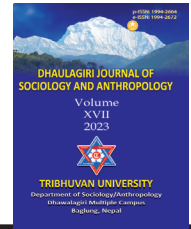


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Community Participation in Conservation and Development: A Case of Sikles Village in Annapurna Region

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Conservation of nature and biodiversity, together with livelihood maintenance and socioeconomic advancement of the local community, has always been a contested issue. This paper attempts to analyze the nature and extent of community participation in the conservation and development programs in Sikles Village of the Annapurna Conservation Area Project (ACAP) region and assess role of such community participation in the livelihood of the local people. The research used a mixed method. The primary data were collected through a household survey and interviews. The samples were selected from five clusters of Sikles Village. In total, 83 households were chosen as samples for the survey. In addition, interviews were also taken with selected representatives of the Conservation Area Management Committee (CAMC) and villagers. The conservation and development programs launched by ACAP in Sikles Village are carried out with the participation of the local people. The CAMC facilitates the process of community participation and it is compatible with the indigenous practices of the local community. However, the participation of the community is mostly at the implementation stage. The research shows that the decisive role is still limited to the village elites present in the CAMC and the experts of ACAP. Moreover, the formation of CAMC is exclusionary from caste/ethnicity and gender perspective. The people whose livelihood strategies are agriculture and animal husbandry are benefited from the conservation initiatives of ACAP.

Keywords: community participation, conservation and development, livelihood, natural resources, protected areas

Introduction

There is a very close relationship between human societies and nature. Human beings affect nature and, in turn, are affected by nature. The development of human society is also dependent on the proper utilization of natural resources. However, the depletion of natural resources has become a serious challenge for human civilization. To conserve natural resources and the existing biodiversity, there is an increasing trend of developing protected areas worldwide. The World Conservation Union (IUCN) defined protected area as "an area of land or sea dedicated to the protection and maintenance of biological diversity

and of natural and associated cultural resources, managed through legal or other effective means" (IUCN, 1994, p. 7). The protected area network has grown rapidly since the 1970s, and there are currently over 120000 designated areas recorded in the World Database on Protected Areas (WDPA), covering approximately 12% of the terrestrial surface (UNEP-WCMC, 2007, as cited in Coad et al., 2008, p. 6). Nepal also initiated the implementation of the concept of protected areas. The then His Majesty's Government (HMG) of Nepal embarked upon a modern era of conservation with the passage of the 1973 National Parks and Wildlife Conservation Act. A later amendment in the Act paved the way for the formation of another type



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of protected area called "conservation area".

In the initial phase, the conservation policy centered on establishing national parks. This conventional approach was guided by the belief that nature and human culture are separate. "It led to the establishment of areas isolated from human intervention, where the postulated uniqueness of nature should be protected. This concept entailed resettlement of the local population and the enforcement of regulations by regular or paramilitary troops" (Müller-Böker & Kollmair, 2000). As this approach seized the property and terminated livelihood opportunities of the local people using forest resources, it resulted in conflict between local people and park authorities. A community-based conservation approach was developed to overcome the gaps in the conventional conservation approach. Thus, there has been a paradigm shift in conservation policy. Community-based conservation involves local communities in the planning, decision-making, implementation, and monitoring of conservation efforts (Kothari et al., 1998). The new approach that started during the 1980s promised to build support among the local community by sharing the benefits of the protected area. The goals of these initiatives included compensating local people for lack of access to protected areas and providing alternative income sources that would allow people to benefit economically from conservation while refraining from environmentally destructive practices (Wells & McShane, 2004). Annapurna Conservation Area Project (ACAP), which started in 1986, followed such community-based conservation approach in its region. The main objectives of ACAP are to conserve the natural resources of ACA for the benefit of present and future generations, bring sustainable social and economic development to the local people, and develop tourism in such a way that it will have a minimum negative impact on the natural, social-cultural and economic environments (NTNC, 2019). Here, the state's agencies cooperate with the local management committee to conserve natural resources and biodiversity. There are altogether 57 Conservation Area Management Committees (CAMC) and 135 Forest Management Sub-Committees functioning at the local level (NTNC, 2010). Along with the conservation of natural resources, development activities are also carried out. In a village where the livelihood of the people is dependent on natural resources, conservation and sustainable use of these resources aim to enhance the livelihood of the people. However, Bajracharya et al. (2007) argued that the contribution of a community-based conservation approach to the livelihood of poor people is not sufficient. It does not consider the diverse composition of the community. The agendas regarding conservation are fixed by the people outside the community, and the poor and marginalized people are deprived from the decision-making process. Similarly, Timsina (2010) argued that although the management of forests is led by the communities, the interests of local elites and government officials and the

present policies and institutions continue to exclude the poor people dependent on natural resources. He further argued for the equitable distribution of resources to ensure people's livelihood.

