

WHITE PAPER

Collaborating for resilience in complex aquatic resource commons: Lessons for policy and practice

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Collaborating for resilience in complex aquatic resource commons: Lessons for policy and practice

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ABSTRACT

How can multi-stakeholder dialogue be used to assess and address the roots of environmental resource conflict in complex commons characterized by multiple levels of governance? This paper presents the results of a collaborative initiative aimed at strengthening aquatic resources governance in three ecoregions—Lake Victoria (Uganda), Lake Kariba (Zambia), and Tonle Sap Lake (Cambodia)—implemented from mid-2010 through early 2013. Analysis drawn from multi-stakeholder dialogue workshops and follow-on activities in each of the lake systems characterizes the sources of resource conflict, associated governance challenges, and opportunities for institutional innovation to address these. These innovations include attempts to increase community voices in private sector investment decisions and secure access rights for marginalized households in the face of competition, as well as strengthen community-based co-management, resource protection, public health, and gender equity. For each case, we consider interactions across scales with regard to ecosystem services, livelihood opportunities, and institutions of government, civil society, and the private sector. We then compare the process of participatory dialogue, action, and learning in each of the sites, noting the core set of principles employed, the diverse approaches to applying these in different socio-cultural and political contexts, and the outcomes as measured through evaluations led by local actors. The paper concludes with a synthesis of lessons regarding the conditions under which such an approach to multi-stakeholder dialogue is appropriate, the contributions this approach can make to improve multilevel governance as well as its limitations, and strategies for improving this domain of practice in the future.

Keywords: resource conflict, competition, dialogue, governance, action research, participatory learning and action

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EXECUTIVE SUMMARY

How can multi-stakeholder dialogue be used to assess and address the roots of environmental resource conflict? The German Federal Ministry for Economic Cooperation and Development (BMZ) commissioned a three-year research project focused on this question. This paper summarizes the outcomes and lessons.

Competition and conflict are intrinsic elements of natural resource management. When combined with other risk factors, however, natural resource conflict can aggravate the potential for broader social conflict. The “Strengthening Aquatic Resource Governance” project supported institutional innovations aiming to: (1) build resilient livelihoods among poor, rural producers who depend on wetland and freshwater resources; (2) generate gains in nutrition, income, welfare, and human security; and (3) reduce the likelihood of broader social conflict.

The project focused on three ecoregions: Lake Victoria, with a focus on Uganda; Lake Kariba, with a focus on Zambia; and Tonle Sap Lake in Cambodia. These ecoregions are characterized by persistent poverty, high dependence on aquatic resources for food security and livelihoods, intense resource competition, limited ability of local stakeholders to effectively influence decision-making processes and policies, and significant new pressures that could lead to broader social conflict if not effectively addressed.

Working in partnership with government, community, and civil society actors, the initiative applied a common approach to stakeholder engagement and action research that we call “Collaborating for Resilience” (CORE). In each ecoregion, collaborators assisted local stakeholders in developing a shared understanding of risks and opportunities, weighing alternative actions, developing action plans, and evaluating and learning from the outcomes.

Institutional innovations supported under this initiative included attempts to increase community voices in private sector investment decisions and secure access rights for marginalized households in the face of competition, as well as strengthen community-based co-management, resource protection, and public health. Significant outcomes include the following:

- **Improved attitudes towards collaboration and heightened dialogue among community groups, NGOs, and government.** Villagers at the Kachanga landing site in Uganda, for example, demonstrated a new willingness to invest in community-led actions after mobilizing to build a shared latrine and biogas facility.
- **New and successful engagement with private investors.** Overcoming initial reluctance on the part of the local chief, villagers in the Kamimbi fishing village in Zambia, for example, have negotiated agreements with commercial aquaculture investors to maintain fishing grounds and access routes, as well as to secure local jobs.
- **Influence on government priorities in addressing the needs of fishing communities.** Floating fishing communities in Cambodia, for example, have partnered with government to introduce innovative joint patrols to stem illegal fishing, and are working to gain approval for an experimental model of community-based commercial fish production.
- **Engaging new sources of support to scale out innovations.** UN agencies and the Ministry of Water and Environment in Uganda, for example, are working to respond more effectively to the priorities of lakeshore communities in health and sanitation. The Zambian Environmental Management Agency is extending the dialogue approach to strengthen community voices in environmental impact assessment processes. And in Cambodia, the Fisheries Administration has committed to support evaluation of local conflict management initiatives in order to draw lessons for broader policy implementation.

Experience during project implementation has confirmed the need for and the value of a collaborative, stakeholder-driven approach to addressing the roots of resource conflict. Cross-regional comparisons signal a range of emerging lessons. A first set of lessons is oriented towards policy officials and development agencies, and concerns the planning and implementation of initiatives to address resource competition and invest in capacity for conflict management:

- **A dialogue approach requires time and stakeholder commitment.** For a dialogue to begin, competing groups must be willing to meet and explore solutions. Outside investments may deliver few results if not matched by local actors' belief in the value of collaboration. Participants will only see collaborative processes as valuable if the outcomes bring direct benefits as defined by the communities concerned.
- **Understanding the institutional and governance context is key to identifying appropriate areas for support.** Sometimes there is space for innovation in the absence of policy change, but reforms can provide a particularly opportune moment for local innovation if national agencies can engage effectively with local communities, adapt, and respond to their priorities.
- **Policy changes can aggravate conflicts when instituted without adequate stakeholder involvement.** National policy initiatives such as promotion of Nile perch exports in Uganda or maize production in Zambia can leave fishing communities marginalized from decision-making, contributing to local tensions and conflict. A rapid attempt to introduce new rules, such as the post-reform fishing regulations in Cambodia, can also shortcut local input and build resentment. Achieving effective stakeholder involvement in reform decisions depends on robust civil society organizations.
- **Investing in collaboration and innovation requires a tolerance for uncertainty and risk.** Supporting local innovations means reorienting many of the conventional practices of project management. Blueprint plans, fixed timelines of activities, and centralized decision-making must give way to adaptability, joint problem assessment, and planning in mixed stakeholder groups. These dialogue processes can open the possibility of more fundamental advances in conflict management.

A second set of lessons is geared towards field-level practitioners in government and civil society who are working with diverse stakeholders to better manage resource competition, increase local livelihood resilience, and reduce the likelihood of broader conflict:

- **A structured process of multi-stakeholder dialogue can open new opportunities for collaboration.** Understanding stakeholders' prior experiences with conflict and collaboration can help shape the approach, and a wide range of possible methods and techniques are potentially useful in creating a quality dialogue process. Effective dialogue can avert disputes before they escalate, and may be welcomed by new players, including outside investors.
- **Attention to women's voices and decision-making roles can open new pathways to institutional change.** Observing gender inequities and other power imbalances can lead to creative adaptations to include all voices in the dialogue process, such as using informal consultations prior to or on the sidelines of a multi-stakeholder workshop. Supporting individual change agents in government, civil society, and the private sector who are prepared to advocate for women's voices and concerns can help shift institutional priorities.

