Biodivers Conserv
DOI 10.1007/s10531-006-9143-5

ORIGINAL PAPER

Integrated conservation and development project life cycles in the Annapurna Conservation Area, Nepal: Is development overpowering conservation?

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Received: 3 October 2006 / Accepted: 28 November 2006

Abstract The merits of integrated conservation and development projects (ICDPs), which aim to provide development incentives to citizens in return for conservation behaviors, have long been debated in the literature. Some of the most common critiques suggest that conservation activities tend to be strongly overpowered by development activities. We studied this assertion through participant observation and archival analysis of five Conservation Area Management Committees (CAMCs) in the Annapurna Conservation Area (ACA), Nepal. Committee activities were categorized as conservation activities (policy development and conservation implementation), development activities (infrastructure, health care, education, economic development, and sanitation), or activities related to institutional strengthening (administrative development and capacity building activities). Greater longevity of each ICDP was associated with greater conservation activity in relation to development activities. Project life cycles progressed from a focus on development activities in their early stages, through a transitional period of institutional strengthening, and toward a longer-term focus that roughly balanced conservation and development activities. Results suggest that the ICDP concept, as practiced in ACA, has been successful at building capacity for and interest in conservation amongst local communities. However, success has come over a period of nearly a decade, suggesting that prior conclusions about ICDP failures may have

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been based on unrealistic expectations of the time needed to influence behavioral changes in target populations.

Keywords Annapurna · Biodiversity conservation · Community-based conservation · Gender · ICDP · Nepal · Protected area management

Introduction

Poverty, access rights and environmental degradation are major challenges to the biodiversity conservation movement today, particularly in the developing world (Western 2000). The concept of the integrated conservation and development project (ICDP) came into vogue in the 1980s to address these issues, based on the assumption that local people are far more likely to abide by conservation measures once their own socioeconomic well-being is assured (Kremen et al. 1998). Analyses of ICDPs have shown varying results (Wells et al. 1992; Schelhas et al. 2001; Brown 2002; Wright and Andriamihaja 2002; McShane and Wells 2004). This has led many to argue either specifically for or against ICDPs as a viable conservation strategy (Terborgh et al. 2002).

Those most fervently opposed to the ICDP concept as a useful conservation tool suggest, among other things, that ICDPs often lack adequate conservation measures, instead focusing on development activities without sufficient linkage to sustainable environmentally friendly behaviors. They also suggest that typical ICDPs tend to patronize local participants, rather than enlist them as true allies of conservation efforts (van Schaik et al. 2002), and that, in developing countries, local people tend to demonstrate high levels of enthusiasm for development projects over conservation (Wainwright and Wehrmeyer 1998). Expenditures on development for conservation purposes do not necessarily lead to effective conservation (Adams and Thomas 1996). Moreover, community development needs can often directly compete with conservation objectives (Wells 1994; Noss 1997).

Meanwhile, other scholars have uncovered certain factors influencing stronger contributions of ICDPs toward biodiversity conservation. In general, ICDPs are most successful when they solicit genuine community participation and reconcile conflicts over resource use and conservation (Wells et al. 1992; Alpert 1996). Meanwhile, short time frames, financial instability, and inequitable distributions of benefits have been found to be key detractors from ICDP success (Belsky 1999; Wells et al. 2004). ICDP theorists suggest that longer time frames, careful attention to social structures and organization, and extensive education and capacity-building for independent local planning are keys to successful ICDPs (Brown 2002; Budhathoki 2004; Wells et al. 2004; Spiteri and Nepal 2006).

ICDPs associated with the Annapurna Conservation Area (ACA) have been in place since the area's legal establishment as a protected area in 1992. A considerable amount of resources has been specifically allocated for empowering local communities. Management strategies has explicitly incorporated local knowledge and traditional institutions. The use of pre-existing institutional structures has granted a degree of legitimacy to conservation efforts and has helped to avoid overly skewed distributions of program benefits. ACA programs have focused primarily upon natural resource management, environmental education and tourism management. Entry fees from tourism are channeled back to villages for various conservation and

development activities undertaken by local people; therefore, ACA's socioeconomic development is more prominent than in any other protected area in Nepal (Mehta and Heinen 2001). Although active community participation can actually slow initial results (Alpert 1996), local benefits are more likely in the long-term than in the older coercive models of conservation. According to the ICDP concept, this should spur greater interest in conservation activities. Therefore, ACA should be expected to provide a successful application of the ICDP concept.

