

# An Ecotourism Development Plan for Minalungao National Park, General Tinio, Nueva Ecija

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#### **ABSTRACT**

This study assessed the implementation of the Ecotourism Management Plan of Minalungao National Park (MNP) outlined by the Department of Environment and Natural Resources (DENR). MNP, located in Barangay Pias, General Tinio, Nueva Ecija, with a land area over 2,000 hectares, is a protected area under the initial component of Republic Act 7586, also known as the National Integrated Protected Areas System (NIPAS) Act. Based on the conducted Protected Area Suitability Assessment (PASA) on August 23, 1994, MNP has been recommended under Protected Landscape, where activities provide opportunities for the public through recreation and tourism. Respondents of the study included the designated DENR staff at the park, 71 officers and members of the Samahang Makakalikasang Minalungao (SaMaMi), and the 214 visitors. The research was a mixed study, and data among the focal implementers were gathered through a structured survey questionnaire and interview, and the observation of the visitors were gathered through the same outline of survey questionnaire conducted among the focal implementers which have triangulated responses among all respondents using Analysis of Variance. Minalungao National Park reflects to be a feasible ecotourism destination, and in the long run, MNP was perceived as one of the ecotourism destinations in the country which showcases the majestic beauty of water resources and rock formation, wildlife and adventure activities, and culinary skills of Novo Ecijanos. However, results on the study reflected that there were existing drawbacks in the implementation of the current ecotourism management plan of MNP in terms of environmental and socio-economic aspects thus, the study showed that there was significant difference in terms of the implementation of ecotourism management plan of MNP and the conformity of the Samahang Makakalikasang Minalungao which were validated through the observations of the visitors. An Ecotourism Development Plan for Minalungao National Park was developed based on the park's current situation and on the data gathered among the respondents.

**Keywords:** Ecotourism; Ecotourism Management Plan; Environmental Aspects; Protected Area; Socioeconomic Aspects



### Introduction

Minalungao National Park is one of the few remaining natural environments in the region north of Manila (Pader, 2017). The park derived its name from "Mina" and "Lungao", meaning gold mine in caves, delineates with dense forests, rock formations, cool springs and flowing rivers which captivates travelers through the picturesque site of the Sumacbao River that flows across most of the park and the colossal limestones formations that border it (Bernardino, 2016).

MNP also established a Protected Area Management Board (PAMB) recognized by Department of Environment and Natural Resources (DENR) and had entered a 25-year Memorandum of Agreement (MOA) with a private company, Ground Air Logistics Corporation (GALCO), which is capable in financing the development, operations and maintenance of the protected area. GALCO also organized a local community organization called the Samahang Makakalikasang Minalungao (SaMaMi). Members are mostly the local residents of Sitio Minalungao and were given the opportunity to participate in MNP's operations such as local guides, maintenance, and other front and back-of-the-house activities.

MNP showcases unique rock formation and the crystal blue-green water of Sumacbao River suited for bathing, swimming, kayaking, and rafting. The park also offers wildlife experiences through bird watching by riding a bamboo raft. Cave and forest ecosystems serve as venue for adventure experiences like picnic, trekking, hiking, spelunking or caving, zipline riding and camping to captivate visitors to be more exposed to nature. At the top of the Mt. Pinaltakan, a towering man-made Cross with more than 1000 steps serves as one of the attractions visited by domestic tourists. Aside from the adventure activities, MNP also caters to mouthwatering cuisine, cooked through a Novo Ecijano way using indigenous ingredients of Nueva Ecija, which can also be served to visitors during their river cruise.

Capacity building is vital on the first phase of implementation. LGU, DENR and PAMB provides opportunities to the community through culinary and livelihood trainings and workshops of the PAMB committee. MNP is also a potential site to increase employment and business in the community, like hiring caretakers, guard, local guides, cottage and ecolodge attendants, parking attendant, public area attendant, and local residents to establish a small business enterprise like carinderia, sari-sari store and souvenir shop.

Ecotourism, in its every scope, is a motivator of change. It shapes alliance between people and the environment and among other cultures and ways of life. Tourists are in search of new experiences away from their routine through traveling at ecotourism areas. Residents residing near ecotourism sites perceive of an enhanced standard of living and life opportunities parallel to the development of potential destinations. And environmentalists together with the government and other concerned sectors, yearn for the protection and conservation of ecology.

Choi et al. (2017) stated that the tourism industry had faced various concerns and challenges towards stabilizing environmental ideals with the increasing marketability of



ecotourism and the inclination of profit generation, resulting in economic advantages yet at the expense of nature. In ecotourism, environment is not the only strand to be considered but also on how it impacts the economy and society and how these aspects will be treated equally.