Hence, there are criticisms regarding the governance and importance of community-based conservation. In this context, this paper tries to describe the nature and extent of community participation in ACAP's conservation and development programs and analyze its role in the livelihood of the local people.

Livelihood, Natural Resources and Management of Protected Areas

The ability to pursue different livelihood strategies is dependent on the basic material and social, tangible, and intangible assets that people have in their possession. Drawing on an economic metaphor, such livelihood resources may be seen as the 'capital' base from which different productive streams are derived from which livelihoods are constructed (Scoones, 1998, p. 7). There are different types of capital. Scoones (1998) listed four capitals, viz. natural capital, economic or financial capital, human capital, and social capital, as livelihood resources. Natural capital includes soil, air, water, and environmental services from which resource flows and services required for livelihood are drawn. Economic or financial capital includes cash, savings, physical infrastructure, and production technology required to pursue any livelihood strategies. Human capital includes skills, knowledge, good health, and physical capability, which are vital in carrying out livelihood strategies. Social capital includes social networks required for coordinated actions while seeking different livelihood strategies.

People mobilize a variety of natural resources to sustain their livelihood. "Land, forest and water are the most commonly used means of production in cultivation and animal grazing purposes" (Pandey, 2012, p.1). The rural people, having a subsistence economy, rely mostly on these resources. Ellis (2000) stated that natural resource-based livelihood strategies include gathering from forests, food cultivation, livestock keeping and pastoralism, and non-farm activities such as brick making, weaving, and thatching. "It is estimated that 90% of the world's poor depend on forests for at least a portion of their income" (World Bank 2000; Scherl et al. 2004; USAID 2006, as cited in Coad et al., 2008, p. 5). They get various important materials, such as timber, non-timber forest products (NTFPs), animal protein, etc., from forests. However, the people's access to such resources is denied by putting boundaries in it in the name of protected areas.

When restrictions are placed on the utilization of natural resources, there arises problems in the livelihood of the local and indigenous communities. So, conflict may occur between the local people and the management authority regarding issues such as poaching, illegal timber felling, fodder collection, fishing, grazing, etc.

There are both merits and demerits of the protected areas. According to [Coed et al. \(2008\)](#), the demerits of protected areas can include displacement of local people, changes in customary land tenure, denied or limited access to resources, loss of employment, crop damage and livestock predation, whereas the merits of protected areas can range from the ecosystem services protected within the forest areas to direct and indirect benefits from protected area management such as NTFPs, income from ecotourism, direct payments for conservation, development projects, employment opportunities, secure land tenure and conservation of resources from external threats. However, the provision of these benefits to local communities depends on the structures of management authority and the level of community involvement in governance.

[Ostrom \(1990\)](#) argued that neither the state nor the market is uniformly successful in sustaining long-term, productive use of natural resource systems. The collective institutions that are organized and governed by the resource users themselves successfully manage the common pool resources over a long period of time. "When users are genuinely engaged in decisions about rules affecting their use, the likelihood of users following the rules and monitoring others is much greater than when an authority simply imposes rules on users" ([Ostrom & Nagendra \(2007\)](#)). So, community-based conservation could be an effective approach to conserve natural resources. "Community-based conservation is defined as those principles and practices that argue that conservation goals should be pursued by strategies that emphasize the role of local communities in decision-making about natural resources" ([Adams & Hulme, 1998](#)). The concept of community-based conservation implies that 'the community' has an adequate institutional base for the management, and this, in turn, implies that it has a sanctioned authority that implements its responsibilities ([Murphree, 1994](#)). The local community can enforce rules, distribute incentives, and penalize for undesired activities regarding the conservation of natural resources. This approach assumes that people will be more conservation-oriented if they have a greater role in the distribution of benefits from managing natural resources.

[Müller-Böcker and Kollmair \(2000\)](#) found that local institutions have played an important role in regulating natural resources such as pasture, grass and forests in Kanchenjunga Conservation Area. Subsistence agriculture, animal husbandry, and other diverse economic strategies have contributed to sustaining the livelihood of the local people. Similarly, [Poudel \(2008\)](#) explored how the villagers of *Thini* Village, Mustang sustained their livelihood in the context of formally regulated Common Pool Resources. Previously, these resources were managed by the villagers themselves. However, with the arrival of ACAP, the CAMC started to regulate it. He found that agriculture and livestock are the villagers' major livelihood activities dependent on those resources. It shows the significance of

local management committees in resource management.