- **Building cross-scale linkages and accountability can help sustain local initiative.** Questioning assumptions about stakeholder roles, including, for example, what may be blocking effective communication between communities and government, is the first step toward reinforcing effective linkages. Addressing local disputes often requires support from higher levels of administration, and successful examples of this type of collaboration can help strengthen mechanisms of accountability over time.
- **Effective stakeholder engagement can build a culture of learning and innovation.** Structured reflection is critical during implementation of institutional innovations, addressing open-ended questions such as “What changes have we seen?” and “What are the obstacles remaining?” Participatory monitoring and evaluation efforts that focus first on the needs of local stakeholders can also build capacity for improved collaboration among local change agents, government agencies, and external funders.

These lessons from sustained efforts at multi-stakeholder engagement demonstrate that investing in capacities for conflict management is not only practical but can also aid broader improvements in resource governance. Systematic efforts to compare and analyze the results of future experience in this domain across multiple resource systems will further deepen our understanding of the factors that contribute to lasting transformation.

1. Introduction

The links between natural resources and conflict have received increasing attention over the last two decades. Research has shown that natural resources have played a role in 40 percent of all intrastate conflicts in the last 60 years, and the affected countries are twice as likely to relapse into conflict in the first five years following a settlement (Binningsbo and Rustad 2008). A large part of this research has focused on the role of high-value resources such as oil, minerals, timber, and diamonds in creating and sustaining conflict, especially large-scale conflict. At the same time, competition over scarcer renewable resources such as land and water has demonstrated significant conflict potential, especially on the local level. These conflicts are frequent and impact the daily lives of many communities around the world (Rüttinger et al. 2012).

Research has also shown that natural resources have great potential to foster cooperation, transform or prevent conflicts, and build peace. The sustainable and equitable management of natural resources can prevent conflict, for example, by reducing grievances and building resilient livelihoods (UNEP 2009). However, as the global population is increasing, economies are developing and cities are growing, and the demand for natural resources is increasing, as are the negative impacts on the environment. At the same time, environmental change such as global warming will have potentially large-scale impacts on water, land, and ecosystems. These issues bring new urgency to the quest for approaches that transform the conflict potential of natural resources and harness their capacity for peace.

While new tools have been developed to assess the linkages between environmental resources and conflict, and to identify opportunities for peacebuilding through collaborative resource management (Rüttinger et al. 2013), these tools have not previously been adapted or widely applied in addressing aquatic resources. Such tools also remain largely confined to use by external agencies, whereas much remains to be learned about undertaking collaborative assessments with local stakeholders and building on these insights to support institutional innovation and learning, including approaches that draw on and enhance existing, traditional conflict resolution processes.

Taking these challenges and observations as a starting point, the German Federal Ministry for Economic Cooperation and Development (BMZ) commissioned a three-year research project, “Strengthening Aquatic Resource Governance” (STARGO). The project focused on developing institutional innovations aiming to: (1) build resilient livelihoods among poor, rural producers who depend on wetland and freshwater resources; (2) generate gains in nutrition, income, welfare, and human security; and (3) reduce the likelihood of broader social conflict.

These institutional innovations were based on inclusive, multi-stakeholder engagement across different governance levels and action research that enabled diverse stakeholders to assess and manage resource competition equitably. The goal was to effectively link sustainable resource and conflict management to support social-ecological resilience, including capacity to adapt to future risks such as climate change. The project and research focused on building such institutional innovation in three ecoregions: Lake Kariba, with a focus on Zambia; the Tonle Sap/Lower Mekong region of Cambodia; and Lake Victoria, with a focus on Uganda. These ecoregions are characterized by persistent poverty, high dependence on aquatic resources for food security and livelihoods, intense resource competition, limited ability of local stakeholders to effectively influence decision-making processes and policies, and significant new pressures that could lead to broader social conflict if not effectively addressed.

This paper summarizes and compares the experiences in the three ecoregions using a common approach to stakeholder engagement and action research that we call “Collaborating for Resilience” (CORE). In each ecoregion, collaborators assisted local stakeholders in developing a shared understanding of risks and opportunities, weighing alternative actions, developing action plans, and evaluating and learning from the outcomes.

The next section compares the governance challenges and sources of resource conflict in each ecoregion, followed by an overview of the process for stakeholder engagement and action research. Subsequent sections then describe case studies of institutional innovations that resulted in each ecoregion, as well as a synthesis of policy lessons for governments, development agencies, and practitioners working on resource governance and conflict prevention.

2. Governance challenges and sources of resource conflict

This section summarizes the context for the work in each ecoregion, taking into account governance challenges, sources of resource conflict, and opportunities for addressing these. Each case study considers interactions across scales with regard to ecosystem services, livelihood opportunities, and institutions of government, civil society, and the private sector.

a. Putting conflict in context

Conflicts are a normal part of societies and not inherently negative. In essence, conflicts are “a relationship among two or more parties, whether marked by violence or not, based on actual or perceived differences in needs, interests and goals” (Means et al. 2002: 9). This means that conflict can often be an important force for social change. At the same time, if not handled well, conflict can escalate and develop into a negative force, destroying human life, the environment, and social relations (Means et al. 2002: 34).

Managing allocation of and access to resources inevitably includes diverging interests that can lead to conflict. Conflicts also arise around negative impacts on natural resources, such as the pollution of water resources or destruction of ecosystems. Local or community-based resource conflicts refer to conflicts that take place on a sub-national level; for example, when different groups within a community fight over the allocation of forest resources. However, while these conflicts take place at local levels, they often involve regional, national, and even global actors (Engel and Korf 2005). From an environmental and livelihoods perspective, these conflicts can undermine existing institutions that govern resources and thus lead to unsustainable exploitation, environmental degradation, economic decline, and deteriorating livelihoods. From a conflict perspective, these disputes can feed into or interact with other grievances and conflict structures. If they turn violent, they can rip apart the entire fabric of society (Castro and Nielsen 2003).

Local resource conflicts are complex and highly context specific. This means that there is no simple or deterministic causal link between natural resources and conflict. Environmental and resource-related factors are always only one among multiple causes and interact with the broader social, political, cultural, and economic context (Bächler 1994, Homer-Dixon 1999, Bächler et al. 2002, Carius 2006, Carius et al. 2008). One important factor is governance: If governments and governance institutions are legitimate, inclusive, representative, and transparent, conflicts can often be solved or managed in a peaceful manner (Houdret et al. 2010). On the other side, conflicts are more likely to develop and escalate when certain groups are marginalized or excluded. These dynamics can be exacerbated by strong group identities, which can be used as a potent mobilization resource and strategy to escalate a conflict, especially when it turns violent (UNDP 2004).

b. Resource competition and conflict in three ecoregions

Each of the three ecoregions targeted in the STARGO project concerns a large lake ecosystem of international significance. The two African lake systems are bordered by multiple states (Zambia and Zimbabwe in the case of Lake Kariba; Uganda, Kenya, and Tanzania in the case of Lake Victoria), while Tonle Sap Lake in Cambodia is directly affected by decisions of upstream and downstream users of the Mekong River system (Laos, Thailand, China, Vietnam, and Myanmar).