This study aimed to determine the issues and concerns in implementing the ecotourism management plan of Minalungao National Park, General Tinio, Nueva Ecija outlined by the Department of Environment and Natural Resources. Specifically, the study was conducted to determine the current environmental and socio-economic practices of Minalungao National Park, General Tinio, Nueva Ecija, and compare the practices between the Department of Environment and Natural Resources' perception and Samahang Makakalisang Minalungao with the observation of the visitors. The study also highlighted the proposed Ecotourism Development Plan for Minalungao National Park which covered the revision of the park's current Vision and Mission Statements, Target Market, Carrying Capacity, List of Activities, Visitor Management, Marketing Strategies, Human Resource Development, and Community Building, Risk Management Plan and Waste Management Plan.

## **Literature Review**

Tourism is more than hotels, vital as they are visitors' accommodation and lifts economic impacts. Tourism is more than roads, airlines and ships, as they require access to destinations. What tourists can perceive through senses draws interest and reaction to tourist sites. Tourism development today entails both bright and dark sides - positive and negative impacts. Thus, tourism development varies among destinations found in cities, rural areas and small towns, non-industrialized areas, and others. Nevertheless, enhancement of tourist areas comes with continuous progress towards sustainable development- positive socioeconomic change that doesn't compromise ecological and social systems that host community and stakeholders are dependent on. Responsibilities of various levels of organizations take part in achieving sustainability by creating achievable vision and mission, coordination of policy implementation from government to local community and visitors, and acceptance of responsibility for minimal education with respect to values of host region (Gunn, 2014).

Bouquet (2017) mentioned that the Philippines has been patronized by international visitors mostly from Europe, America, Australia and among countries in Asia and has the tourism potential in terms of landscapes, coastal areas and heritage, but also constitutes organization and infrastructural weaknesses such as transportation, and lack of proper maintenance of tourism assets. Like the closure of Boracay Island last April 26, 2017, aside from the tourists, whom the six-month shutdown of the island greatly affected were the residents and stakeholders of the destination. Boracay has been their livelihood-basket for years until it faced issues regarding improper waste management. Tourism will always be on the side, but sustainability really depends on our hands with this depiction.



Having the second-largest archipelago in the world, the Philippines has immense potential for tourism where both an effective governance system and standardized system of planning would help to harness its productivity. According to Kirillova, et.al. (2013), a destination is considered to be admirable if it possesses aesthetic judgement to tourists. Paramount among these aesthetic dimensions is the presence of clean and green environment.

Ecotourism has been promoted to reconcile seemingly conflicting goals of tourism development and tourist destination (Baral, 2014). Tokai, et.al. (2015) added that waste management policy is crucial yet effective on waste management system. The idea requires the involvement of all stakeholders - the host community, the government, and the tourists, to work altogether.

The concept of carrying capacity (CARCAP) had called the attention to the public due to the increasing concerns on natural environments. Dr. Lope Calanog of the Ecosystems Research and Development Bureau of the Department of Environment and Natural Resources published a manual on 2015 regarding the computation of carrying capacity of ecotourism sites in protected areas to regulate the influx of tourists to ecotourism sites and manage activities to maintain visitor's level of satisfaction and at the same time preserve and protect the ecological conditions of the areas.

Revisit intention of travelers impacts the favourable outcome to the destination; thus, return customers help build reputation on the tourism site. In response, the tourist destination shall also create customer loyalty. Another aspect that may affect tourists' revisit intention is preventive measures with various unexpected disasters or incidents within the area. Asia faces increasing flooding risks due to climatic and socio-cultural changes. Though governments among nations were able to establish preventive measures, it still appeared inadequate to protect the vulnerable communities from ever-increasing flood losses due to deficient policy formulation and planning process, and lack of institutional coordination. Abbas, et.al. (2015) emphasized the need to enhance institutional linkages, community participation and do more evidence-based research. However, according to Jauhari and Chew (2014), with perceived risk and destination image being empirically distinctive constructs, perceived socio-psychological and financial risks influenced both cognitive and affective destination images. Where perceived risks did not have a significant influence on destination image though it directly affects revisit intention.

Aside from the incidents caused by natural disasters, Gstaettner, et.al. (2017) illustrated visitors' perspectives on risk management in a natural tourism setting through the Theory of Planned Behaviour- behaviour or intention of visitors towards their actions. Visitors perceived pursuing risky activities nevertheless of the harm or risk that might happened, showing personal detachment for danger and seeing others led to the notion that those activities may also be safe with them. Also, visitors also felt safe noticing high presence of management which includes signages, life guards, safety gears, and another form of commercial operations. Enhancing future risk management strategies, and continuous training of staff and re-assessment of the location and



activities taking place will improve safety of well-being for both the visitors and the host area (Clinch and Filimonau, 2016).

