RESEARCH ARTICLE

Check for updates

Article Info: Received 26 October 2023 Revised 20 December 2023 Accepted 22 December 2023

Corresponding Author: Sudirman Daeng Massiri Department of Forestry University of Tadulako E-mail: sudi_untad@yahoo.co.id

Copyright © 2024 Massiri et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.



Correlations between Local Institutional Capacity and Community Conservation Partnerships in Lore Lindu National Park

MEDIA Konservasi

SCIENTIFIC JOURNAL IN CONSERVATION OF NATURAL RESOURCES AND ENVIRONMENT

Sudirman Daeng Massiri, Hamzari, Hendra Pribadi, Golar, Hamka, Akhbar, and Naharuddin

Department of Forestry, University of Tadulako

Abstract

The Community Conservation Partnership (CCP) is a policy option for ensuring the sustainability of conservation functions while improving the local community's economy. The critical issue in implementing this policy is local institutional capacity. This research aimed to describe the correlation between local institutional capacity and the performance of community conservation partnerships in LLNP. This research was carried out in 10 villages that had established conservation partnership agreements with LLNP managers. This research adopted a quantitative descriptive method. This research revealed that CCP performance was significantly dependent on local institutional capacity. The CCP programme improved the function of conservation areas but did not boost the local economy significantly. Trust and financial capacity were the essential organisational and management capacities that strongly correlated with CCP performance. The performance of CCP was more strongly correlated with the organisational and management capacity. The individual capacity in forestry. Therefore, strengthening capacity at organizational and management levels, such as building trust, communications, and funding support for local institutions, is crucial for improving and sustaining conservation partnerships.

Keywords: conservation partnership, community empowerment, local institution, institutional capacity, conservation management

1. Introduction

The challenges encountered by local communities living around the conservation areas in Indonesia are related to legal rights, access, and capacity to manage the conservation areas. Six thousand three hundred eighty-one villages rely on 201 conservation areas in Indonesia [1]. Most communities living around forest areas rely on land resources and forest resources. This situation characterizes high exclusion costs for these local communities [2]. This problem has triggered tenurial conflicts between conservation area managers and the local communities for decades.

The government of the Republic of Indonesia has implemented a policy involving the community in the management of conservation areas in response to the existing problems [3,4]. The policy involving the community in managing conservation areas is a conflict resolution strategy and a form of community empowerment [5]. The community empowerment program in conservation areas aims to gain community support in conserving conservation areas.

The concept of community empowerment covers a wide range of aspects, including access, authority, control over resources, raising awareness, and increasing capacity and social improvement [6–8]. However, when it comes to the conservation areas in Indonesia, the policy narrative on community empowerment aims to develop self-reliance and welfare of the local community to support the area's sustainability. The spectrum of empowerment includes increasing awareness, granting access, increasing capacity, and giving power. Community empowerment emphasizes on the process of community improvement [9], including the process of improving community institutions, businesses, income, environment, and life.

Many community empowerment programmes in conservation areas in Indonesia have often failed due to narrow focus on economic aid programmes, rather than fully supporting the adoption of a collaborative management model [10]. In Indonesia, the community empowerment policy in managing conservation areas is not only a programme that supports the local economy but also provides legal access to the local community and manages conservation areas. Conservation partnerships are collaborative management in which the Head of the Conservation Area Management Unit and the local community work together to take responsibility for an area.

Most of conservation areas in Indonesia have developed extended partnership conservation policies [1]. These policies can help resolve tenure conflicts in conservation areas [11]. However, implementing the conservation partnership policy still results in vertical conflicts over land use, while some communities refuse to accept the scheme [12].

Lore Lindu National Park has established a conservation partnership as a model for community-based conservation area management. This partnership is called Community Conservation Partnership (CCP). The integration of CCP into LLNP's management approach is a means of empowering local communities. With the support of foreign funds, LLNP managers have established 56 agreements with village governments that aim to protect the conservation area and support local community income [13]. However, according to LLNP Management's assessment report on the CCP's needs, the community conservation partnership has not been effective in improving the local economy [14].

It is widely recognized that local institutional capacity and empowerment processes play a crucial role in determining performance in both institutional and community empowerment contexts [15]. Institutional capacity describes potential capacity and an actor's ability to achieve collective goals [16]. This capacity includes individual capacity and organizational capacity [17]. The individual capacity encompasses both technical and behavioural capabilities. The technical capacity comprises skills in technology use, administration, management, leadership, and entrepreneurship. The organizational capacity is related to social capital, including participation, trust, teamwork, and networking.

The empowerment process may lead to efforts to improve performance. Empowerment is a capacity-building process [18] that occurs at the individual, organizational, community, and inter-organizational levels [19], with the aim to improve performance. However, an ineffective empowering strategy will not result in higher performance [20,21]. It is crucial to understand institutional capacity linkages when developing capacity-building initiatives to enhance the effectiveness of conservation partnerships. Further research is required to explain the correlation between institutional capacity and local institutional performance in quantity. This research examined the correlation between local institutional capacity and the performance of CCP in LLNP. In addition, this research identified local institutional aspects, determining CCP performance.