One serious drawback of community-based conservation, such as that witnessed in ACA, is lax implementation of protected area legislation. ACA bases its primary strategy upon the assumption that providing development incentives will encourage people to abide by rules that are favorable to conservation. While this approach can sometimes be less effective than a regulatory approach to conservation because benefits accrue to society while costs of conservation are borne by individuals (e.g., Heinen and Low 1992; Heinen 1994, 1996), community involvement in ACA has advanced conservation activities in many regards. This article addresses these successes and also some shortcomings.

Evolution of the Annapurna Conservation Area

Nepal's formal conservation efforts began in 1973 when the Department of National Parks and Wildlife Conservation was established and was vested with power to declare national parks and wildlife reserves (Heinen and Kattel 1992). Many people were evicted in the process of protected areas creation. Over time, it became apparent that these actions were not economically viable, socially feasible or politically justified for the extension of the protected areas network. Therefore, a pilot project was implemented in the Annapurna region of Nepal to test a new concept in protected area management: conservation with economic development, managed by local people with popular participation, and self-sustained through tourism entry fees and other economic activities (Sherpa et al. 1986). Although the project had been in place since 1986, the conservation area was recognized legally as a protected area only in 1992 after an amendment of the National Parks and Wildlife Conservation Act of 1973 (Heinen and Mehta 1999). In 1996, the government ratified the Conservation Area Management Regulation (CAMR), which provided the legal framework for current operation of the conservation area. The CAMR officially recognized Conservation Area Management Committees (CAMCs) that were vested with the authority to oversee conservation and development activities in each Village Development Committee (VDC; the smallest political and administrative unit in rural Nepal). While all of these committees were already in place in Annapurna with a different name, the CAMR required them to reorganize in order to be granted legal recognition from the state. They each started a new term in 1998.

In ACA, each CAMC consists of 15 members; 9 members are elected by village assemblies, five are nominated by the Chief Conservation Officer of the Annapurna Conservation Area Project (ACAP) from special groups such as women, occupational castes and social workers, and the VDC chair is an ex-officio member. Each committee's members elect a chair and a secretary. The chair instructs the secretary to call meetings and presides over them. Committee decisions are made by simple majority, and the chair casts deciding votes in the case of ties. All management decisions are made in regular meetings. The tenure of CAMC members is 5 years.

ACAP staff provide technical support to CAMCs for drafting management plans, complying with area regulations, developing forest inventories, and designing and budgeting for development projects. They also foster capacity building of CAMCs by providing various trainings and provide support in enforcing ACA regulations. The empowerment of CAMCs has been crucial in the successful delivery of conservation benefits to local people in ACA (Bajracharya et al. 2005).

According to regulations, local communities are to be encouraged to participate in all project stages. Local participation—defined herein as building capacities of local people to mobilize their resources—assures that the community members are social actors rather than passive subjects (Cernea 1985). In ACA, CAMCs provide a platform for wider participation, empowerment and exercising of authority. They provide a mechanism through which the direction of conservation and community development can be influenced.

ACAP intends to begin handing over the management of the conservation area entirely to CAMCs in 2006 and complete the process by 2010. Therefore, an analysis of the performance of the CAMCs is timely. Moreover, the CAMCs of ACA provide a unique opportunity to examine the progress of one particular participatory ICDP framework at different points in their development, as the age of the CAMCs included in the study vary. The project allows us to examine the degree to which the framework is actually working to protect biodiversity while concurrently providing economic development. Is development overpowering conservation? It also provides the opportunity to explore the life cycles of the different CAMCs in hopes that the patterns revealed might be more broadly applicable to other similar projects.

Study area

ACAP first launched its conservation activities in Ghandruk village as a pilot project in 1986; it is now the largest protected area in Nepal (7629 sq. km). The ACA is divided into seven management units and each unit has its own field office. The Ghandruk field office manages five CAMCs: Ghandruk, Lumle, Dangsing, Sikha and Narchyang that are spread over 808 sq. km (Fig. 1). We selected the Ghandruk management unit for study because it is most representative of the entire conservation area in terms of programs, activities and the longevity of its CAMCs. It also contains multiple CAMCs that were formed in different stages of ACA's ICDP evolution. The Ghandruk village CAMC was initially formed in 1986, while the Lumle CAMC was formed in 1988. The Dangsing and Sikha CAMCs were formed in 1990, and the Narchyang CAMC was formed in 1994.