[Bajracharya \(2003\)](#) revealed that the community-based approach was successful in incorporating a significant portion of the community in conservation in the Annapurna region. The local people have perceived positive results in their village. The cost-benefit analysis showed that the benefits at the community level are higher than the cost it bears. Likewise, [Baral & Stern \(2010\)](#) explored the potentiality of local communities to be the primary actors in the governance of ACA in the context of the planned handover of the authority of the conservation area to the local communities. They have assessed the CAMC's capacities to manage ACA without outside support. Local villagers had favorably evaluated the performance of CAMCs, stating that the status of natural resources had improved compared to the pre-ACAP and over the past ten years. There has been an increment in the presence of women and Dalits in the organizational structure of CAMCs. The CAMCs have acquired local support measured by trust and legitimacy.

However, [Dahal et al. \(2014\)](#) stated that the representation of marginal groups in the local management committees was limited, and they were unable to influence the decisions regarding conservation and development. Those who represented the committee were just passive participants. Their meaningful participation was limited by various factors such as property, household work, size of the population, social norms and tradition, time, interest, qualification, occupation, etc. Similarly, [Schuett et al. \(2016\)](#) also found that the perceived benefits of ACAP were not equally distributed among the various groups within the community. A large number of people from marginal group perceived that they do not have benefits of any kind. One-third of people from the marginal group perceived that those who are on the management committee are the main beneficiaries of ACAP. So, whether community-based conservation approaches like ACAP bridges or broadens the gap of social inequality is a matter of debate. In this regard, [Heil \(2017\)](#) found that the Integrated Conservation Development Programs (ICDP) in Ghandruk of Annapurna region has broadened the gap between central Ghandruk with trekking business and Northwestern Ghandruk with subsistence farming. As the tourism management committee receives more funds than the programs in agricultural development, the people of central Ghandruk benefit more. Moreover, the lack of knowledge and education about the functions of ICDP has limited the participation of the marginalized groups of Northwestern Ghandruk. Hence, they have been further marginalized.

Most of these studies show the significance of a community-based conservation approach in conserving natural resources. Similarly, this conservation approach benefits the local people whose livelihood is dependent on such resources. However, there are still some questions regarding the governance of the approach and

its contribution to the livelihood of the local people. Is the level of community participation as participatory as theoretically explained? Has community participation addressed the livelihood issues of the local people? These are important issues in the conservation discourse.

Methodology

The research was conducted in *Sikles* Village of Kaski District in the Annapurna region. The CAMC of this region was awarded the Equator Prize 2014 by UNDP, and this village is considered a model of community participation in nature conservation. A mixed method was used in the research because a deep and broad understanding of the problem can be attained through both quantitative and qualitative data. The research holds a pragmatic worldview. So, instead of sticking to a single approach, it is important to address the research problem. The household survey was used as the method of data collection. During the survey, interview schedule was used to collect data from the sampled households. The interview schedule was filled by visiting the sampled households during the month of October, 2017. An enumerator provided support during the fieldwork. Both closed-ended and open-ended questions were asked. The five wards viz. ward number 5, 6, 7, 8 and 9 of the then *Parche* Village Development Committee comprised *Sikles* Village. The number of households in wards 5, 6, 7, 8, and 9 was 61, 65, 96, 75, and 35, respectively (CBS, 2012). Altogether, there were 332 households in the village. Cluster sampling was adopted to ensure the proper representation of different areas. Each ward of the village was considered a cluster, and 15, 16, 24, 19, and 9 households were randomly selected from ward numbers 5, 6, 7, 8, and 9, respectively. Hence, 83 households were chosen as samples in total. Besides the household survey, semi-structured interviews were also taken with selected representatives of CAMC and villagers. The interviewees were purposively selected. The data obtained through the survey were analyzed by using the SPSS. Mostly, the analysis was descriptive in nature, and in some cases, cross-tabulation of relevant variables was also performed. On the other hand, the qualitative data obtained through interviews were transcribed, coded, categorized, and then interpreted thematically.