2. Research Methodology

This research was performed in villages implementing community-based conservation partnerships in area 2 of LLNP management. The administration of the LLNP was divided into three areas. The previous performance assessment research found that CCP in area 2 of LLNP management had significant performance variation compared to other management areas. Ten village governments under Area 2 of LLNP management had established conservation partnerships with LLNP managers. These ten villages were selected as the research sample for examining the correlation between local institutional capacity and CCP performance.



Figure 1. Research site map

Table 1. Data requirements	and data	collection	methods
----------------------------	----------	------------	---------

Scope of research	Data requirement		uirement Data collection methods		
Individual capacity of the village	a.	Administrative and managerial capacity	Structured interviews using questionnaires were conducted with ten members from each village		
conservation agency's	b.	Technical capacity in forestry	conservation agency in 10 sample villages, resulting in a		
members	с.	Business development capacity	total of 100 participants being interviewed.		
Organizational and	a.	Clarity of vision and missions	a. Structured interviews using questionnaires with ten		
management capacity	b.	Clarity of the main tasks and	members of each village conservation agency in 10		
of the village		functions	sample villages, resulting in a total of 100		
conservation agency	с.	Trust	participants being interviewed.		
	d.	Communication	b. In-depth interviews with the village conservation		
	e.	Financial capacity	agency's primary administrators		
CCP performance	a.	Controlled forest resource utilization	a. Structured interviews using questionnaires with ten members of each village conservation agency in 10		
	b.	Business development	sample villages, resulting in a total of 100		
	с.	Preservation of forest areas	participants being interviewed.		
			 In-depth interviews with the village conservation agency's primary administrators, Village Government LINP Administrator, and Eacilitators 		
			c Focus Group Discussion (FGD)		
			d Observation and study of documents		

The data were collected for four months in 2023 by applying a structured and in-depth interview technique as well as focus group discussion (FGD). Structured interviews were carried out to obtain information on local institutional capacity and the success of community conservation partnerships. Structured interviews were conducted with ten members from

each village conservation agency. In-depth interviews were carried out with facilitators, LLNP administrators, village administration, and village conservation officials to obtain data on partnership formation, mentorship procedures, and challenges to community conservation partnership implementation. FGD activities were carried out in two stages. Initially, they were carried out in each village to verify CCP performance data. Ten participants, including the primary administrators and members of the village conservation agency, took part in these FGDs. The second stage of FGD aimed to verify the performance obstacles of conservation partnerships. The FGD participants' consisted of the head of the village conservation agency, the village head, the village facilitator, and LLNP staff members from the resort, department, and area management divisions.

This research used Spearman rank statistical analysis to examine the correlation between the potential capacity of the village conservation agency and the CCP performance. The potential capacity was an independent variable, including the individual capacity and the organizational capacity. Meanwhile, the CCP performance was the dependent variable. The variables of village conservation agency capacity considered to have a relationship with the CCP performance were administrative and management skills (X1), technical skills in the forestry sector (X2), business development experience (X3), understanding the vision and missions of the partnership and the organization (X4), understanding of main tasks and functions in the organization (X5), trust (X6), communication (X7) and funding (X8). Meanwhile, the dependent variables were CCP performance in controlling the use of forest resources (Y1), CCP performance in business development (Y2), and CCP performance in forest conservation (Y3).

The local institutional capacity and the CCP performance were quantitatively measured. In addition, the institutional capacity and the CCP performance were divided into three levels: Low (0.00 - 33.33%), moderate (33.34%-66.66%), and high (66.67-100%).

The correlation between local institutional capacity and conservation partnership performance was determined based on significant and coefficient correlation values. The criteria for the coefficient of correlation can be classified into five categories, as outlined in [22]: very high correlation (0.90-1.00), high correlation (0.70-0.89), moderate correlation (0.50-0.69), low correlation (0.30-0.49), and no or low correlation (0.00-0.29).

3. Results and Discussion

3.1. Local institution implementing CCP

The institution at the local level, implementing conservation partnership agreements in LLNP is called the village conservation agency. The roles and functions of the village conservation agency are: a) facilitating communication between the community and the LLNP management, b) preparing the program implementation plan and annual work plan together with the LLNP management, c) disseminating the CPP to the community, g) reporting the results of the CCP program to the LLNP managers and Village heads.

The CCP developed in LLNP is a form of community empowerment. Community empowerment strengthens the community access and capacity [23]. Community access granted for the utilization of forest resources is limited to the traditional zone of LLNP. The allowed type of utilization is limited to non-timber forest products and forest resources that are exclusively used for traditional purposes. The programme of activities of the village conservation agency comprises three components: a) controlled forest resources utilization in traditional zones, b) business development, and c) conservation of the forest area.

The implementation of the conservation partnerships program depends on the village conservation agency's capacity as the local institution. The institutional capacity refers to the ability of specific individuals, organizations, or units to carry out their duties efficiently, effectively, and sustainably [24,25]. The importance of human resources and the technical guidance process in conservation partnerships cannot be overstated, as they play a crucial role in determining the effectiveness of such partnerships [26]. The process of strengthening

local community capacity has been carried out by LLNP managers [13] to support the management objectives of conservation area[23].