All the committees are situated within similar ecosystems and social structures. Each also exhibits more or less the same socioeconomic status. As a result, each deals with similar types of resource use patterns, conservation problems and development aspirations. Each of the areas is also more or less ethnically homogeneous, although Sikha and Narchyang are home to predominantly Magar populations, while predominantly Gurung populations inhabit Ghandruk, Lumle, and Dangsing. Each of these Buddhist ethnic groups lives similar lifestyles in Annapurna with regard to resource use and development activities. With the exception of Narchyang, each are major tourist destinations and lie along the main trekking routes of ACA. It should also be noted that, beginning in 1996, the Maoist insurgency in Nepal had affected these areas heavily (Baral and Heinen 2006). A ceasefire is in place at the time of this writing,

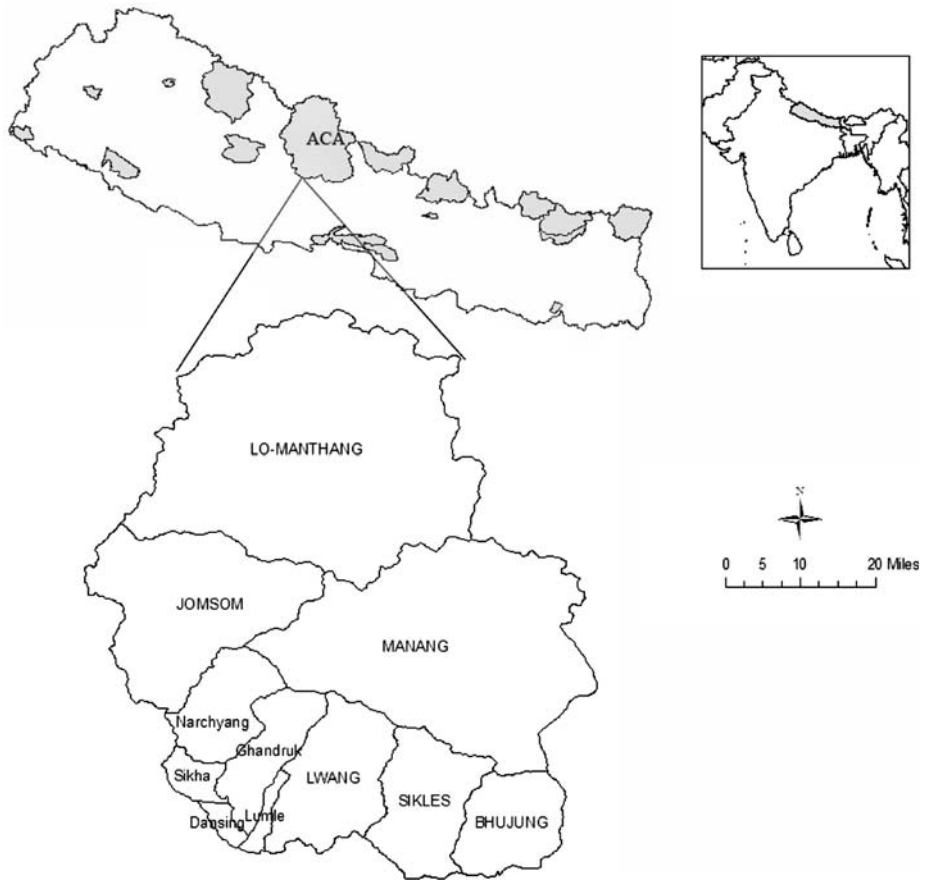

Fig. 1 Map showing location of the Annapurna Conservation Area, seven conservation management units, and the intensive study area

but insurgent activities were very widespread in ACA for almost 10 years. However, we have no reason to believe that the insurgency differentially affected villages in the region and thus there is no evidence that this social and political movement affected the main, comparative results reported here.

Methods

The study employed both participant observation and archival analysis in each of the five CAMCs. The first author was tenured as a conservation officer in the Unit Conservation Office, Ghandruk, from April 2001 to August 2002. He had established a good rapport with local people and committee members, and as a representative of ACAP, he attended most meetings of CAMCs in 2001 and 2002. This provided an opportunity to characterize the types of decisions typically made in such meetings and assess performance and participation levels within each committee.