In all three lake systems, fisheries resources are of central importance for food security, rural livelihoods, and national economies. For this reason, conflict potential can increase if the resources and ecosystems are allowed to degrade to the point of being unable to sustain rural livelihoods (Al Mangouri 2004). Sustainable management is thus critical to reducing the vulnerabilities that poor families face and to maintaining social stability.

Amid increasing competition over natural resources, national governments in all three of the focal countries (Uganda, Zambia, and Cambodia) have launched significant policy initiatives aimed at decentralization of rural development planning, including natural resource management. This reflects a broader global trend towards a devolution of authority from central to local levels, intended to reduce vertical power asymmetries and support community livelihoods (OECD 2004), as well as increase participation of local communities in local government development planning (Meinzen-Dick and Knox 1999; Ogwang et al. 2009). In the fisheries sector, this includes efforts in all three countries to institutionalize co-management, though limited support services, weak organizational capacity of community organizations, and marginalization of poor fishing households from influence in policy formulation and implementation have posed significant obstacles to varying degrees in each of the countries.

The conflicts in the three lake systems have evolved differently as a result of region-specific histories and institutional dynamics. In Lake Victoria, many small conflicts persist at the communal level that have the potential to escalate quickly and immobilize fisheries management processes. Recent conflict behaviors in Lake Victoria include verbal confrontations and mutual threats between fishers and higher-level authorities, shaming and fines by local authorities, acts of civil disorder by groups within fishing communities, and property destruction and use of violent force by both community members and government authorities. For example, taxes for landing fish at one landing site were increased by the sub-county leaders without proper consultation with stakeholders. This resulted in further interpersonal and institutional conflicts that were angrily aired during project meetings between the STARGO team, the fishing community, and leaders from higher levels of public administration. Theft of fishing gear is also a frequent source of local conflict.

In Zambia, conflicts among natural resource users are taking place in the particularly sensitive context of ethnic marginalization and politically driven change in the racial makeup of the commercial fishing industry. When the Zambezi River was dammed to create Lake Kariba in 1959, 35,000 households, mainly of the Gwembe Tonga ethnic group, were relocated, sometimes under duress from the state (Bourdillon et al. 1985). These communities remain severely marginalized politically, socially, and economically. Currently, Zambian policymakers are pushing to increase the participation of black Zambians in the mainly white-dominated commercial fishing industry. One measure to achieve greater participation of black Zambians was to increase the number of fishing licenses awarded. However, now there are frequent conflicts between the established white commercial fishers, new "small scale" semi-commercial fishers from urban areas of Zambia, and artisanal players (Mhlanga 2006). Recent commercial aquaculture and tourism investments on the shoreline have spawned new tensions over access to the shoreline and fishing grounds. Conflict behaviors included destruction of gillnets by kapenta rafts, confiscation of nets by hotel owners, complaints of noise pollution from engines by hotel and lodge owners, fishing in prohibited zones, and trespassing by villagers on private property.

In Cambodia, fisheries conflicts have been violent in the past, and have included large-scale protests, which helped motivate a series of reforms. Cambodia's freshwater fishery sector reform is a regionally significant example of a policy shift towards decentralized natural resource management. Implemented in two main waves, the first took place in 2000-2001, when 56 percent of fishing lot areas in Tonle Sap Lake were released for community access. In early 2012, the second wave of reform culminated in the complete removal of all inland commercial fishing lots, part of a broader campaign to address poor management, widespread illegal fishing, and ongoing fisheries conflicts around Tonle Sap Lake. Many lakeshore fishing communities also face disputes over conversion of seasonally flooded forest lands for dry-season rice cultivation, often backed by powerful investors from outside the local area (Keskinen et al. 2007).

c. Comparisons, challenges, and opportunities

Despite variation among the three regions in conflict behavior and conflict intensities, there are many similarities. In all three ecoregions, most conflicts stem from attempts to control or limit access of communities to fisheries resources; for example, through licensing, prohibitions on use of certain fishing gears, fishing in proscribed zones, and taxation or other fees on fishing activities. When describing conflict causes, fishers in Lake Kariba, Lake Victoria, and Tonle Sap all point to a "shrinking commons," with increasing pressure on the fisheries resources due to greater fishing effort. Fishing yields per unit effort are perceived to be decreasing, pushing fishers towards illegal practices and theft. Conflicts between large-scale and small-scale fishers are also common. Due to the large capital outlay to enter commercial fishing, commercial fisheries are dominated by groups outside the local communities. These outside groups tend to come from urban areas and (in the African cases) are sometimes backed by investors outside the country.

In the context of broader decentralization reforms, the governments of each of the three focal countries are working to address the intensifying claims on fisheries resources through varying forms of co-management. In Uganda, fisheries growth continues to be export driven (Benkenstein 2012) and policy in turn strongly supports industrial fishers, who are predominantly foreigners, leaving villagers in many local beach management units feeling overlooked. In Zambia, the government has tried to create a space for indigenous Zambians to take part in commercial fishing under a newly revised fisheries law (Government of Zambia 2011), yet the institutions to support co-management are still largely lacking. In Cambodia, government policy has recently shifted to prioritize the livelihoods of small-scale fishers over commercial interests in freshwater fisheries, with renewed emphasis on strengthening a broad network of community fisheries (Ratner 2011).

Decentralizing natural resource management brings a host of challenges, which often include an increase in conflict as local actors maneuver to access new rights, influence resource allocation decisions, capture positions of power at the local level, or take advantage of gaps in enforcement (United Nations 2010; International Crisis Group 2012). At the same time, decentralization reforms can promote improvements on the ground, contributing to local dispute resolution while helping build institutional capacities and relationships for improved resource governance. To pursue such gains, practitioners and policymakers need to pay attention to power differences among actors; support mediation between stakeholders; transparently specify benefit and cost sharing between communities, the private sector, and governments; safeguard against manipulation of community representative bodies by individuals or interest groups; and build gender-transformative measures into resource management planning (Nunan 2006).

3. Process of stakeholder engagement and action research

Noting the differences in the context for resource conflict and collaboration in each of the ecoregions, the STARGO project set out to develop and apply a set of principles for stakeholder engagement and action research aimed at building capacity to manage and transform local resource conflict. This section compares the process of participatory dialogue, action, and learning in each of the sites, noting the key set of principles employed and the diverse approaches to applying these in different socio-cultural and political settings.

a. Principles of CORE

“Collaborating for Resilience,” or CORE, provides a framework for understanding stakeholder interactions and organizing for social and institutional change, distinguished by its emphasis on whole systems, an open search for solutions, and explicit treatment of power. These characteristics make the approach especially well suited to catalyzing collective action to address shared challenges of natural resource management. It is not meant as an approach to intervene in active, violent conflicts, nor to mediate between opposing groups who are unwilling to meet in dialogue and explore options for the future. (For further discussion of these distinctions and the spectrum of available approaches, see Rüttinger et al. 2013.)