3.2. Individual capacity of the member of village conservation agency

Individual capacity building involves a series of actions and efforts that empower individuals in an organization to perform their duties at their best [27,28]. The individual level of community capacity encompasses various characteristics, including leadership, entrepreneurship, skills, organization, management, and planning [29]. In this research, the individual capacity of the member of village conservation agency was assessed from 3 aspects, namely the administrative and managerial capacity, forestry technical capacity, and individual capacity in developing businesses. Administrative capacity describes the ability of individuals in an organization to carry out administrative and managerial activities, such as knowledge of correspondence, skills in documenting activities, and organizational experience. Business development capacity describes the individual experience and abilities of the members of village conservation agency in running and developing a business. Forestry technical capacity describes the forestry technical knowledge and skills of the members of village conservation agency, such as map reading, ability to use GPS, and skills in nursery and rehabilitation techniques.

This research revealed that the members of the village conservation agency had a relatively high average forestry technical capacity. However, their individual capacity in administrative and managerial matters as well as business development was in the moderate category. The scores for individual capacity in administrative and managerial aspects averaged at 59.50%, while forestry technical capacity scored an average of 76.75%, and individual capacity in developing business scored an average of 70.75% (see Figure 2).



Figure 2. The average individual capacity of members of the village conservation agency

High individual capacity in the technical field of forestry was confirmed by the level of understanding of village conservation agency members in using GPS and reading maps. The members of the village conservation agency also acquired skills in seeding techniques, compost-making techniques, honeybee cultivation technology, and other forestry technology. Village conservation agency administrators organized training programs where competent speakers were invited to present. In addition to this program, the facilitators and LLNP managers also provided support and practical experience in establishing nurseries, producing organic fertilizer, and conducting forest monitoring and conservation operations. This program has implications for increasing the knowledge and skills of village conservation agency members.

Despite the fact that most members of the village conservation agency acquired moderate administrative and management skills, some members of the village conservation agency acquired good administrative and management skills. Some members of the village conservation agency had organizational expertise and experience in various local organizations, such as village administration, farmer groups, religious organizations, and youth organizations. The village government determined the mechanism for engaging the members of the village conservation agency. The membership structure of the agency varied from 15 to 20 persons and included village administrations and communities utilizing the LLNP area's resources.

 Table 2. Individual capacity of members of the village conservation agency in Area 2 of LLNP management

		Individual capacity of members				
Villages	Village conservation agency	Administrative and managerial	Technical capacity in forestry	Business development		
		capacity	-	capacity		
Bakubakulu	Hilonga Hijau	67.50%	75.00%	87.50%		
Bobo	Saluntolondo	80.00%	87.50%	75.00%		
Bunga	Bunga	77.50%	87.50%	80.00%		
Kapiroe	Kapiroe	75.00%	87.50%	75.00%		
Sintuwu	Bersatu	75.00%	72.50%	75.00%		
Karunia	Mosipatupu	27.50%	70.00%	62.50%		
Tongoa	Lestari	30.00%	60.00%	80.00%		
Bulili	Watu Bose	67.50%	80.00%	57.50%		
Kadidia	Maleo Lestari	65.00%	65.00%	40.00%		
Sigimpu	Tiro Lemba	30.00%	82.50%	75.00%		
Average		59.50%	76.75%	70.75%		

Descriptions: 0.00%-33.33% = Low, 33.34%-66.66% = Moderate, 66.67%-100% = High

In addition to having high technical forestry capacity, members of village conservation agency in several villages had high business development capacity. Some members of the village conservation agency had experience in small-scale businesses such as developing palm sugar, furniture, flower cultivation, as well as buying and selling forest and agricultural products, organic fertilizer businesses, and food stalls. In addition, several village conservation agencies had implemented training programs to enhance members' business development capabilities.

3.3. Organizational and management capacity of village conservation agency

This research indicated that the average organizational and management capacity of the village conservation agency were moderate. Clarity of vision and missions, clarity of principal tasks and functions of the village conservation agency, communication, and trust did not significantly differ in scores. However, the financial capacity was identified as a deficient aspect, with some villages having low capacity. Figure 3 presents the average organizational and management capacity of the village conservation agency.





According to interviews with administrators of village conservation agencies, many of them encountered a shortage of funds for both operational and business development activities after the cessation of donor support. The initial funding for village conservation agency was granted by Forest Program 3. The Enhances Protected Areas of Central Sulawesi Project provided funding to village conservation agencies. However, the community conservation agency received financial aid for only two years.

After the project support ends, village conservation agencies should receive funding support from LLNP managers, village administrations, and funding from the profits generated by developed enterprises. This is also stated in the exit strategy document of Forest Program 3. The program for strengthening the sustainability of the village conservation agencies included developing group business, improving group business and financial management, building cooperation with market chain actors, and collaborating with banking and private parties to increase access to capital and markets (Implementing Consultant Forest Program III Sulawesi 2022). However, this research revealed that the funding capacity of some village conservation agencies was in the low category. Currently, some village conservation agencies do not have adequate funding to support their operational activities and business development. Table 3 presents the organizational and administrative capacity of each village.