Result and Discussion

Community Participation in Conservation and Development Programs of ACAP

The conservation and development programs launched by ACAP in *Sikles* Village were carried out with the participation of local people. A large majority of the respondents (61.4%) were engaged in the conservation and development activities of ACAP. The community was mobilized by the CAMC for various activities related to conservation and development, such as tree planting, village

cleaning, conservation of wildlife, and construction of roads and retaining walls. Even before ACAP arrived, the people conserved their forests using their indigenous practices. They have the provision of *Ban heralo*¹. Every ward has its own specific forest and provides a forest guard in each forest. The villagers collect some grains or sometimes a few amounts of money and give it to the guard. The main task of the forest guard is to patrol the forest to see if any illegal activities are being carried out in the forest. Likewise, there is also a provision for *Ban chodne*² once a year. During this time, the villagers can collect the dry wood. In addition, there is also an Indigenous practice of *Jhara*³. The community engages in the above-mentioned conservation and development activities through this system. Clarifying the engagement of the local community, the secretary of the CAMC said:

There are six *tole* (settlements) in *Sikles*. If any development budget is allocated in any *tole*, then the people of that *tole* contribute through *Jhara*. All the people of that *tole* are informed and appealed for *Jhara* and the people gather to contribute their labor for the construction and management of the development works. If an individual is not able to be present in the program, then he/she will pay some amount and that money will be used for tea and snacks of that day.

It shows that the local community is engaged in conservation and development activities through the traditional practice of *Jhara*. Gurung (2008) revealed that local communities have successfully conserved biodiversity in the ACA by embedding and fusing traditional, Indigenous, and contemporary governance principles. Hence, *Jhara* facilitates community participation.

Participation is often defended as a radical approach that allows local people to express 'agency' through which people exercise their political citizenship in shaping the decisions that affect them (Gaventa, 1999, as cited in Paudel et al., 2010, p. 17). Thus, the community participates with full potential at all decisive levels in the conservation and development activities. However, in practice, some limitations of the approach have been observed. Paudel et al. (2010) criticized the participatory approach under four parameters. First, participation is mainly expected at the level of implementation but the management agenda and policy framework are mostly set by the government and international conservation agencies. Second, community participation is limited to instrumental participation. The local community is given limited autonomy regarding resource management; rather they are asked to participate as per the framework which is designed from above. Third, the existing approach regards the local community just as a recipient of benefits and development support instead of considering them as the partner of protected area governance. And lastly, the development benefits of

1. Forests guard, who is locally appointed and assigned to take care of the forests
2. The traditional practice of permitting to go to the forests
3. Indigenous practice of labor contribution by a group of people

the conservation project are unequally distributed. The benefits are mostly consumed by a few elites of the village.

People participate in conservation and development activities at various stages in *Sikles* Village, from the very first stage of policymaking to planning, decision-making, and implementation. Table 1 shows the stages of participation of the respondents in those activities.

Table 1
Caste/ethnicity and Stages of Participation

			Stages of Participation				Total
			Policy Making	Planning	Decision Making	Implementation	
Caste/Ethnicity	Gurung	Count	1	5	2	34	42
		% within Caste/ethnicity	2.4%	11.9%	4.8%	81.0%	100.0%
	Dalit	Count	0	0	0	9	9
		% within Caste/ethnicity	0.0%	0.0%	0.0%	100.0%	100.0%
Total	Count	1	5	2	43	51	
	% within Caste/ethnicity	2.0%	9.8%	3.9%	84.3%	100.0%	

n=51*

Table 1 shows that most respondents (84.3%) participated in the implementation stage. The respondents' participation at other stages, such as policy-making, planning, and decision-making, is very low. Only 9.8% of the respondents participate in the planning stage. Similarly, 3.9% of the respondents participate in the decision-making stage, and the very least (2.0%) participate in the policy-making stage. It shows that people have less access to the decisive level. The table further shows that the stages of participation also vary by caste/ethnicity. Dalits have

* Out of 83 sampled households, only 51 responded that they participated in conservation and development activities. So, participation in various stages is analyzed for those who participated

Source: Field Work, 2017

Table 2
Land Ownership and Stages of Participation

			Stages of Participation				Total
			Policy Making	Planning	Decision Making	Implementation	
Land Ownership	No Land	Count	0	0	0	3	3
		% within Land Ownership	0.0%	0.0%	0.0%	100.0%	100.0%
	1-3 Ropani	Count	0	2	2	15	19
		% within Land Ownership	0.0%	10.5%	10.5%	78.9%	100.0%
	4-6 Ropani	Count	0	2	0	20	22
		% within Land Ownership	0.0%	9.1%	0.0%	90.9%	100.0%
	>6 Ropani	Count	1	1	0	5	7
		% within Land Ownership	14.3%	14.3%	0.0%	71.4%	100.0%
Total	Count	1	5	2	43	51	
	% within Land Ownership	2.0%	9.8%	3.9%	84.3%	100.0%	

n=51

Source: Field Work, 2017

no participation in the decisive level at all. All of them participate in the implementation stage.