The primary units of analysis of the study were decisions made in regular CAMC meetings. Law mandates that CAMCs hold regular meetings and keep detailed

minutes of each, which include records of all decisions made during each meeting. We reviewed each CAMC's minute books along with other official documents and files. All documents were translated from Nepali (the national language) into English. The recorded decisions of each of the five CAMCs were classified into three broad mutually exclusive categories: conservation activities, development activities, and activities associated with institutional development. We categorized decisions related to natural resource management, policies, legal actions, and public land preservation as conservation activities. Decisions related to infrastructure development, livestock production, and sanitation were categorized as development activities. Decisions related to human capacity-building, institutional organization, or administrative rule-making were categorized as institutional activities. While we acknowledge some conceptual overlap between such issues as sanitation, livestock production, and conservation, we categorized individual activities according to their alignment with conservation, economic development, or institution-building. For example, a decision requiring compensation to neighbors for crop damage done by livestock was categorized as a development decision, while a resource-use zoning plan was categorized as a conservation activity.

Decisions falling into each category were tallied. While mere counts of decision-types provide rather coarse-grained data, our observations suggest that they actually represent reasonable proxies of the operational foci of each CAMC. Of course, some single decisions were related to higher or lower degrees of conservation, development, or institutional strengthening, but these differences came close to canceling each other out, with individual conservation decisions commonly having a somewhat higher magnitude of impact than other decisions. For example, conservation decisions included the approval of comprehensive natural resource management plans, while the largest development decisions generally involved discrete small projects for less US $1000.

Data were also collected regarding the number of meetings held by each CAMC as well as participation and attendance of different groups at each. Means of quantitative variables are presented with one standard deviation. Percentages are also presented as descriptive measures. One-way analyses of variance were used to compare means of quantitative variables among the three types of CAMCs. When the test was significant we used multiple comparisons to test the difference between pairs. Chi-square tests of homogeneity were done to test the associations between types of decisions (conservation, development or institutional) as a function of the duration of committees.

For the purposes of some of the analyses presented below, we have grouped the CAMCs into three clusters. Ghandruk and Lumle, with respective longevities of 12–16 and 10–14 years during the 5-year study period, are considered long-term CAMCs. Dangsing and Sikha CAMCs, each in existence for 8–12 years during the study period, are considered mid-term CAMCs. The Narchyang CAMC, which was only in existence for 4 years at the start of the study, is considered short-term. We report results from the entire 5-year period of the study from each CAMC. We have also analyzed decision-making on an annual basis within the CAMCs. The trends are the same, though there is much more noise in the annual dataset due to a few large fluctuations in decision-types from 1 year to the next that could only be explained by unique circumstances in each case. Thus, aggregating the data proved most efficient for presentation here.

Table 1 Frequency of meetings held by five committees in 5 years

CAMCs	Year					Total	Annual average
	1998	1999	2000	2001	2002		
Ghandruk	11	9	7	11	8	46	9.2 ± 1.8
Lumle	7	7	12	6	8	40	8.0 ± 2.3
Dangsing	10	4	3	4	6	27	5.4 ± 2.8
Sikha	5	3	2	3	6	19	3.8 ± 1.6
Narchyang	3	4	6	4	6	23	4.6 ± 1.3

Results

Institutional strengthening

The longer a CAMC was in place, the greater number of meetings it held over the 5-year study period ($F = 11.23$, df = 2, $P < 0.001$). The Tukey test of multiple comparisons showed that the mean number of meetings held by the longer-term CAMCs (8.6 ± 2.1) was significantly greater than the medium-term (4.6 ± 2.3) and the short-term (4.6 ± 1.3) CAMCs ($P = 0.001$). For the period of 1998–2002, the total number of meetings held was highest in Ghandruk followed by Lumle, Dangsing, Narchyang and Sikha (Table 1). The highest and lowest numbers of meetings held in any given year occurred in 2000, totaling 12 and 2 in Lumle and Sikha, respectively. The shortest gap between regular meetings was 10 days in Ghandruk and the longest gap was 10 months in Sikha. The chair presided over 88, 97 and 78% of regular meetings in Ghandruk, Lumle and Dangsing, respectively; and all meetings in Sikha and Narchyang.

Committees with greater longevity exhibited greater independence from officials associated with ACAP. The short-term committee in Narchyang was heavily dependent upon ACAP staff for conducting meetings, frequently deferring to officials for aid in decision-making and procedural processes. The mid-term committees occasionally needed interventions from ACAP staff in legal affairs, but were otherwise mostly self-sufficient. Meanwhile, the long-term committees only very rarely required minimal input from ACAP officials.