-		Organizational and management capacity					
Village	- Village conservation agency	Clarity of vision and missions	Clarity of the main tasks and functions	Trust	Communication	Financing capacity	
Bakubakulu	Hilonga Hijau	57.50%	55.00%	70.00%	67.50%	57.50%	
Bobo	Saluntolondo	55.00%	52.50%	65.00%	70.00%	57.50%	
Bunga	Bunga	62.50%	75.00%	72.50%	67.50%	50.00%	
Kapiroe	Kapiroe	75.00%	82.50%	82.50%	75.00%	75.00%	
Sintuwu	Bersatu	75.00%	67.50%	57.00%	60.00%	40.00%	
Karunia	Mosipatupu	50.00%	60.00%	57.00%	67.50%	40.00%	
Tongoa	Lestari	67.50%	75.00%	57.00%	62.50%	32.50%	
Bulili	Watu Bose	62.50%	62.50%	52.00%	57.50%	25.00%	
Kadidia	Maleo Lestari	60.00%	62.50%	62.50%	57.50%	25.00%	
Sigimpu	Tiro Lemba	55.00%	52.50%	70.00%	65.00%	57.50%	
Average		62.00%	64.50%	64.55%	65.00%	46.00%	

 Table 3. Organizational and management capacity of village conservation agency

Descriptions: 0.00%-33.33% = Low, 33.34%-66.66% = moderate, 66.67%-100% = high

3.4. CCP Performance

The goal of the conservation partnership is to preserve the functions of conservation area and to improve local communities' economy [13]. This research revealed that the CCP program in LLNP effectively realised the sustainability of conservation functions. The average CCP performance was relatively high in forest area conservation activities. However, the CCP performance was in the moderate category in the economic improvement of local communities. The score of performance of implementing the area conservation program was 86.67%, controlled resource utilization was 73.33%, and business development performance was 60.00%. The CCP performance is presented in Figure 4.



Figure 4. Average performance of CCP in LLNP

Most of the business units established by the village conservation agency were not sustainable. Although infrastructure and production facility grants were provided to the village conservation agencies, they have not been able to generate any products. Although some business units of village conservation agencies have managed to produce products, they have struggled to grow and sustain their production. The Kapiroe Village was the only village conservation agency that operates a commercial division. Figure 5 provides a comprehensive summary of the CCP performance in each village.



Figure 5. CCP performance in each village in Area 2 of LLNP management

In order to grow a business, it is essential to choose the right products and size of the business based on a thorough analysis of market demand, as well as the available resources or raw materials [31]. The village conservation agency's business arrangement is focused solely on the potential of forest resources in traditional zones, as shown in Table 4. Non-timber forest products, which were abundant in the traditional zones of LLNP, were considered as potential forest resources. The majority of businesses run by the village conservation agency are related to palm sugar processing, honeybee cultivation, and the artisanal production of non-timber forest products.

Village	Village conservation agency	Area of the CCP (Ha)	Potential forest resources	Business unit
Bakubakulu	Hilonga Hijau	56.59	Rattan, areca nut, palm, bamboo, sugar palm, forest pandan, taro, orchid, honeybee	Palm sugar processing
Bobo	Saluntolondo	263.87	Sugar palm, candlenut	Candlenut fruit breaker processing
Bunga	Bunga	139.4	Rattan, areca palm, sugar palm, pandan bamboo, orchids	Rattan crafts
Kapiroe	Kapiroe	124.12	Candlenut, bamboo, rattan, sugar palm	Candlenut fruit breaker processing
Sintuwu	Bersatu	150	Rattan, bamboo, sugar palm, candlenut, forest pandan	Honeybee cultivation
Karunia	Mosipatupu	100	Rattan, resin, honey, mushrooms, orchids, bamboo, sugar palm, candlenut	Handicrafts from bamboo and sugar palm sticks
Tongoa	Lestari	250	Rattan, honey, bamboo, sugar palm, candlenut	Palm sugar, brown sugar and palm fruit processing
Bulili	Watu Bose	150	Rattan, sugar palm, bamboo, resin, orchids, agarwood, mushrooms	Rattan crafts
Kadidia	Maleo Lestari	50	Rattan, honey, bamboo, sugar palm, candlenut, forest pandan	Palm sugar processing
Sigimpu	Tiro Lemba	68.77	Rattan, sugar palm, bamboo, orchids, honeybees, candlenuts, coffee plants	Honey bee cultivation

Table 4. Potential forest resources and developing	g businesses
--	--------------

Source: Balai Besar Taman Nasional Lore Lindu [14]

3.5. Correlation between individual capacity and CCP performance

According to the results of Spearman's rank correlation analysis, it was found that only one aspect of individual capacity - the forestry technical capacity of village conservation agency members - had a significant correlation with the performance of the CCP. In particular, technical capacity in forestry had a strong correlation with controlling resource use. However, research has shown that conservation partnerships had a low correlation with other individual capacities, such as administrative and managerial capacity as well as individual capacity in developing businesses. The statistical analysis results of the correlation between individual capacity and conservation partnership performance are presented in Table 5.