The approach aims to transform stakeholder relationships in ways that promote collaboration, learning, and resilience. In a nutshell, the principles can be understood in terms of purpose, people, and process:

- The CORE approach is purpose driven. Collaborating for resilience requires transforming social relationships. Clarity of purpose is the most fundamental of the conditions for transformation. There is a tension in finding a purpose that is broad enough to bring all the key players to the table, yet specific enough to address real needs and motivate action.
- People make the CORE approach work. In preparing for an initiative, organizers actively seek out the participation of key influential people from a wide range of stakeholder groups. In conditions of natural resource competition, this means going beyond a particular sector to address the root causes of the problem and bridging several geographic and institutional scales.
- Process in the CORE approach aims at continuous development of institutional capacity to address the roots of resource competition and build resilience. While the principles of the approach can be used in small planning meetings or large, multi-day dialogue events, the premise is that complex challenges require multifaceted responses over time. This means that action, reflection, and learning from experience are embedded in the process.

The CORE approach provides a set of orienting concepts, principles, and practices that different groups—including civil society organizations, development agencies, and governments—can adapt to the socio-cultural context and particular challenges at hand. For the STARGO project, the process included several months of scoping in preparation for one or more multi-stakeholder workshops. These workshops, while adopting different tools, followed a common format broken into three phases, roughly equal in time:

1. Building a shared awareness of the issues, the possibilities for the future, and the constraints and opportunities of the current situation (the **listening** phase)
2. Debate over different possible courses of action to pursue a common purpose, including an assessment of the groups that may support and oppose such actions (the **dialogue** phase)
3. Deciding on an action plan comprised of commitments by individuals and multi-stakeholder teams, including a reflection on the degree to which these actions will achieve the common purpose (the **choice** phase)

General guidance on the CORE approach, as well as a suite of tools for use in assessment, planning, monitoring, and evaluation, were developed in advance of initiating the multi-stakeholder dialogue processes in each case study site, then adapted on the basis of learning from these cases (Ratner and Smith 2013). The following summaries give an overview of how the process was adapted to the unique context of each local setting.

b. Applications in each ecoregion

Stakeholders in the Lake Victoria region were used to participatory mobilization meetings, but were not familiar with multilevel dialogue processes, especially around fisheries governance. Therefore, the team spent time explaining the broad concepts of dialogue, ownership, and agency behind the CORE approach. To address power imbalances among stakeholders, the STARGO team organized a preparatory workshop for community participants to make their voices heard and enhance their capacity to engage other stakeholders. This was followed by a multi-stakeholder workshop bringing together government representatives from various levels alongside representatives of three lakeshore and island communities.

In the Lake Kariba region, reviews during scoping showed that previous initiatives were limited in large part because of biases towards sectoral interests. STARGO's first workshop mobilized all the key stakeholders involved in the use and management of the lake to envision a desired future against the current realities. A smaller workshop that followed focused on actions that artisanal fishers, on the lowest rungs of the social hierarchy, and other stakeholders like the Department of Fisheries could pursue to promote dialogue. The organizing team opted for a learning-by-doing strategy to foster a locally owned and locally driven approach to developing the capacity for co-management, including linkages with private investors. A parallel action research process addressed trans-boundary trade issues between Zambia and Zimbabwe.

In the Tonle Sap region, civil society groups have long contested the fairness of commercial fishing lots that skewed access to the fisheries in favor of a few powerful groups. Recently, state reforms suspended and then permanently cancelled commercial lots and required agencies to plan and implement changes to increase community-based management. However, civil society networks and a range of relevant agencies were poorly prepared to coordinate their efforts in response to the changing policy context. STARGO supported a lake basin-wide workshop, then focused on facilitating institutional innovations among communities in Kampong Thom Province to engage changes in the policy context and combine perspectives of stakeholders working at basin-wide or national levels with those working at local and provincial levels.

c. Monitoring and evaluation

The monitoring and evaluation (M&E) approach was based on clearly defining the theory of change that underlay and guided each of the project activities and institutional innovations in the three regions. The theories of change and associated output, outcome, and impact indicators focused mainly on the personal and relational dimensions of peacebuilding. The personal dimension includes individual attitudes towards members of another group, while the relational dimension covers the relationships and patterns of interaction between individuals and groups.

The goal was not only to monitor and evaluate the project's activities but foremost to foster local learning. This meant in practice that the M&E systems were designed with a maximum of participation, taking into account that most of the actors involved had little or no experience in M&E. The theories of change, indicators, and monitoring activities were defined and implemented by the local project partners, communities, and other actors (such as government institutions). These activities included structured approaches such as questionnaires, action research activities such as focus group discussions and individual interviews, and narrative descriptions of personal experience such as participant diaries.

4. Institutional innovations and outcomes

Institutional innovations supported under this initiative included attempts to increase community voices in private sector investment decisions and secure access rights for marginalized households in the face of competition, as well as strengthen community-based co-management, resource protection, and public health. Although in each case study the STARGO team focused on communities who depend significantly on fishing for income and livelihood, the priorities that emerged from the participatory dialogue processes were not restricted to fisheries or natural resource management, since the dialogue processes provided space for consideration of multiple dimensions of livelihood resilience and vulnerability. The following subsections summarize the institutional innovations and outcomes in each case study, as measured through evaluations led by local actors.

a. Lake Victoria

In all three Lake Victoria sites, stakeholders chose actions they felt would directly reduce poverty and indirectly reduce resource competition in their communities. In Kachanga, the main site, stakeholders chose to reduce fecal contamination to water resources, fisheries, and agricultural lands as a way to improve water quality, human health and productivity, and fish health. In Kasekulo, stakeholders chose to improve income by value-added processing and reducing rates of post-harvest loss, which is reported at up to 80 percent. In Kisenyi, stakeholders decided to support fishers to earn income from activities away from the water.

In Kachanga, community members, beach management units (BMU), the Department of Fisheries Resources (DFR), and local and district administrations have worked together successfully to build a new sanitation facility. The project has managed to strengthen vertical and horizontal linkages with relevant supportive institutions at community, sub-county, district, and national levels. The project has also triggered the formation of new partnerships between communities, development partners, and researchers, who will continue to engage the community and document progress in comparison to the situation existing before the project began.

Significant outcomes include:

Attitudes towards collaboration. During the initial multi-stakeholder workshop there were clear signs of tension and frequent verbal disputes between fishers, BMU, and DFR officers. The “government” (represented by higher-level administrative officers and extension workers) was described by the fishers as corrupt and as having abandoned the communities to live without basic services. Some community members refused to contribute to the sanitation project until the construction began. Once the work started, coordination meetings attracted more participants, and by the end of the process the attitudes of the community members interviewed had shifted from skepticism to conviction about their central role in choosing which actions to undertake.