Trends in participation

There was no significant difference in the number of members present in meetings among three types of CAMCs ($F = 0.46$, $P > 0.10$, df = 2). On average, only 64% of the total 15 members were present in meetings, which was slightly higher than a simple majority. Apart from members, villagers' participation in regular meetings was higher in the medium- and short-term committees than the long-term committees. In addition, the chair of the VDC was present in 83, 69, 74, 42 and 68% of meetings of Ghandruk, Lumle, Dangsing, Sikha and Narchyang, respectively. On average, the short-term CAMC decided upon more issues per meeting (4.8 ± 2.8) than the medium-term (3.8 ± 2.1) and long-term (3.4 ± 2.3) CAMCs ($F = 3.31$, $P < 0.05$, df = 2).

The representation of females on executive committees was significantly related with the duration of CAMCs ($F = 18.69$, $P < 0.001$, df = 2). The average number of

Table 2 Percentage of decisions made by each CAMC relating to conservation, development, or institutional strengthening

CAMCs	Conservation (%)	Development (%)	Institutional (%)
Ghandruk	55	28	17
Lumle	25	21	53
Dangsing	27	24	49
Sikha	11	19	69
Narchyang	23	39	29

female members in each year was significantly higher in the long-term (2.2 ± 1.0) than medium-term (1.4 ± 0.9) and short-term (1.1 ± 0.8) CAMCs ($P < 0.001$). No females were present in 14% of regular meetings. The highest number of female participants was in Ghandruk (4) followed by Lumle (3) and the other three committees had two women each who were nominated by ACAP. Two women were elected to the executive committee in Ghandruk, as was one woman in Lumle. Ethnic minorities were elected in no committees; however, ACAP nominated one or two members for each as called for by the regulation.

Trends in conservation, development, and institutional strengthening

Long-term CAMCs tended to make more decisions regarding conservation (36%) than medium-term (21%) and short-term (22%) CAMCs ($\chi^2 = 28.69$, $P < 0.01$, df = 4). Tables 2 and 3 show the breakdown of the three categories of CAMC decisions. Development-related decisions overpowered conservation-related decisions in Narchyang and Sikha. They were roughly equal, however, in Dangsing and Lumle, with slightly more conservation-related decisions being made in each. In Ghandruk, the longest-standing of the CAMCs, conservation-related decisions were far more frequent than development-related decisions. Institutional decisions were most frequent in Sikha, Dangsing and Lumle, and least frequent in Narchyang and Ghandruk, the youngest and oldest CAMC, respectively. In Narchyang, institutional decisions were outnumbered by development-related decisions, while in Ghandruk, both conservation and development decisions outnumbered institutional decisions. These findings reveal three trends with regard to the ages of the CAMCs: (1) that development concerns overpowered both conservation and institutional concerns in the youngest project; (2) that institutional strengthening was the paramount activity in the mid-term CAMCs; and (3) that conservation activities were more common in the most established CAMCs (see Fig. 2).

The primary conservation activities undertaken by the CAMCs included afforestation, forest nursery management, seedling distribution, stone and barbed wire fencing for plantations, managing the harvest of forest products, and wildlife population management. Other conservation-related decisions made by the CAMCs regarded tariffs for timber and non-timber forest products, pest control, natural resource management and work plans, fishing regulations, alternative energy promotion policies, and public land encroachment. CAMCs declined applications for establishing tea shops and hotels on public lands, requested technical assistance from ACAP and the government to delineate public lands, allocated vulnerable lands for religious and cultural causes, recommended land title for already reclaimed public lands, collected land taxes from settlers, and settled disputes regarding

Table 3 Break down of conservation, development and institutional decisions of five CAMCs

CAMCs	Conservation decisions				Development decisions				Institutional decisions		
	Resource management	Legal/Policies	Public land preservation	Total	Infrastructure	Sanitation	Livestock production	Total	Skill development	Administration	Total
Ghandruk	28	27	2	57	16	1	12	29	–	17	17
Lumle	18	15	7	40	30	3	1	34	6	79	85
Dangsing	9	9	5	23	18	2	0	20	3	38	41
Sikha	4	1	2	7	10	1	1	12	1	42	43
Narchyang	11	7	0	18	33	4	2	39	4	19	23