Table 5. The results of a correlation analysis between individual capacity and CCP

 performance

	Statistical analysis		Individual capacity in administrative and managerial	Individual capacity of technical capacity in forestry	Individual capacity in business development
Spearman's rho	Controlled forest	Correlation coefficient	.380	.763*	149
	resource utilization	Sig. (1-tailed)	.139	.005	.341
		Ν	10	10	10
	Business development	Correlation coefficient	.040	.538	.027
		Sig. (1-tailed)	.457	.054	.470
		Ν	10	10	10
	Preservation of forest	Correlation coefficient	287	216	221
	areas	Sig. (1-tailed)	.211	.275	.270
		Ν	10	10	10

Annotations: *. Correlation is significant at the 0.05 level (1-tailed), **. Correlation is significant at the 0.01 level (1-tailed)

One of the targets of conservation partnership policies and programs, apart from conflict resolution [5], is to realize the sustainability of the function of conservation areas [32]. This research revealed that the involvement of local institutions had played an essential role in enhancing the long-term viability of forest ecosystems. The main purpose of National Park conservation is to preserve and protect unique ecosystems, plants, and animals that are specific to those areas.

3.6. Correlation between organizational and management capacity and CCP performance

Based on this research's findings, there were three aspects of the organizational and managerial capability of village conservation agency that significantly correlated with CCP performance, which are trust, communication, and financial capacity. Trust and financial capacity were strongly correlated with business development. Financial capacity also had a strong correlation with controlled forest resource utilization. Meanwhile, other organizational capacity aspects, such as vision and missions as well as clarity of duties and functions indicated a low correlation with CCP performance. The results of statistical analysis of the correlation between organizational and management capacity on CCP performance are presented in Table 6.

Table 6. Results of correlation analysis between organizational and management capacity and CCP performance

Statistical analysis		Clarity of vision and mission	Clarity of the main tasks and functions	Trust	Communica tions	Financial capacity	
Spearman's	Controlled forest	Correlation Coefficient	149	246	.606*	.585*	.747**
rho	resource utilization	Sig. (1-tailed)	.341	.247	.032	.038	.007
		Ν	10	10	10	10	10
	Business	Correlation Coefficient	304	159	.826**	.646*	.741**
	development	Sig. (1-tailed)	.196	.331	.002	.022	.007
		Ν	10	10	10	10	10
	Preservation of forest	Correlation Coefficient	215	359	686*	253	253
	areas	Sig. (1-tailed)	.275	.154	.014	.241	.240
		Ν	10	10	10	10	10

Annotations: *. Correlation is significant at the 0.05 level (1-tailed), **. Correlation is significant at the 0.01 level (1-tailed)

Trust at the organizational capacity was strongly correlated with the control of forest resource use. Additionally, trust had a moderate correlation with the controlled forest resource utilization and preservation of forest areas. Trust is considered an element of social capital [33], and it can influence social capital to support collective action [34]. Lack of trust can be a serious obstacle to business development [35]. Many empirical findings suggest that the lack of trust becomes a prominent factor contributing to the failure of collaborations and partnerships [36]. According to [13], the role of national park managers in the regional sector is fundamental in establishing and fostering public trust in conservation partnerships.

This research also found a moderate correlation between communication in conservation partnerships and business development as well as controlled forest resources utilization in the LLNP area. Communication is one of the factors that determine trust [37,38]. The significance of trust in forest management and collaboration with the community is clear, as it constitutes a vital component of social capital [39,40].

The performance of implementing community-based conservation partnership programs in LLNP was also primarily determined by funding capacity. The statistical analysis results found a strong correlation between funding capacity and business development programs and controlled forest resources utilization. Village conservation agencies that are still receiving funding support from FP3 tend to perform better than those that no longer receive funding support. These findings are presented in Figure 5 that the business development performance of the village conservation agencies formed in 2020 (Sintuvu, Karunia, Kadidia, Tonga, and Bulili villages) was lower than the five other villages that developed business units in 2021. This finding was supported by Ting (2012), who suggests that the community-based co-management program of forest resources still relies on external funding. It revealed that the program's sustainability supported by foreign funding needs financial support from the government after the project ends [2,41].

Based on the results and discussion above, to enhance the community's economy and ensure the long-term viability of conservation areas, it is suggested that the institutional capacity of the village conservation agency should be fortified at the management and organizational levels through building trust with communication processes and financial supports. Funding support for conservation partnerships can be obtained by incorporating the LLNP program and village government planning into village conservation agency planning.

The Village conservation agency requires financial support from the village government for business development. Therefore, it is necessary to communicate and negotiate the business plan and funding with the village government. This can be achieved by preparing the village development plan and village funds/budgets. This will ensure that the activities planned by the village conservation agencies are accepted as part of the activities funded by village funds. Meanwhile, forest protection planning programs from village conservation agencies require financial support from LLNP managers. It requires an effective communication approach between both parties.