Improved dialogue. The planning, procurement, and construction of the sanitation facility increased opportunities for dialogue, networking, and communication among the community-level institutions, with higher administrative bodies, and among community members. The sub-county and district authorities gave political support and recognition to the construction during several visits to Kachanga. The traditional leader of the sub-county also visited Kachanga to observe progress in the construction.

Influence on local government. At the beginning of the process it was very difficult to engage the sub-county and district administration. There was a marked change during the M&E phase. Officials from Masaka District and technical extension staff cite the practical relevance of the activities carried out in Kachanga for planning further developments in the water, sanitation, and health sectors in Masaka District. The Ministry of Water and Environment has committed to complement the sanitation facilities with water and waste disposal systems, providing complete water, sanitation, and hygiene service. This will, if implemented, go well beyond the original scope of the project to meet the wider community vision of “a peaceful, clean landing site with modern infrastructure, and healthier, more prosperous community members.”

Scaling out. Following meetings with UN-HABITAT, UNICEF, and the German development cooperation agency GIZ to discuss complementarities in water and sanitation activities in Uganda, the project team plans to share lessons learned about community engagement in operations and maintenance of communal facilities, and to prepare recommendations as to how the Ministry of Water and Environment (working with UN-HABITAT) can extend and complement the project activities in Kachanga. Also, Makerere University views its partnership with the Kachanga community and local government as an important part of its long-term research on ecohealth and diseases in emerging livestock systems.

In the Kasekulo and Kisenyi sites, it is too early in the process to see outcomes beyond ongoing, regular communication and joint planning of actions. In Kasekulo, the stakeholders are networking with development partners, including the Icelandic Development Authority, which has agreed to consider a funding application from Kasekulo stakeholders. In Kisenyi, the stakeholders felt they are too dependent on fisheries resources and are planning training in alternative income-generating activities. The National Agricultural Advisory Services will provide training in beekeeping and honey processing, and discussions are underway with the Uganda Community Tourism Association to provide support on ecotourism activities.

b. Lake Kariba

In the Lake Kariba ecoregion, the main focus of activities has been on the Kamimbi site in Siavonga District. Action areas identified included activities focused on managing current and potential conflict arising from the use of the fishery, collaboration activities that address tension over use of the land on the lakeshore, and development of a capacity to engage and leverage a “win-win” relationship with current and future private sector investors in Kamimbi. Project activities included facilitating meetings among the communities affected by the privatization of previously common-property land, between communities and the traditional leaders responsible for allocating land to investors, and between communities and investors. The meetings were intended to show a spirit of collaboration rather than confrontation to promote a culture of dialogue between the investors and the community.

Significant outcomes include:

Strengthened dialogue with private investors. The Zambian Environmental Management Agency (ZEMA) trained fishing communities and Department of Fisheries (DOF) staff on environmental impact assessment (EIA) provisions to encourage their use as a platform to promote dialogue between investors on the lakeshore and fishing communities. The communities of Kamimbi fishing village subsequently convened a meeting, mediated by the village chief, that resulted in a negotiated agreement with one of the investors to address how to maintain access routes villagers and their children use that had been blocked by the investor. Multiple stakeholders cited the ongoing dialogue with investors as an empowering and transformative process.

Improved collaboration between artisanal and commercial fishers. A second priority addresses a history of local conflict, where artisanal fishers have destroyed larger-scale kapenta fishing rigs. The district commissioner of Siavonga had already been looking into this issue, and called for a meeting between the Kapenta Fishers Association and artisanal fishers, where each group raised complaints against the other. Stakeholders agreed to a follow-up meeting, and the DOF officer at Siavonga has been engaged in helping to mediate the dispute as part of a broader effort at implementing community-based co-management.

New linkages for trans-boundary collaboration on trade and gender equity. A team at the University of Zimbabwe led a dialogue workshop in Kariba in December 2012 to probe opportunities for improving trans-boundary collaboration, focusing on fish trade, where women's involvement is greater than in fishing on the lake. At a follow-up meeting in Siavonga, women traders, DOF officials, and Zimbabwe national parks staff discussed the challenges associated with current fish trade arrangements, including the burdensome administrative procedures at the border that often lead to significant spoilage and losses for women traders. Insights from the action research are being followed up by DOF and Smart Fish, an NGO focused on fish trade.

c. Tonle Sap

The first step in identifying local institutional innovations in Kampong Thom Province in the Tonle Sap ecoregion was to support multi-stakeholder dialogue sessions in each community to assist local actors to assess their own issues, identify actions within their own capabilities, and make commitments as part of community action plans. Two of the three communes proposed expanding public fishing grounds into the area of the former commercial lots. These requests could be brought to higher authorities through the power of collective voice. Similarly, there was potential for participation of all three communities in future policy dialogues exploring fisheries management options after the reform.

As it became clear that the area of public access and community fisheries would indeed be significantly expanded, local priorities shifted from advocacy for increasing access to fishing grounds to making the community fisheries more effective. The action research team brought together government officials, community representatives, and local authorities from Phat Sanday, Peam Bang, and Kampong Kor communes to jointly discuss issues of common concern, develop a common action plan, and identify new opportunities for mutual dialogue and cooperation among relevant stakeholders to aid in implementing the community-level action plans.

Significant outcomes include:

Implementation of joint patrolling to improve resource protection. Outcome evaluations confirm that community fishery (CFi) organizations in all three communities have completed restructuring of their management and strengthened their patrolling. An innovation is the use of joint patrols combining CFi members and fishery officers, which both cite as a sign of improved collaboration. CFi committees are meeting more regularly and cite improved collaboration within and between CFi committee members, village and commune authorities, and local police across the three sites in cracking down on illegal fishing, as well as raising awareness about fisheries regulations.

Reduced conflict between fishers and dry-season rice farmers. A local dialogue in Kampong Kor resulted in a negotiated agreement on water allocation between dry-season rice farming and maintaining water for fisheries in the CFi area. The CFi and dry-season rice farmers association reached a verbal agreement in the presence of provincial line departments and other stakeholders, with more specific provisions to be stipulated and formalized subsequently. Enforcing the new agreement remains a challenge, however, particularly as it is being implemented in an especially dry year.

Piloting of community-based commercial production to improve equity. At a national dialogue workshop held in December 2012, the director general of the Fisheries Administration (FiA) confirmed his readiness to support piloting of a new form of community-based management. The pilot model would permit commercial production under community management, with safeguards to ensure adequate resource protection and benefit sharing. The FiA is similarly motivated to draw on the lessons of local innovations to inform future policy implementation.

5. Lessons for policy: Investing in capacity for conflict management

Experience during STARGO project implementation has confirmed the need for and the value of a collaborative, stakeholder-driven approach to addressing the roots of resource conflict. Comparison of the experiences from the three eco regions has also highlighted a range of emerging lessons. The lessons in this section are oriented towards development of policy and implementation of initiatives (particularly by governments and development agencies) aiming to address resource competition and invest in capacity for conflict management.

a. A dialogue approach requires appropriate conditions, time, and stakeholder commitment

For a dialogue to begin, competing groups must be willing to meet and explore solutions.