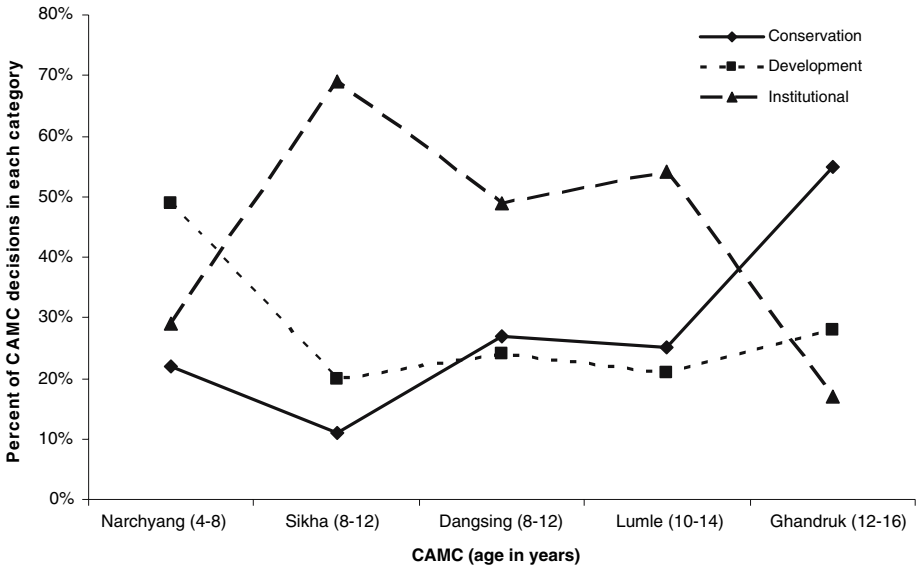

Fig. 2 Trends in decision categories across different-aged CAMCs

encroachment. At the local level, CAMCs punished villagers who breached rules and regulations, fined cattle owners for allowing livestock to graze in preserved forests, gave warnings to villagers in cases of small violations, resolved disputes about resource allocations, apprehended poachers and culprits for setting wild fires, and forwarded cases to ACAP to take legal action for serious offenses.

With regard to development-related decisions, construction of CAMC offices received high priority, as did infrastructure development projects, including road and bridge construction and repair, drinking water supply projects, and the development of health care facilities and schools. CAMCs also made numerous decisions regarding public sanitation. For example, CAMCs procured and managed rubbish bins in strategic locations, supported the construction of both public and private toilet facilities, some with biogas capabilities, funded the development of a dumping site, and organized health camps in collaboration with other stakeholders. In addition, CAMCs supported youth clubs and other local groups, solicited volunteer labor for developmental activities, established camping sites, initiated a village electrification project, and established endowment funds for schools and health posts.

Other development activities related to livestock production, an integral part of Nepali mountain economies. CAMCs introduced improved breeds of livestock, established a livestock health care unit, provided instructions to shepherds to protect villagers' crops from livestock damage, and devised mechanisms for compensation of crop losses caused by livestock.

Most decisions in the CAMC minute books dealt with administrative activities. These decisions were categorized as institutional activities, and included the operation of offices, delegating responsibilities for auditing sub-committee accounts, scheduling meetings, reviewing applications, and corresponding with stakeholders. CAMCs regularly organized mass meetings to make public their incomes and expenditures to villagers. In many instances, CAMCs formed task force committees

and assigned members for inspection, monitoring and accomplishment of projects. CAMCs also mandated the presence of certain members in sub-committee meetings.

Other activities associated with institutional development and strengthening involved capacity-building activities for CAMC members and other local residents. CAMCs requested multiple skill development trainings from ACAP. They invited villagers to take part in trainings such as animal health care, sewing, auxiliary nurse midwifery, community medical assistantships, and vegetable farming. CAMCs also organized adult literacy classes. Members received various trainings in accountancy, leadership, conflict resolution, and other topics from ACAP. Members also participated in tours that exposed them first-hand to the need for understanding conservation and raising awareness.

Discussion

The trends revealed in this study suggest the possible existence of a general pattern (see Fig. 3) in the development of participatory ICDPs. We hypothesize that this pattern may be generalizable to other similar situations. At their outset, ICDPs, particularly those in economically depressed areas, may most commonly focus upon economic development. If the ICDP is able to advance beyond this stage, a period of institutional strengthening ensues, during which conservation activities gradually advance toward a rough balance with development. As ICDPs advance further and their institutional frameworks become more established, administrative activities begin to diminish in relation to active conservation and development. In situations in which economic development needs have been achieved, projects may further focus their activities upon complementary conservation activities, as seen in Ghandruk, the most economically stable of the villages in the study.