Establishing trust and communication is a network governance strategy [42]. The network governance approach is implemented by establishing consensus, building a foundation of mutual trust, and applying empathy and an awareness of interdependence [43]. A partnership is a mutually beneficial relationship [44] that can be sustained through effective communication. According to Zikargae, Woldearegay, and Skjerdal (2022), adopting a nonformal communication strategy can enhance communication effectiveness in collaborative efforts. Harmonious relationships and effective communication can be achieved through mutual respect, trust, and mutual benefit. [44]. Building community-based conservation partnerships on this basis could contribute to conserving the function of the site, enhancing the economy, and offering mutual benefits.

4. Conclusion

The Community Conservation Partnerships (CCP) performance implemented in LLNP management improved the function of conservation areas but did not improve the local economy effectively. The CCP performance in business development was categorized as moderate. Local institutional capacity was found to be correlated with the CCP performance. Technical capacity in forestry, trust, communication, and financial capacity were identified as significant aspects of local institutional capacity that correlated with CCP performance. Trust, financial capacity, and technical capacity in forestry were found to be strongly correlated with CCP performance, while communication only had a moderate correlation. The communication capacity of the local institution was found to have a moderate correlation with controlled forest resource utilization and business development. The aspects of the local institutional capacity that were found to have a strong correlation with business development were trust and financial capacity. Both the organizational and managerial capacities were suboptimal, falling under the moderate category. To strengthen conservation partnership institutions in LLNP management, priority should be given to capacity building at the organizational and management levels. This includes building trust through effective communication and seeking funding for local institutions to implement conservation partnerships.

Author Contributions

SDM: Conception, design of the research, Drafting the manuscript, Critical review/revision; **HMZ and ABR**: Analysis and interpretation of data; **HMK and HPI**: Acquisition of data; **GLR**: Critical review/revision; **NHR**: Writing - Review & Editing.

Conflict of Interest

We declare that there is no conflict of interest with any financial, personal, or other relationships with other people or organizations related to the material discussed in the manuscript.

Acknowledgements

We would like to sincerely thank the Dean of the Faculty of Forestry and the Chair of the Institute for Research and Community Service of Tadulako University for providing funding. We would also like to thank the *Riset Mahasiswa* organization for assisting with data collection in the field.

References

- 1. Prayitno, D.E. Kemitraan Konservasi Sebagai Upaya Penyelesaian Konflik Tenurial Dalam Pengelolaan Kawasan Konservasi Di Indonesia. *J. Huk. Lingkung. Indones.* **2020**, *6*, 184–209, doi:https://doi.org/10.38011/jhli.v6i2.175.
- 2. Massiri, S.D.; Nugroho, B.; Kartodihardjo, H.; Soekmadi, R. Institutional Sustainability of a Community Conservation Agreement in Lore Lindu National Park. *For. Soc.* **2019**, *3*, 64–76, doi:10.24259/fs.v3i1.5204.
- 3. Sahide, M.A.K.; Fisher, M.; Nasri, N.; Dharmiasih, W.; Verheijen, B.; Maryudi, A. Anticipating a New Conservation Bureaucracy? Land and Power in Indonesia's Essential Ecosystem Area Policy. *Land use policy* **2020**, *97*, 104789, doi:https://doi.org/10.1016/j.landusepol.2020.104789.
- 4. Anugrahsari, I.; Sardjono, M.A.; Fitriyah, N.; Golar, G. Social Contracts: Pillars of Community Conservation Partnerships in Lore Lindu National Park, Indonesia. *For. Soc.* **2020**, 115–126, doi:http://dx.doi.org/10.24259/fs.v4i1.8682.
- Dawson, N.M.; Coolsaet, B.; Sterling, E.J.; Loveridge, R.; Gross-Camp, N.D.; Wongbusarakum, S.; Sangha, K.K.; Scherl, L.M.; Phuong Phan, H.; Zafra-Calvo, N.; et al. The Role of Indigenous Peoples and Local Communities in Effective and Equitable Conservation. 2021, doi:https://doi.org/10.5751/ES-12625-260319.
- 6. Harbi, J.; Erbaugh, J.T.; Widagdo, F.R.; Mauri, J.; Supriyanto, S.; Milantara, N. Three Generations of Forest Peoples' Empowerment in Indonesia: Process Towards Sustainable and Equitable Forest Management. *J. Manaj. Hutan Trop. (Journal Trop. For. Manag.* **2020**, *26*, doi:https://doi.org/10.7226/jtfm.26.2.91.
- 7. Perkins, D.D.; Zimmerman, M.A. Empowerment Theory, Research, and Application. *Am. J. Community Psychol.* **1995**, 23, 569–579.
- 8. Sen, G. Empowerment as an Approach to Poverty. *Hum. Dev. Rep.* **1997**, *97*.
- 9. Mardikanto, T.; Soebiato, P. Pemberdayaan Masyarakat Dalam Perspektif Kebijakan Publik. **2012**.
- 10. Peranginangin, L.S.U. Partisipasi Masyarakat Dalam Pengelolaan Kawasan Konservasi. *JKAP (Jurnal Kebijak. dan Adm. Publik)* **2014**, *18*, 66–78, doi:https://doi.org/10.22146/jkap.6877.
- 11. Munandar, A.; Priatna, D.; Retnowati, R. The Impact of Conservation Partnership on Increasing Community Welfare at the Gunung Masigit Kareumbi Hunting Park (GMKHP). *Indones. J. Appl. Environ. Stud.* **2022**, *3*, 131–138.
- 12. Fatimah, A.H.P.; Sahide, M.A.K. What Conflicts Possible: A New Social Forestry Partnership Policy in a National Park in Indonesia. In Proceedings of the IOP Conference Series: Earth and Environmental Science; 2019; Vol. 343, p. 12050.
- 13. Massiri, S.D. Membangun Keseepakatan Konservasi Masyarakat; Sebuah Proses Pembelajaran Kolaborasi Pengelolaan Di Taman Nasional Lore Lindu; Balai Besar Taman Nasional lore Lindu: Palu, 2019;
- 14. Balai Besar Taman Nasional Lore Lindu Laporan Penilai Kebutuhan Lembaga Pengelola Konservasi Desa Di Taman Nasional Lore Lindu; Palu, 2022;
- 15. Pujo, P.; Sofhani, T.F.; Gunawan, B.; Syamsudin, T.S. Community Capacity Building in Social Forestry Development: A Review. *J. Reg. City Plan* **2018**, *29*, 113–126, doi:https://doi.org/10.5614/jrcp.2018.29.2.3.
- 16. Dang, T.K.P.; Visseren-Hamakers, I.J.; Arts, B. The Institutional Capacity for Forest Devolution: The Case of Forest Land Allocation in Vietnam. *Dev. Policy Rev.* **2017**, *35*, 723–744.
- 17. Merino, S.S.; Carmenado, de los R. Capacity Building in Development Projects. *Procedia-Social Behav. Sci.* **2012**, *46*, 960–967.
- 18. Levine, K. Capacity Building and Empowerment Practice. *Partnering with parents Fam. Pract. Child. Serv.* **2013**, 107–129.
- 19. Zimmerman, M.A. Empowerment Theory. In *Handbook of community psychology*; Springer, 2000; pp. 43–63.