However, as the experiences in all three regions have shown, not everybody has to be involved and show the same commitment from the beginning. Often actors that did not take the process seriously at first changed their attitude as they saw the process being successful and showing first results. Accepting the reality of varying levels of commitment requires significant patience and trust in the process by the organizers and donors who fund these activities. The longer timeframe and depth of participation needed also requires considerable resources and commitment by the organizers and donors.

The approach is best suited to the initial stages of conflict, before disputes become entrenched.

In particular, it is not intended for application in the context of large-scale violence such as civil war or countries that have just emerged out of large-scale violent conflict. Participative approaches in these contexts are often faced with more obstacles and risks—including the personal safety of the actors involved. In circumstances of ongoing, severe conflict or post-conflict situations, professional mediation capacities may be needed (UNDP 2010), which was not the case in any of the three regions where this initiative focused.

Past experiences with collective action influence people's readiness to collaborate. Frequent migration that changes the mix of residents at landing sites, as witnessed in the case of the Lake Victoria, can impede a sense of cohesion and full integration (Westlund et al. 2008). The same is true for disappointing past experiences with collective action, or failed attempts to gain the support of state agencies. At the Kachanga landing site, residents have formed small savings circles to fund individuals to carry out self-help projects, but there were few prior examples of the whole community working together to reach an overarching community goal. Indeed, the attempt to facilitate dialogue and plan multi-stakeholder actions incorporating a high level of individual agency and collaboration was met with some puzzlement. This is why actions responding to a very immediate expressed need for improved sanitation were appropriate to build experience of collaboration. By contrast, in the floating village of Phat Sanday in Cambodia, memories of working together to advocate for fisheries reform were still quite fresh. This motivated people to work towards more complex efforts such as joint patrolling and community-based commercial production.

Sustaining new collaborations requires long-term funding and commitment built over time.

Participants will only see collaborative processes as valuable if the outcomes bring direct benefits as defined by the communities concerned. Outside investments may deliver few results if not matched by local actors' belief in the value of collaboration, which takes time to build. In the case of the moderately violent conflicts over fisheries revenue collection or fisheries enforcement in Lake Victoria, trust has been eroded to such a degree that long-term investments need to be made in capacity building for conflict management at the community level. Many community groups in Uganda's landing sites were originally formed to address the social development or welfare goals important to their members. Working with them to address these priorities is essential to building the confidence and commitment required for them to subsequently engage fisheries management and conservation efforts that call for collaboration at larger ecosystem scales.

b. Understanding the institutional and governance context is key to identifying appropriate areas for support

Sometimes there is space for innovation in the absence of policy change. Earlier initiatives towards co-management in both Lake Kariba and Tonle Sap Lake were implemented despite the lack of an enabling policy or law. In the case of Tonle Sap, early experimentation provided a positive example and gave legitimacy to subsequent legal reforms and a national rollout of community-based management, while in Lake Kariba, the early efforts petered out with little to show a decade later. Malasha (2007) argues that co-management projects in Zambia were largely donor driven and superficial, failing to build local institutional capacity and commitment. This reaffirms how taking advantage of opportunities for new collaborative approaches requires careful attention to stakeholder roles, relationships, and motivations.

Reform can also provide an opening for local innovation. In the case of Tonle Sap, the recent fisheries policy reform opened up new opportunities for collaboration and experimentation. Communities like Peam Bang and Phat Sanday are testing out joint patrols, though they lack an ongoing source of funding, while in nearby Boeng Tonle Chhmar, villagers have reached an informal accord with fisheries officials to split the fees collected from illegal fishers as a way of sustaining enforcement in the former lot areas. Similarly, the reform has created an opportunity to explore the new community-based commercial fisheries production model, which communities see as an opportunity to achieve financial sustainability by supporting local livelihoods and financing resource protection.

The opportunity space depends on the responsiveness of national agencies to local priorities.

The responsiveness of national agencies may need to be actively strengthened. In Lake Kariba, the decentralization policy provided a rationale for co-management, but in reality there was very little flow of resources to the local level and very little support from central agencies. Recognizing this history, the STARGO team found it critical to demonstrate alternative approaches locally and engage higher-level agencies along the way. In Cambodia, the team discovered that because locals felt confused about the overlapping roles among agencies such as the Tonle Sap Authority, FiA, and environment departments at the provincial level, they often sought out the highest level they could reach or circumvented the line agencies altogether by seeking out assistance from the Parliament. Better distinguishing the roles of different agencies and their responsibilities towards the success of community fisheries is an important step towards making them more accessible and responsive.

c. Policy changes can aggravate conflicts when instituted without adequate stakeholder involvement

Disconnects between national policy initiatives and local needs contribute to local tensions and conflict. Participants in STARGO dialogue events in all three regions identified important examples of cases in which national policy did not meet local needs. For example, Ugandan fisheries management policy, participants argued, is premised on the assumption of national economic growth benefiting all. The main focus is sustaining Nile perch production to protect export revenue. Local communities may benefit little directly but are nevertheless asked to carry the burden of protection. In Zambia, agricultural policy favors maize production, with fishers expressing a sense of being overlooked and left to fend for themselves amid new developments like aquaculture investment or increases in cross-border fishing.

Rules changed without community participation can prompt new disputes. In Cambodia, the recent wave of fisheries reform explicitly recognized the need for more equitable resource access and called for a study of management options. Yet, in an effort to introduce new rules quickly, decisions on allocation of fishing grounds and gear regulation were instituted with little consultation. Participants in the national policy forum emphasized the importance of local participation in formulating rules and policies that affect fishing communities. Rules formulated without community consultation have been viewed as unsuitable to local needs, building tension between the communities and enforcement entities. Poorer households reportedly remain relatively disadvantaged as they are unprepared to invest in the gear required to benefit from increased access to fishing grounds. The reforms have also raised new ecological risks as more people fish, particularly in the terrestrial environments, increasing pressure on sensitive fisheries habitats and creating the potential for more conflict over limited resources.

Achieving effective stakeholder involvement in reform decisions depends on robust civil society organizations. In Cambodia, where fisheries are a relatively high policy priority compared to many countries, civil society networks have achieved notable successes as advocates of reform on the Tonle Sap Lake (Ratner 2011). By contrast, in Uganda, the relatively low policy priority on small-scale fisheries means fishing communities have found it much more difficult to advocate for the sector and their priorities in local development planning processes. In Zambia, where the policy focus on fisheries co-management includes recent efforts by ZEMA and DOF to increase their capacity for outreach to local communities, a shortage of civil society networks linking fishing communities and representing their interests remains an obstacle to effective implementation.

d. Investing in collaboration and innovation requires a tolerance for uncertainty and risk

Supporting local innovations means reorienting many of the conventional practices of project management. In the STARGO experience, it was critical that teams in each ecoregion seek out ways to support collaborative actions by local and national stakeholders in line with the agreed purpose, yet with a sense of real flexibility about the specific objectives that would emerge from the process. Blueprint plans, fixed timelines of activities, and centralized decision-making had to give way to adaptability and joint planning in mixed stakeholder groups.