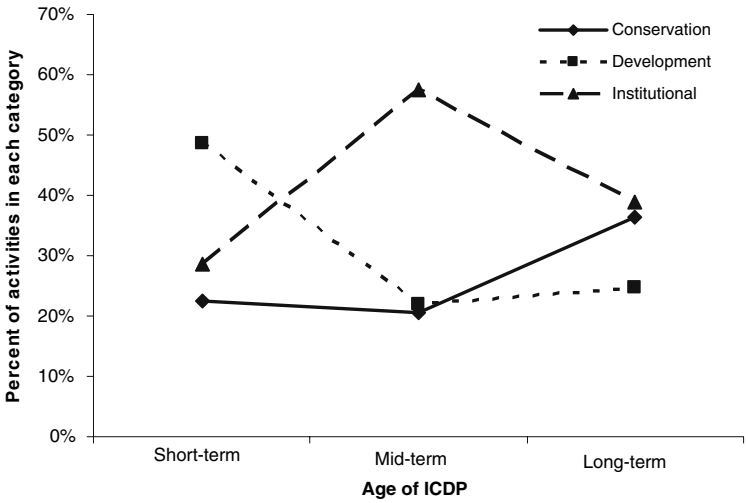

Fig. 3 The life cycle of participatory ICDPs in ACA

Our study suggests that a decade might be a reasonable timeframe to expect a shift from institutional and economic development foci toward more conservation activities. This time period will surely vary from case to case, but our results suggest that many prior analyses labeling ICDPs as failures may have been based upon unrealistic expectations of the time needed to change the behaviors of an entire population. If we only included Narchyang, the youngest CAMC in our study, we may have suggested that the ICDP was only marginally successful at best, influencing far fewer conservation actions than economic development actions. Including the other CAMCs, we see what might amount to a natural progression in the region towards more sustainable management.

The establishment of CAMCs has promulgated many forms of participation considered important by natural resource scholars, including information gathering, consultation, decision-making, initiating action, and evaluation (Cohen and Uphoff 1980; Paul 1987; Salmen 1987). Examples from elsewhere show that failure to devolve real power leads to diminishing participation as members lose interest (Hough 1991). In ACA, the longevity of these committees speaks to their success in devolution of decision-making authority.

These ICDPs are not without their shortcomings, however. While committee activities have contributed to improved conservation policies, environmental restoration, and more sustainable natural resource use in general, there are still instances of breaching the protected area's rules and regulations. Committees would seldom take strict legal actions against their own friends and relatives. In regular meetings, CAMCs tended to table issues that required legal actions. When they would address them, their first priority would be to settle legal issues with graduated sanctions. Committees tended to warn violators at first and fine small amounts if warnings were not heeded. Most cases of serious violations were forwarded to ACAP, particularly if violators were influential in the community. This raises questions about the future sustainability of natural resource regulations following the intended withdrawal of ACAP officials between 2006 and 2010. Continuing a reduced government presence might prove necessary if violations increase in frequency or intensity.

While active attendance at CAMC meetings did not increase significantly over the study period, participation of women was significantly higher in the longer-term CAMCs. The role of women in conservation and development is generally overlooked by many ICDPs (Wainwright and Wehrmeyer 1998), and local institutions can act as the catalyst in providing a forum for greater participation by rural women. The latter is true to some extent in ACA. One of the policies adopted in the ACA Management Plan was to increase women's participation in each CAMC to at least 33% of membership by the end of 2002 (KMTNC 1997). To date, the highest number of women on the executive committee is four. To accomplish the stated objective, there should be at least five. This would require the popular election of women to the committees. To date, although they have been nominated in all five, only two CAMCs have actually elected female members. In meetings, women seldom raised issues, though men often broached subjects considered women's issues, such as Mothers' Group mobilization, celebration of festivals, and female empowerment. Even though women were on committees, they had not developed the confidence to put forth their views publicly in this male-dominated sphere.