Similarly, Table 2 shows the stages of participation also varies by land ownership.

Table 2 shows that those with larger land sizes participate in the decisive stages. 14.3% of the respondents who have more than 6 ropani of land participate in the policy-making stage, and the other 14.3 % of the respondents of the same category participate in the planning stage. On the other hand, all the landless respondents (100%) participate in the implementation stage.

So, the stages of participation vary by the categories of land ownership. Table 1 and Table 2 show that all Dalits and landless people participate only in the implementation stage, showing a decisive role mostly limited to the village elites and the ACAP experts.

One of the Dalits who did not participate in the meeting said:

All the decisions are carried out by the *Chibba* (village’s headman). They don’t listen to the Dalits.

So, we usually don’t go to meetings. What’s the use of going to the meetings if it is not beneficial?

It shows that the dominance of village elites in the decision-making process limits the participation of marginalized groups.

The conservation approach has not recognized the diverse nature of the community. Agrawal & Gibson (1999) argued that the usual assumption about a community, such as a community as a small spatial unit, a homogeneous social structure with common interests and shared norms, is a limited understanding. It is necessary to recognize the heterogeneity of the community to ensure the participation of all the groups within a community. There is also some caste-based discrimination that limits the participation of people in the meetings. Khadka & Nepal (2010) found that the high-caste, and richer social groups systematically exclude participation of the marginalized people in ACA. Similarly, Parker (2005) observed that poor and marginalized groups have not been successfully included in ACAP’s approach in *Sikles*. The principles of participation, consultation and inclusion advocated by ACAP theoretically have not been practically implemented locally. ACAP’s staff and local leaders are more concerned about mobilizing the poor and marginalized than including them in a participatory process.

The CAMC is the platform through which the community participates in the conservation and development programs of ACAP. However, its formation is exclusionary from a caste/ethnicity and gender perspective. Of 15 members, 13 are from the Gurung community, 1 Dalit, and 1 Brahmin. Regarding sex, 11 are males, and 4 are females. An exclusionary mechanism cannot ensure the community's participation.

Besides the exclusion of Dalits, there was also political influence in the formation of the committee. A villager stated:

There was a political influence on the formation of

CAMC. The members, Chairman, and Secretary are selected based on political affiliation. Yes-men are selected and the committees are formed. Both the chairman and secretary are of the same party. We argued that if the Chairman is from *Sikles*, then the secretary should be from *Khilang* (another village of *Parche* VDC). But they did not follow our suggestions.

Hence, it shows some political influences in the formation of CAMC. The political or caste/ethnicity dominants influence the committee's composition.

ACAP seeks advice from the local community through CAMC while planning the programs. The CAMC holds meetings and discusses the necessity of the development and conservation programs in the village. They also seek advice from the villagers regarding this matter. The secretary of the CAMC, further added:

The development projects required for the village are discussed in the CAMC meeting. Each ward representative states the requirements of development projects at their ward. The demands of the local people are discussed in the meeting. The meeting finalizes the development projects based on necessity and sends it to ACAP office for approval. Then, the proposal for those development projects is sent to the Head Office of ACAP at Pokhara, and finally, it is sent to the office of the National Trust for Nature Conservation (NTNC) in Kathmandu. After the approval from the NTNC office, the budget is sent to CAMC through ACAP; hence, CAMC carries out the development projects.

It shows that the advice of the local people and ward representatives was considered in developing the village's projects. However, the final decisions was made by the head office of ACAP and NTNC.

Role of Community Participation in ACAP’s Programs on the Livelihood of the Local People

Livelihood Strategies in the Village

The economic opportunities in the village of Nepal is limited and hence, most of the people are engaged in agriculture. Table 3 shows the occupation of the respondents.

Table 3
Occupation of the Respondents

Occupation	Frequency	Percent
Agriculture	61	73.5
Animal Husbandry	8	9.6
Foreign Employment	4	4.8
Salaried Job	4	4.8
Business	6	7.2
Total	83	100

Source: Field Work, 2017

Agriculture and animal husbandry are the respondents' main occupations directly dependent on natural resources. Conservation of these resources benefits those villagers engaged in agriculture and animal husbandry. [United Nations Development Programme\[UNDP\], \(2016\)](#) reveals that CAMC of *Sikles* has planted more than 200,000 trees, including fruit-bearing and other ecologically beneficial species. Tree planting is done strategically in barren and fallow areas as well as on steep slopes in order to prevent soil erosion and landslides. One of the farmers of the village stated:

Since the start of ACAP in our villages, the CAMC has mobilized villagers to plant trees. They have provided us with seedlings, and we have planted many trees on barren land. This has protected nature and our land from landslides. Now, it is safe to cultivate crops in our land.