Authorities need to demonstrate an openness to solutions that build on local insight and initiative. Small “early wins” can help build local commitment and demonstrate that the space for innovation is authentic. In Lake Kariba, the simple step of initiating multi-stakeholder dialogues and facilitating joint action planning was sufficient to build a sense of shared purpose for local groups that led them to initiate a new approach to engaging private investors, even in the absence of budget or other support, but with the clear backing of fisheries and environment agencies. By securing some concessions from investors, including a commitment to maintain open access routes, local stakeholders were later prepared to take on the more difficult task of ensuring their voices would be heard during environmental impact assessments. In Lake Victoria, the dialogue between community members and subcounty and district-level authorities intensified after the initial multi-stakeholder dialogue. Bolstered by the commitment expressed by a local government leader in a joint meeting, Kachanga community members took initiative to raise their own funds for the common sanitation project.

Embracing uncertainty and a measure of risk opens the possibility of more fundamental advances in conflict management. For work in Tonle Sap, the reforms adopted during project implementation shifted the realm of the possible. The FiA became much more willing to work with communities to experiment with new management approaches. As the lead agency responsible for ensuring sustainability of the sector, and recognizing its limited capacity and the suddenly expanded area of fishing ground released from the lots, the FiA became the key proponent of a more ambitious plan of support to community fisheries. In the STARGO collaboration, this meant the deputy director general took the lead in proposing aggressive milestones for negotiating and piloting efforts with joint patrolling and community-based commercial production. This illustrates how the realm of influence for an initiative can change quickly, and how efforts to invest in capacity building for conflict management can accelerate when these openings are identified and plans are shifted accordingly.

6. Lessons for practice: Working with stakeholders to build collaboration for conflict management

The STARGO guidelines on stakeholder engagement have proven useful in a range of socio-political and ecological settings, demonstrating the value of the underlying CORE principles (Ratner and Smith 2013) as well as the toolkit of methods for assessment, planning, and evaluation (Rüttinger et al. 2013). The following lessons are oriented towards improving the practice of working with diverse stakeholders to build collaboration and dialogue to better manage resource competition, support actions that increase local livelihood resilience, and reduce the likelihood of broader conflict. These lessons are geared towards practitioners in government and civil society, emphasizing the importance of adapting the general guidance to specific local conditions and taking into account new obstacles and opportunities as they emerge.

a. A structured process of multi-stakeholder dialogue can open new opportunities for collaboration

Understanding stakeholders' prior experiences with conflict and collaboration can help shape the approach. In Lake Victoria, the team responsible for designing the process recognized that multiple preexisting conflicts had led to strongly negative attitudes on the part of community members towards government officials, including the Department of Fisheries officers. Expecting that community members might be hesitant to participate openly and confidently, the team organized a separate preparation workshop with community members prior to the main workshop. During the larger dialogue workshop, they became some of the most active participants due to the capacity for engagement they had built in the preparation workshop. In Lake Kariba, the core team noticed that participants repeatedly compared how effective this dialogue forum and subsequent action planning could be to other platforms for presenting their interests. Since community judgments of effectiveness are constantly reassessed and can change quickly based on perceptions of progress, the team focused on early achievements to build confidence.

A quality dialogue process requires flexibility to build stakeholder engagement. One measure of dialogue quality is the authentic ownership that participants develop in their action planning and implementation. In Lake Victoria, when community representatives returned to their villages after the main workshop, two of the three sites ended up changing their plans. "At first I was annoyed," said one of the organizers, "then I realized it was because people were really engaged ... What we did that was different was open up the space." Bringing together the three communities encouraged people to reflect, to compare their experiences, and to rethink their plans. The Kachanga site, for example, ended up prioritizing actions to improve sanitation when one community asked for action on the matter. In an unusual show of local commitment, villagers raised money from within the community for building materials, got district council approval for building a latrine and biogas facility, and secured a commitment from the leader of the district government to provide trucks to transport the building materials. The sense of shared purpose brought in additional supporters. "Many people who were not in the room at the workshop then became committed," said another organizer.

Effective dialogue can avert disputes before they escalate. In Lake Kariba, investors in cage aquaculture and lakeshore tourism development proved much more willing to cooperate than community members and organizers expected. Local villagers realized that competition among investors meant they were eager to show good will to communities, resulting in spoken agreements to ensure routes of travel in areas of cage aquaculture investment and to safeguard local employment opportunities. This showed it was possible for local communities to engage with investors and build some measure of accountability without resorting to legal processes. Investors also commented that they would be more likely in the future to request this sort of dialogue as a way of avoiding deteriorating relationships.

b. Attention to women's voices and decision-making roles can open new pathways to institutional change

Observing gender inequities and other power imbalances can lead to creative adaptations to include all voices. In Uganda, for example, a system of quotas is in place to make sure that less powerful stakeholders, such as women, boat crew, and other fish workers, are included on decision-making bodies such as beach management units. However, during initial community consultations it took several tries and some creative childcare arrangements to find a small number of women to participate in the stakeholder workshop. During the workshops, women and boat crewmembers rarely spoke or suggested actions unless they were specifically asked. By contrast, male boat owners were very outspoken. Women were in the minority of those nominated to participate in capacity-building actions. Recognizing the gap between an official policy of inclusion and typical processes of decision-making biased towards men and economically privileged groups propelled the core team to seek out ways to address these imbalances.

A range of informal consultations can help reveal unspoken concerns. Having observed the gender dynamics in the workshop setting, the core team in Lake Victoria held additional side meetings where the more reserved participants could express their concerns, which were subsequently validated in the full dialogue, shifting the focus of planning towards community sanitation. In Lake Kariba, likewise, the team found that even when women were less vocal in the workshop, facilitators were able to actively seek out their concerns, making sure they were voiced and heard by all participants. In the Tonle Sap, where workshop organizers lacked long prior experience in the selected communities, team members undertook several days of informal consultations, including meetings with small groups of women and men separately, before convening a more structured dialogue event.

Supporting individual change agents can lead to more lasting institutional change. In Lake Victoria, the team was able to identify individual women representatives from the BMU and local councils who were particularly active in the early stages of the initiative, then find ways to encourage them in the role of change leaders in supporting the project activities and in getting other community members involved. In Tonle Sap, the team found that the participation of a former commercial fishing concession operator proved pivotal when, after suspension of the commercial lots, she committed to helping the community explore different management regimes. In Lake Kariba, consultations identified a major concern of women fish traders being harassed by Zimbabwean border officials while undertaking trans-boundary trade. A subsequent dialogue event, organized by the University of Zimbabwe, focused on gender and fish trade and brought new commitments on the part of the DOF and the NGO Smart Fish to address this and related problems affecting the fish trade.

c. Building cross-scale linkages and accountability can help sustain local initiative

Be prepared to question assumptions about stakeholder roles. In Lake Kariba, the core team assumed that the government's role in fisheries management would be focused on surveillance and enforcement, so it was surprising to find that community members saw the DOF as a stakeholder that needed to be present in addressing other issues, such as discussions with traditional chiefs about the approach to engaging investors. Indeed, though the traditional chief was proximate, community members felt the DOF could play a critical brokering role and lend legitimacy to the process. The chief had been reluctant to make a record of investments or to monitor the EIA processes, concerned that these actions could drive away investors. As it turned out in this case, the community had developed more confidence in the neutrality of representatives from a national government agency than in the local traditional leader. Similarly, in Tonle Sap, the core team initially tried to hold to the principle of equal roles among partners in planning the initiative, then recognized that having different leaders for different activities was appropriate. Therefore, in the concluding policy dialogue forum, the FiA played the convening role, while research partners facilitated the event.