The 1996 CAMR states, ''The CAMC shall meet at least six times a year without making a difference of more than 2 months.'' Only the long-term committees (Ghandruk and Lumle) abided by the Regulation. The medium-term (Dangsing and

Sikha) and the short-term (Narchyang) committees lagged far behind. The long-term committees had more funds, either collected from revenues or provided through endowment; therefore, they had more influence on development activities. Ghandruk won two international conservation awards: the Paul Getty Wildlife Conservation Award in 1992 and the United Nations Environment Programme's Global 500 Roll of Honour in 1994, and it has more than US$ 14,000 in endowment trust funds. The interest from these funds and revenues collected from other permits provide ample financial resources for small-scale projects that the CAMC can manage on its own. Of five CAMCs, Ghandruk receives the highest number of visitors and people are benefiting more from ecotourism enterprises. The impacts of ICDP intervention are more apparent in Ghandruk due to its longer timeframe.

The management of natural resources at the local level with the participation of many stakeholders is intended to reconcile political and power issues. In Annapurna, this has worked well to date; however, the future may be somewhat tenuous. Currently, there is a tacit understanding between CAMCs and VDCs about conservation and development projects undertaken in villages. The annual budget allocated by the government for a VDC is around US$ 8000. Meanwhile, CAMCs implemented individual projects with budgets of over US$ 13,000 through ACAP in 2002. The CAMCs have their own budgets in addition to these project budgets in some cases, derived from forest products revenue. Although VDCs are politically more powerful with the state, the influence of CAMCs in the local area is greater due to their greater financial resources (Heinen and Mehta 1999). This has created some tension between CAMCs and VDCs. The Local Governance Act of 2055 (1998) gives authority to VDCs to use natural resources within their jurisdiction. Concurrently, CAMCs are managing these resources within the conservation area. This is potential ground for conflict. Such conflicts have been observed to undermine collaborative management elsewhere (Brown 2002; Nepal 2002; Mclean and Straede 2003).

Other future concerns include over-visitation and potential immigration that could place additional demands on the area's natural resources. In Africa, many conservation areas have become attraction zones for rural migrants who wish to partake in the benefits associated with ICDPs (Oates 1995). The potential for this exists in ACA in the future if opportunities generated by tourism escalate and easy access facilitates immigration.

Conclusion

This study has uncovered trends suggesting that ICDPs may require longer timeframes to reach conservation goals than have been commonly assumed. In ACA, conservation activities only began to outpace development activities after about a decade into the projects. In younger projects, economic development received greatest attention from conservation area management committees. Mid-term projects tended to focus most energies upon institutional strengthening, while the longest-standing projects exhibited the highest percentage of energy on conservation activities. Thus, we propose a hypothesis regarding the typical evolution of participatory ICDPs in similar contexts: that the life cycle of such ICDPs generally moves from a focus on economic development, through a period of institutional strengthening, toward a greater focus on conservation. The hypothesis assumes that communities see

the link between conservation and development and all other best practices uncovered in prior studies of ICDPs are followed (e.g., Wells et al. 2004).

In ACA, participation and empowerment of local people is appreciable. However, truly equitable participation in terms of underprivileged ethnic groups and women has not yet been reached. An additional shortcoming of the ICDPs in ACA is that CAMCs still need to leverage state officials and non-governmental organizations to implement conservation area regulations. It is unclear whether the expectation of an entirely community-based management scheme could be effective in this respect. The Maoist insurgency in Nepal that began in 1996 further complicates matters (Baral and Heinen 2006).

While the future of the region is thus somewhat uncertain, the ICDPs in the region can be seen as successful, as they have contributed to increased consciousness of the importance of conservation and to active engagement in conservation activities by each of the communities involved. The timeframes over which significant shifts in activity focus from economic development toward conservation suggest that about a decade might be a reasonable time frame within which to gauge the success of similar ICDPs.

Acknowledgements We benefited from interacting with CAMC and VDC chairs and appreciate their time and able leadership. We would like to thank the secretaries of the CAMCs who generously made available documents necessary for this study. Members of the committees were always enthusiastic about our queries and rendered help in setting up appointments. Special thanks go to Mr. Som Ale for inspiring this project, to Mrs. Ranju Baral, who helped in translating and entering the data, and to Mr. Rupesh Shrestha, who assisted in preparing the GIS map of the study area. The first author appreciates the synergy and company of the Ghandruk office team for the duration of the fieldwork. He also wishes to thank ACAP and the King Mahendra Trust for Nature Conservation for providing an opportunity to serve the people of the Annapurna region.

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