- 20. Angelia, N.; Batubara, B.M.; Zulyadi, R.; Hidayat, T.W.; Hariani, R.R. Analysis of Community Institution Empowerment as a Village Government Partner in the Participative Development Process. *Budapest Int. Res. Critics Institute-Journal Vol* **2020**, *3*, 1352–1359.
- 21. Umanailo, M.C.B.; Umanailo, R.; Bugis, R.; Bon, A.T. Empowerment Community in Buru Regency. In Proceedings of the Proceedings of the International Conference on Industrial Engineering and Operations Management; 2019; Vol. 20702075.
- 22. Asuero, A.G.; Sayago, A.; González, A.G. The Correlation Coefficient: An Overview. *Crit. Rev. Anal. Chem.* **2006**, *36*, 41–59.
- 23. Massiri, S.D. *Strategi Pemberdayaan Masyarakat Pada Kawasan Konservasi*; Smart Media Publishing: Bandung, 2022; ISBN 9786236819081.
- 24. Domorenok, E.; Graziano, P.; Polverari, L. Introduction: Policy Integration and Institutional Capacity: Theoretical, Conceptual and Empirical Challenges. *Policy Soc.* 2021, *40*, 1–18.
- 25. Massiri, S.D.; Malik, A.; Golar; Hamzari; Nugroho, B. Institutional Capacity of Forest Management Unit in Promoting Sustainable Community-Based Forest Management. Case Study of Forest Management Unit in Central Sulawesi Province, Indonesia. *J. Manaj. Hutan Trop.* **2020**, *26*, doi:10.7226/JTFM.26.2.169.
- 26. Situmorang, A.; Roslinda, E.; Hardiansyah, G. Kemitraan Konservasi Sebagai Upaya Pemberdayaan Masyarakat Desa Rantau Malam. *J. Lingkung. Hutan Trop.* **2022**, *1*, 269–282.
- 27. Ferrero, G.; Setty, K.; Rickert, B.; George, S.; Rinehold, A.; DeFrance, J.; Bartram, J. Capacity Building and Training Approaches for Water Safety Plans: A Comprehensive Literature Review. *Int. J. Hyg. Environ. Health* **2019**, *222*, 615–627, doi:https://doi.org/10.1016/j.ijheh.2019.01.011.
- Bloomfield, G.; Meli, P.; Brancalion, P.H.S.; Terris, E.; Guariguata, M.R.; Garen, E. Strategic Insights for Capacity Development on Forest Landscape Restoration: Implications for Addressing Global Commitments. *Trop. Conserv. Sci.* 2019, *12*, 1940082919887589, doi:https://doi.org/10.1177/1940082919887589.
- 29. Ortuño, M.; De los R, I.; Sastre-Merino, S. The Development of Skills as a Key Factor of the Cooperative System: Analysis of the Cooperative of Artisan Women Tejemujeres-Gualaceo-Ecuador from the WWP Model. *Sustainability* **2022**, *14*, 16233.
- 30. Sulawesi, I.C.F.P.I. Dokumen Exit Strategy FP3 2023-2024; Pengembangan Kawasan Terpadu Menuju Ekonomi Pedesaan Berkelanjutan Dan Kesejahteraan Manusia Pada Cagar Biosfer Lore Lindu; 2022;
- 31. Bocken, N.M.P.; Fil, A.; Prabhu, J. Scaling up Social Businesses in Developing Markets. J. Clean. Prod. 2016, 139, 295– 308.
- 32. Putri, S.N.P.; Purnama, M.M.E.; Pramatana, F.; Kaho, L.M.R. Conservation Partnership Implementation between Rural Forestry Extension Centers and Kelimutu National Park. *Media Konserv.* **2023**, *28*.
- 33. Xu, H.; Zhang, C.; Huang, Y. Social Trust, Social Capital, and Subjective Well-Being of Rural Residents: Micro-Empirical Evidence Based on the Chinese General Social Survey (CGSS). *Humanit. Soc. Sci. Commun.* **2023**, *10*, 1–13.
- 34. Qurniati, R.; Febryano, I.G.; Zulfiani, D. How Trust Influence Social Capital to Support Collective Action in Agroforestry Development? *Biodiversitas J. Biol. Divers.* **2017**, *18*, 1201–1206.
- 35. Tomay, K.; Tuboly, E. The Role of Social Capital and Trust in the Success of Local Wine Tourism and Rural Development. *Sociol. Ruralis* **2023**, *63*, 200–222.
- 36. Sadq, Z.M.; Ahmad, B.S.; Saeed, V.S.; Othman, B.; Mohammed, H.O. The Relationship between Intellectual Capital and Organizational Trust and Its Impact on Achieving the Requirements of Entrepreneurship Strategy (The Case of Korek Telecom Company, Iraq). *Int. J. Adv. Sci. Technol.* **2020**, *29*, 2639–2653.
- 37. Lee, Y.; Li, J.-Y.Q. The Role of Communication Transparency and Organizational Trust in Publics' Perceptions, Attitudes and Social Distancing Behaviour: A Case Study of the COVID-19 Outbreak. *J. Contingencies Cris. Manag.* **2021**, *29*, 368–384.
- 38. Rumkel, L.; Sam, B.; Umanailo, M.C.B. Village Head Partnership, Village Consultative Body and Customary Institution in Village Development. *Int. J. Sci. Technol. Res* **2019**, *8*, 1058–1063.
- 39. B. Valenzuela, R.; Yeo-Chang, Y.; Park, M.S.; Chun, J.-N. Local People's Participation in Mangrove Restoration Projects and Impacts on Social Capital and Livelihood: A Case Study in the Philippines. *Forests* **2020**, *11*, 580.
- 40. Musavengane, R.; Kloppers, R. Social Capital: An Investment towards Community Resilience in the Collaborative Natural Resources Management of Community-Based Tourism Schemes. *Tour. Manag. Perspect.* **2020**, *34*, 100654.