The protection of land from soil erosion and landslides is beneficial to the people whose livelihood is dependent on land. Now, they can safely grow their crops. Protection of soil erosion helps to increase their productivity. Similarly, minimizing the risk of landslides ensures the security of their products. According to UNDP (2016), the village's CAMC has started an agricultural training and loan program contributing to rural agricultural income. The programs include various activities such as operating multipurpose nurseries, providing improved varieties of crops, promoting cash crops and fruit-tree plantations, and improving breed selection and veterinary services. Thus, CAMC and ACAP have contributed a lot in enhancing agriculture and animal husbandry, which are the major livelihood strategies of the villagers.

Materials Received from Forests for Livelihood Purposes

The forest is an important source of various materials used for the villagers' livelihood. The conditions of the forests in the village have improved after the arrival of ACAP. Describing the conditions of the forests, the chairman of CAMC stated, "If we talk about the situation 25 years ago, there was overconsumption of fuel wood, and the village turned almost like a desert. Now, you can see greenery everywhere in Sikles."

The improvement in the conditions of the forests has ensured the availability of the forest products to the local people. The chairman further stated:

The availability of fodder and fuel wood has increased. It used to take almost 10- 12 hours to collect one *vari* (quantity that can be carried at a time) fodder or fuel wood. But now, with the arrival of ACAP and our efforts the situation has changed. One could easily collect a *vari* of fodder or fuel wood within an hour.

Thus, the easy availability of fodder and fuel wood has decreased the working hours spent collecting these materials. Now, they can spend their extra time in other income-generating activities rather than just collecting

fodder or fuel wood, which has enhanced the villagers' livelihoods. [Table 4](#) shows the types of materials received by the villagers from the forests.

Table 4
Materials Received from Forests

n=83		
Types of Materials*	Frequency	Percent
Firewood	80	96.4
Fodder	60	72.3
Herbs	11	13.3
Wild vegetables	19	22.9
Wild fruits	2	2.4
Timber	3	3.6
Nigalo	45	54.2
Puwa fiber	13	15.7

*Multiple responses

Source: Field Work, 2017

The main material that the local people receive from the forest is firewood. 96.4% of the respondents reported that they collect firewood from the forests. It is used as the main source of energy for cooking purposes. So, less money is spent on alternative sources of energy, such as kerosene or liquefied gas. Similarly, fodder is another important material for the villagers. 72.2% of the respondents said they collect fodder from the village to feed their cattle. Raising cattle is an important livelihood strategy supported by the supply of such fodder. Likewise, 54.2% of the respondents receive *Nigalo* (*Himalayan bamboo*) used for making various household items such as baskets, and mats. The other important forest products are wild vegetables, *Puwa* fiber (fiber extracted from Himalayan nettle/ *Girardinia diversifolia*), herbs, timber and wild fruits. Non-timber forest products play a crucial role in rural livelihoods. To cater to increasing subsistence and commercial needs for NTFPs, CAMC *Parche* has promoted a more careful assessment of the NTFP resource base in the area and a participatory approach to designing sustainable harvesting systems (UNDP, 2016, p. 9). NTFPs are harvested annually to check the overconsumption of the products.

All these materials are valuable and significantly improve the livelihood of the villagers. Without the community-based conservation program, they might not have benefited from these materials to this extent. Bajracharya et al. (2006) also found that a greater proportion of the respondents in ACA perceived livelihood benefits compared to those outside ACA. Thus, the forest's products have contributed to the livelihood of the people living in ACA.

People's Evaluation of Their Livelihood Conditions due to ACAP's Program

ACAP has been working in the village for a very long time and one of its objectives is to bring sustainable social and economic development to the local people. So, ACAP's work can contribute to the livelihood of the local people. As discussed earlier, there are some advantages and disadvantages as well. Table 5 shows respondents' evaluation of their livelihood conditions due to the ACAP program.

Table 5
Evaluation of the Livelihood Conditions

Evaluation	Frequency	Percent
Much better	4	4.8
Somewhat better	59	71.1
No Change	17	20.5
Somewhat worse	3	3.6
Total	83	100.0

Source: Field Work, 2017

Table 5 shows that a vast majority of the respondents (71.1%) perceived that their livelihood conditions have improved due to ACAP's program while 20.5% of them stated that there is no change in the livelihood conditions. Likewise, the other few (4.8%) perceived the condition as much better, while the other (3.6%) perceived it as somewhat worse. The important materials they have received, as discussed in Table 4, might have contributed to improving their livelihood conditions. On the other hand, a few respondents have perceived that their livelihood conditions have been somewhat worse due to some disadvantages of ACAP's conservation program, such as crop damage by wildlife and some restrictions on unregulated harvesting of forest products.