Addressing local disputes often requires support from higher levels of administration. The village management committees in Zambia, beach management units in Uganda, and community fisheries in Cambodia each face similar challenges of accessing higher-level support to help resolve local disputes. Many prior efforts at building community-based management institutions focused on local-level organizational capacity in relative isolation, presuming higher-level administrative structures would pass down resources and lend assistance as required. In Lake Kariba, the research team found that involving the DOF and Environmental Management Agency at each stage in the process not only lent legitimacy to local actions, it also helped build linkages so that local innovators could have a voice in articulating needs for longer-term policy, institutional, and legal reform. Having civil society, local government, and both informal and commercial private sector representation in the core team helped facilitate this exchange.

Successful examples of collaboration can help strengthen mechanisms of accountability over time.

As a result of local actions in the Tonle Sap communities of Peam Bang and Phat Sanday, the commune councils became supportive of joint patrolling, strengthening relationships that could help community fishery committees seek other types of support in the future. In Uganda, local initiative to improve community sanitation and generate renewable energy attracted interest from government at different levels, as well as from development agencies. The district council made a public commitment to assist in maintaining the facility, which provides community members a point of reference to hold the council accountable in the future. In this case, an indirect approach to conflict management, addressing an issue directly affecting local health and welfare, proved effective at strengthening existing co-management institutions such as the BMU. Noting the strong local leadership and commitment, transparency in decision-making and fund management, and timely implementation, the Masaka District Head noted that the sanitation improvement project “set new standards of quality and project life span the district would emulate for future projects.” After a successful experience of engaging higher-level authorities, it seems more feasible that they will be able to do the same on related issues such as water treatment, disease control, and habitat conservation on the lake.

d. Effective stakeholder engagement can build a culture of learning and innovation

Structured reflection during implementation is critical. Reflection activities need to be focused, yet flexible. In all three ecoregions, the STARGO team found it challenging to organize community members to record detailed information about activities, such as the number of meetings held with various government groups, or in the case of Tonle Sap, joint patrolling trips undertaken. Few found this information helpful in evaluating progress. In Tonle Sap, the core team therefore shifted to focus on broader questions: “What changes have you seen since the last period? What do you see as the obstacles remaining?” These yielded very rich stories, and helped launch discussion about ways to adapt that would help achieve local goals. Similar reflections in Lake Kariba helped community members and local leaders learn what approaches worked in engaging investors.

Participatory monitoring and evaluation should tap multiple perspectives. In addition to keeping the guiding questions simple and open-ended, research teams found that intentionally bringing in multiple perspectives helped to maximize learning. At times this required skillful facilitation by researchers, paying attention to differences in views, and exploring where these differences come from. In Lake Victoria, personal interviews were arranged around the working schedules of fishers (mostly men), fish processors, and fishmongers (mostly women), to access all possible perspectives. In Tonle Sap, researchers found that local residents not directly engaged in the innovations sometimes had the most valuable insights as relatively impartial observers. They also found that, because a number of related activities were ongoing with support from different outside groups, it was important to take the time to clearly distinguish what actions people are evaluating, and what are the sources of change they describe.

Sustaining collaboration often depends on new linkages among government agencies, local change agents, and supporting groups. In all three ecoregions, there was evidence that community groups had adopted some practices from the dialogue approach and were applying these in new modes through their own initiative. In some instances these are being used to access new channels of support or scale out local innovations, such as the effort by the Kamimbi community in Lake Kariba to seek a community development fund grant to build a health facility in their village. Likewise, UN-HABITAT in Uganda has agreed to further develop the community management model used at the Kachanga landing site in Lake Victoria, including the incorporation of community-driven user fees in future local infrastructure projects planned for construction by the government of Uganda with funding from the African Development Bank. At the Tonle Sap policy dialogue forum, the FiA director general responded to the exchange of lessons on local innovations by affirming a need for further participatory, multi-stakeholder monitoring and evaluation processes to assist in implementation of the ongoing fisheries reforms, requiring the involvement of FiA, local authorities, community fishery committees, and others. To sustain such reflective learning over time, it's critical that local NGOs and community groups build capacity to support such practices beyond the period of a particular intervention (World Bank 2002).

7. Conclusion

Conflict management is an intrinsic element of natural resource management, and becomes increasingly important amid growing pressure on natural resources from local uses, as well as external drivers such as climate change and international investment. When combined with other risk factors, natural resource conflict can aggravate the potential for broader social conflict or escalation of conflict intensity. If policymakers and practitioners aim to truly improve livelihood resilience and reduce vulnerabilities of poor rural households, issues of conflict and conflict management cannot be ignored.

As the cases summarized in this paper illustrate, proactive efforts to convene dialogue addressing the roots of resource conflict can help generate new forms of collaboration among civil society, private sector, and government stakeholders at multiple levels. Effective representation of resource users' interests in decision-making, along with strong systems of accountability, can in turn contribute to more equitable decisions on resource allocation, access, and management rights.

Deep, participatory approaches like the CORE approach to dialogue and multi-stakeholder engagement stand in contrast to the common expectations of participation in development projects. In practice, expectations for participation often mean little more than consultation with intended beneficiaries on problems and needs, as opposed to shared decisions on priorities and community-led action planning (Haider 2009). The CORE approach, by contrast, puts the burden on those organizing multi-stakeholder interactions to engage effectively in local processes by first developing an appreciation of existing institutions and relationships.

The link between improved collaboration and long-term improvements in governance is neither direct nor assured. Dialogue processes as described in this paper can help make incremental improvements and provide examples of innovations that lay the groundwork for more systemic reforms. As the cases from Lake Victoria, Lake Kariba, and Tonle Sap also indicate, however, making progress to strengthen governance requires long-term commitment, engagement of actors at multiple levels, and considerable flexibility to identify and pursue opportunities for policy and institutional reform.

The experiences and lessons reported here, therefore, should be seen as early indications of the potential for investments that directly target capacity for managing environmental resource competition and conflict. There is a need to test the applicability of this approach in other agro-ecological systems and in other socio-political environments, as well as to systematically compare the outcomes of similar approaches to develop a more refined understanding of what strategies work under what circumstances. While there remains much to learn, this initiative demonstrates that investing in this domain of practice is feasible in a variety of contexts, can deliver measurable results even in a relatively short time period, and does not require a dramatic policy change or institutional reform to get started.

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