- 41. Massiri, S.D. Implications of Forest Policy Changes on Investment Program Strengthening Forest Management Unit in Central Sulawesi. *J. Sylva Lestari* **2023**, *11*, 473–490.
- 42. Kapucu, N.; Hu, Q. Network Governance: Concepts, Theories, and Applications; Routledge, 2020;
- 43. Hoppe, R.; Turnbull, N. Problem Structuring, Wrong-Problem Problems and Metagovernance as the Strategic Management of Intractable Positions: The Case of the EU GM Crop Regulatory Framework Controversy. *Public Policy Adm.* **2023**, 09520767231177577.
- 44. Pearce, T.R.; Antonelli, A.; Brearley, F.Q.; Couch, C.; Campostrini Forzza, R.; Gonçalves, S.C.; Magassouba, S.; Morim, M.P.; Mueller, G.M.; Nic Lughadha, E.; et al. International Collaboration between Collections-Based Institutes for Halting Biodiversity Loss and Unlocking the Useful Properties of Plants and Fungi. *Plants, People, Planet* **2020**, *2*, 515– 534.
- 45. Zikargae, M.H.; Woldearegay, A.G.; Skjerdal, T. Empowering Rural Society through Non-Formal Environmental Education: An Empirical Study of Environment and Forest Development Community Projects in Ethiopia. *Heliyon* **2022**, *8*.
- 46. Prasetyo, L.B.; Nursal, W.I.; Setiawan, Y.; Rudianto, Y.; Wikantika, K.; Irawan, B. Canopy Cover of Mangrove Estimation Based on Airborne LIDAR & amp; Landsat 8 OLI. *IOP Conf. Ser. Earth Environ. Sci.* **2019**, *335*, 012029, doi:10.1088/1755-1315/335/1/012029.
- 47. Fawcett, D.; Panigada, C.; Tagliabue, G.; Boschetti, M.; Celesti, M.; Evdokimov, A.; Biriukova, K.; Colombo, R.; Miglietta, F.; Rascher, U.; et al. Multi-Scale Evaluation of Drone-Based Multispectral Surface Reflectance and Vegetation Indices in Operational Conditions. *Remote Sens.* **2020**, *12*, doi:10.3390/rs12030514.