Conclusion

The study has described the extent of community participation in the conservation and development programs of ACAP in *Sikles* Village. It shows that there is a wider participation of the community in the project's activities. CAMC has played a significant role in mobilizing the local community. As argued by [Ostrom \(1990\)](#) the common pool resources that are governed by resource users are more successful than the resources governed by the market or the state. The study has shown that natural resources can be successfully managed through the participation of the local people. It was possible because the project benefited from the Indigenous efforts of the local people for nature conservation, such as *ban heralo*, *ban chodne* and *jhara* systems that have been practiced for a long time. The incorporation of such indigenous practice in the formal procedure of CAMC has facilitated the process of conservation. However, results showed that the structure of CAMC was not inclusive. So, to ensure the wider participation of the community it should

reform its structure. Without the involvement of the local people in the decision-making process, the participation process will lose its essence. Incorporating the local people into the decision-making process might further ensure the success of ACAP. This research has not analyzed the causes and consequences of the exclusionary structure of CAMC. Further analysis of the lived experience of marginalized groups can provide better insights into and suggest making the committee inclusive.

The objective of ACAP is not just to conserve the natural resources but also to enhance the livelihood of the local people. Those people whose livelihood strategies are agriculture and animal husbandry are benefited from the conservation initiatives of ACAP. The conservation of land, forest, and pasture land has significantly contributed to the villagers' livelihood. Moreover, CAMC and ACAP are continuously supporting the villagers by providing various training, operating nurseries and providing seedlings, introducing improved varieties of crops, promoting cash crops, and extending the veterinary services in the village. Thus, ACAP's conservation and development programs have played an important role in enhancing the livelihood of the local people. [Coad et al. \(2008\)](#) argues that the livelihood impacts of protected areas vary with protected area status. Those areas that are strictly protected by top-down management structures have more livelihood costs, while the areas managed through community involvement can provide tangible benefits. As the ACA is managed by community involvement, the local people have been able to get more benefits than other forms of protected area management.

Management of natural resources in post-federal Nepal has been a contested issue. The government of Nepal has repeatedly extended the tenure of NTNC to manage ACAP. At the same time, the provincial government and local government have claimed their ownership over the revenue generated by ACAP. It could be a good case study about federal Nepal's natural resource management conflict. At the inception of ACAP, it was designed to be handed over to the community. Assessing the capability of the community, its prospects, and challenges can also be an important agenda for further research.

Declarations

Ethics Approval and Consent to Participate:

I declare that this research was conducted ethically.

Consent of Publication:

Not applicable.

Competing Interests:

There is no competing interest with any individual or agency.

