six years later.

Below we: 1) identify factors contributing to the Roundtable's success, 2) examine major ongoing challenges, and 3) list practical lessons for managers promoting ACM in other contexts.

### **Why has the Roundtable been successful?**

We identify nine critical points to the successes of the Roundtable:

1. **Favorable preconditions:** Overt conflict had led to crisis and impasse in the face of pressing threats from ranching and drug trafficking encroachment, necessitating negotiation and openness to others' ideas.
2. **Responsiveness to stakeholder interests:** All parties perceived foreseeable tangible benefits from successful negotiation with respect to underlying concerns.
3. **Proactive involvement of a range of voices:** The process was designed to be inclusive, representative, and fair.
4. **Institutionalization from a place of authority:** Formal institutional recognition and the participation of two presidents and high-level institutional directors helped legitimize the Roundtable. Participation at meetings has been very high, and participants have had decision-making capacity to act on behalf of their organizations.
5. **Coordination at a practical level of getting things done:** The Roundtable has worked at a geographic scale that matches the area of interest for stakeholders.
6. **Strong facilitative leadership:** The Roundtable has had strong leadership with legitimate convening power, including a single bridging organization responsible for coordination, and direction from a multi-sector executive committee. Key personalities were able to bridge the gap between stakeholders with very different backgrounds and to maintain a link between the interests of the group and political interests of those in power.
7. **Preparation for predictable surprises:** The Roundtable facilitation team has constantly monitored attitudes and opinions in order to provide reflexive process management and to quickly identify and actively address the issues most important to its members.
8. **Ability to build long-term political support:** The Roundtable has survived political transitions, spanning three governmental administrations.
9. **Access to funding:** The Roundtable has been able to raise money for its own operations and for implementation of agreed-upon actions.

### **Ongoing challenges**

Adaptive co-management is an evolving problem-solving process, with continuously changing challenges (Olsson et al. 2004, Carlsson and Berkes 2005, Folke et al. 2005). The literature has often highlighted obstacles such as power asymmetries among stakeholders, insufficient commitment of resources, negative group dynamics, and information asymmetries. Ongoing challenges to the Roundtable include community representation and centralized Roundtable leadership.

### *Maintaining communities involved and informed*

Adequate community representation and communication lie at the core of successful ACM efforts (Plummer and Armitage 2007). However, groups are not easily bounded, identified, or cohered (Bickford 1999), and group formation involves complex and unstable processes of self-identification and representation (Edmunds and Wollenberg 2001). Lack of stakeholder group organization and poor communication or fidelity between representatives and their constituencies can be major hurdles for MSPs – especially for representation of disadvantaged and marginalized groups (Faysse 2006). From the Roundtable’s beginning, Balam strategically aimed to ensure broad-based understanding among communities regarding the purpose of the Roundtable and the mechanisms for influencing its activities. Given the scarcity of collaborative decision-making structures in Latin America and low levels of public trust in authority, it was critical for the Roundtable to attempt to produce ‘early-wins’ - tangible impacts that can improve people’s lives. However, achieving meaningful progress by working with community organizations has been hampered by internal community conflict, organizational weakness, and perceived illegitimacy of local governance structures. For example, the mayor of Carmelita was elected by a small fraction of village members at an impromptu meeting. He was later also elected president of the community cooperative, further centralizing authority to an individual whose power was already perceived as unrepresentative by a large sector of the community. By working through existing structures, it was difficult to gain widespread acceptance of Roundtable outreach activities, especially since the mayor appointed his daughter-in-law as the local Roundtable point person. Roundtable organizers have attempted to compensate for internal power imbalances by employing outreach technicians from outside the community, focusing on universally beneficial activities, holding meetings in neutral locations, investing extra effort to reach out to marginalized groups, and actively helping to manage conflicts.

### *Building long-term political support*

A second issue vital to the Roundtable and to multi-stakeholder efforts in general, is preparing for and surviving political transitions. When multi-stakeholder decision-making efforts are tied to political tides, a change in leadership can dissolve the institutional support needed to implement key group agreements and decisions. The Roundtable used several strategies to insulate itself from political transitions, which brought in new presidents and new leadership of all the governmental institutions participating in the Roundtable. First, organizers attempted to represent public interests that superseded those of particular parties and devolve leadership to the grassroots level. Second, the Roundtable institutionalized its work within a permanent agency, CONAP. Lastly, members lobbied key political champions of several major parties during and after presidential elections, including congressmen and presidential candidates. Despite these efforts, governmental transitions were tumultuous. Several founding Roundtable members were lost as their institutional appointments expired. New appointees entered without the same level of understanding and buy-in, and in some cases rejected the Roundtable as a project from the era of the former administration. Other appointees asked to postpone meetings until they had time to understand the issues and establish positions, creating a long lag between meetings.

### *Strengthening group empowerment through shared leadership*

Collaborative decision-making efforts often require the impetus of unique leaders with a vision for ways for diverse parties to work more effectively together. In the case of the Roundtable, Balam’s director, Bayron Castellanos, possesses both the institutional knowledge and cultural

sensitivity to motivate a broad of stakeholders who typically do not join forces to collaborate. However, a disproportionate burden of leadership and coordination has fallen to the shoulders of Balam and Castellanos to bring this leadership to bear. In part, this is because the level of skill required to manage a multi-stakeholder process is not easily cultivated. The centralization of leadership and coordination has not caused major problems yet, but for the Roundtable to succeed in the long term, leadership will likely need to be further decentralized.

Table 1. Comparison between conventional top-down decision making before the Roundtable and the adaptive co-management approach as practiced in the Mirador-Rio Azul Roundtable

	Business as Usual (pre-Roundtable)	Adaptive Co-Management (Roundtable)
Goal	Technically viable plans	Technically, socially, and politically viable plans
Primary client	Few powerful actors (Political leadership, foreign interests, business associates)	Several societal sectors, with multi-level representation
Role of public participation	Provide occasional input and advice	Build shared understanding and agreement
Decision making protocol	Financial and political influence, litigation	Seek unanimity among amongst all societal sectors, settle for overwhelming agreement
Dialogue between disputants	Infrequent and antagonistic	More frequent, collaborative, and constructive
Tangible outcomes	Fundraising, archaeological restoration and investigation (other advances limited by social rejection of unilateral development plans)	Master plan, infrastructure construction, stakeholder capacity building, environmental protection, fundraising
Intangible outcomes	Distrust and frustration	Identification of shared interests, improved relationships, increased trust, hope, public support
Political Support	Support of Presidents Portillo, Berger	Support of Presidents Berger, Colom

## Take-away lessons for managers

Although the context of the Mirador-Rio Azul Roundtable is unique, several principles are universal. This case study confirms the basic precepts of adaptive co-management theory, emphasizing that:

- **Processes that are inclusive, representative, and perceived as fair** *can produce better and faster results than top-down management for problems with high social complexity*
- **Facilitators must attend to both group process and outcomes** *to ensure that decisions are perceived as fair, informed, and wise, and that results benefit key constituencies quickly and in significant ways*
- **Organizers must be alert and flexible** *in order to quickly identify and address surprises*

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