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References

- Adams, W.M. & Hulme, D. (1998). *Conservation and communities: Changing narratives, policies and practices in African conservation* (Working Paper No. 4). Manchester: IDPM, University of Manchester
- Agrawal, A. & Gibson, C. C. (1999). Enchantment and disenchantment: The role of community in natural resource conservation. *World Development*, 27(4), 629-649. [https://doi.org/10.1016/S0305-750X\(98\)00161-2](https://doi.org/10.1016/S0305-750X(98)00161-2)
- Bajracharya, S. B. (2003). *Community involvement in conservation: An Assessment of impacts and implications in the Annapurna conservation area Nepal* [Unpublished doctoral dissertation]. Institute of Geography, School of Geosciences, University of Edinburgh, Edinburgh.
- Bajracharya, S. B., Furley, P. A. & Newton, A. C. (2006). Impacts of community-based conservation on local communities in the Annapurna conservation area, Nepal. *Biodiversity and Conservation*, 15, 2765–2786. <https://doi.org/10.1007/s10531-005-1343-x>
- Bajracharya, S. B., Gurung, G. B., & Basnet, K. (2007). Learning from community participation in conservation area management. *Journal of Forest and Livelihood*, 6(2), 54-66.
- Baral, N. & Stern, M. J. (2010). Looking back and looking ahead: local empowerment and governance in the Annapurna conservation area, Nepal. *Environmental Conservation* 37(1), 54-63. <https://dx.doi.org/10.1017/S0376892909990269>
- CBS (2012). *National Population and Housing Census 2011: Ward wise Table*. CBS, Government of Nepal
- Coad, L., Campbell, A., Miles, L. & Humphries, K. (2008, May). *The costs and benefits of protected areas for local livelihoods: a review of the current literature* (Working Paper). UNEP-WCMC
- Dahal, S., Nepal, S. K & Schuett, M. A. (2014). Examining marginalized communities and local conservation institutions: The case of Nepal's Annapurna Conservation Area. *Environmental Management*, 53, 219-230. <https://doi.org/10.1007/s00267-013-0204-8>
- Ellis, F. (2000). *Rural livelihood and diversity in developing countries*. Oxford University Press
- Gurung, H. B. (2008). *Fusioning: A grounded theory of participatory governance in the Annapurna conservation area, Nepal* [Unpublished doctoral dissertation]. Griffith University, Australia.
- Heil, J. E. (2017). Through the Eyes of Asa; the role of integrated conservation development programs in Ghandruk, Nepal. *World Journal of Environmental Research*. 7(1), 17-26.
- IUCN. (1994). *Guidelines for protected area management categories*. Gland: CNPPA, WCMC, IUCN
- Khadka, D. & Nepal, S. K. (2010). Local responses to participatory conservation in Annapurna conservation area, Nepal. *Environmental Management*, 45, 351-362. <https://doi.org/10.1007/s00267-009-9405-6>
- Kothari, A., Anuradha, R.V & Pathak, N. (1998). *Communities and conservation: natural resource management in south and Central Asia*. Sage Publication
- Murphree, M. W. (1994). *The Role of Institutions in community-based conservation*. In Western, D., Wright, M. & Strum, S. C. (Eds.), *Natural connections: Perspectives in community-based conservation*, (pp. 403-427). Island Press.
- Müller-Böker, U. & Kollmair, M. (2000). Livelihood strategies and local perceptions of a new nature conservation project in Nepal: The Kanchenjunga Conservation Area Project. *Mountain Research and Development*, 20 (4), 324-331. [http://dx.doi.org/10.1659/0276-4741\(2000\)020\[0324:LSALPO\]2.0.CO;2](http://dx.doi.org/10.1659/0276-4741(2000)020[0324:LSALPO]2.0.CO;2)
- NTNC (2010). Achievement fact sheet. NTNC-Annapurna Conservation Area Project
- NTNC (2019). Annapurna Conservation Area Project <https://ntnc.org.np/project/annapurna-conservation-area-project-acap>
- Ostrom, E. & Nagendra, H. (2007). Insights on linking forests, trees, and people from the air, on the ground, and in the laboratory. *PNAS*, 103(51), 19224-19331. <http://dx.doi.org/10.1073/pnas.0607962103>
- Ostrom, E. (1990). *Governing the commons: The evolution of institutions for collective action*. Cambridge: Cambridge University Press
- Pandey, T. R. (2012). Towards a framework for study of rural livelihood. *Occasional Papers in Sociology and Anthropology*, 12, 131-181.
- Parker, S.L. (2005). *Reflecting on REFLECT in Sikles, Nepal: a dialogical inquiry into participation, non-formal education and action-oriented research*. [Unpublished doctoral dissertation]. Liverpool John Moores University, England.
- Paudel, N. S., Jana, S. & Rai, J. (2010). *Protected areas*

- and rights movements: *The Inadequacies of Nepal's participatory conservation* (Discussion Paper Series 10:3). Kathmandu: Forest Action
- Poudel, D. P. (2008). *Livelihood and common-pool resources: A study of Thini village, Mustang, Trans-Himalayan Region of Nepal* [Unpublished M.Phil. dissertation]. Department of Geography, University of Bergen, Norway
- Scoones, Ian. (1998). *Sustainable rural livelihoods: A framework for analysis* (IDS Working Paper 72). Brighton: IDS
- Schuett, M. A, Dahal, S. & Nepal, S. (2016). Local perspectives on benefits of an integrated conservation and development project: The Annapurna conservation area in Nepal. *International Journal of Biodiversity and Conservation*, 8(7), 138-146. <https://doi.org/10.5897/IJBC2016.0958>
- Timsina, N. P. (2010). Natural resources governance and livelihoods in Nepal: Political economy and political ecology perspectives. In B. R. Upreti & U. Müller-Böcker (Eds.), *Livelihood insecurity and social conflict in Nepal*, (pp. 49-72). NCCR (North-South), RCO, South Asia.
- United Nations Development Programme (2016). *Conservation area management committee, Parche, Nepal* (Equator Initiative Case Study Series).
- Wells, M. P. & McShane, T. O. (2004). Integrating protected area management with local needs and aspirations. *Ambio*, 33(8), 513-519. <https://doi.org/10.1579/0044-7447-33.8.513>

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