Baum (2015) mentioned that human resource issues are lead drawback of global tourism's challenges. Rathore (2017) added that aside from the products -goods and service- offered in the hospitality and tourism industry, the service sector should outline human resource qualifications and should also invest in staff training. Thus, training program would strengthen work place skills, improve workmanship, and enhance staff knowledge. Nickson (2007) cited by Rathore (2017) assessed that successful hotels always include staff training as a vital part of their development strategy. A standardized service with quality caters good customer relationship that leads to customer satisfaction and retention. Liu, et.al. (2013) integrated to their study the theoretical perspective of social capital into community-based ecotourism (CBET). Findings on their study revealed that economic benefits directly impact residents' pro-environmental behaviours and the cognitive social capital has partial-mediation effects.

Wu and Chen (2016) examined decisive factors that influence the local residents' behavioral intentions in participating in the community development of ecotourism. Their study indicated that residents' attitudes towards community development, behavioural control, and benefits have a significant relationship with the participating behaviour of the community, an equivalent benefit motivates them to participate. It was perceived that ecotourism can deliver not only social benefits but also lifts economic and environmental welfare. Ecotourism was viewed to be an activity contributing mostly on the quality of lives of the residents and was able to increase levels of financial and attitudinal support for environmental conservation (Hunt et al., 2014).

Zacarias and Loyola (2017) assessed that ecotourism empowered local people, improved resource stewardship, and influenced policy and decision-making conservation. They added that there are also direct and indirect economic benefits of ecotourism in educating and raising awareness toward biodiversity conservation. The roles on ecotourism differ from community to community, region to region, and country to country.

## Methodology

The researcher gathered data through a survey questionnaire among the focal implementers, DENR and SaMaMi. Request letter and consent forms were provided to focal implementers prior to the conduct of data gathering.

The study also collected data from visitors using two sets of structured survey questionnaire which determined the socio-demographic characteristics of the respondents and assessed their observation on the current practices at MNP, which validated the level of implementation of DENR and the level of compliance of SaMaMi. The questionnaire was divided into two parts. The first part was about the socio-demographic characteristics of the respondents, such as age, gender, and civil status. The second section was composed of statements pertaining to the conformity on



environmental and socio-economic practices prescribed by the Department of Environment and Natural Resources. Environmental factors were identified among preparedness towards risk management and waste management, the socio-economic aspects pertaining to community building for the local residents. Response of the visitors on their observation was measured through a seven-point Likert scale: 7 (always implemented), 6 (often implemented), 5 (sometimes implemented), 4 (implemented), 3 (seldom implemented), 2 (rarely implemented), 1 (never implemented).

Survey questionnaire were distributed among the visitors during their visit at the park. However, the data gathering was during the lean months of MNP, the researcher also has used google form to gather data among visitor-respondents. Google form was sent through email and social media such as Facebook and Instagram to elicit data among the visitor-respondents who experienced traveling before at MNP. The survey questionnaire for the visitor-respondents was drafted into two parts: sociodemographic characteristics of respondents and their observation on the conformity to the ecotourism management plan of the focal implementers, which was measured through a Likert scale. The purpose of the study was clearly stated, and confidentiality/ privacy was assured.

The questionnaire was pilot-tested among 15 local guides and two (2) representatives from DENR. An interview was also conducted at the tourism office of the Municipality of General Tinio. After all the questionnaires were answered and retrieved, the data was statistically treated for interpretation and analysis. The reliability analysis of the gathered data resulted in an acceptable coefficient of Cronbach's Alpha where overall reliability on Environmental Aspect was 0.688 and on Socio-Economic Aspect was 0.664.

The focal implementers who participated in the study were 3 DENR staff and 71 SaMaMi representatives (15 officers and 56 members), and a total of 214 visitor-respondents participated on the conduct of data gathering. Raosoft was used to compute the sample size of the respondents using a 5% margin of error with 95% confidence level considering the actual population size of the samples and a 50% response distribution.

The statistical tools which were used in the data analysis were descriptive statistics to describe socio-demographic characteristics of the respondents such as frequency counts and percentages for categorical variables, while mean and standard deviation for quantitative variables. Moreover, Analysis of Variance (ANOVA) statistics was used to determine the statistical significance of the results using an F-ratio to measure difference among 3 or more groups. In comparing groups, t-test for independent samples was used in determining the difference between the focal implementers' level of compliance with the ecotourism management plan and visitors' observation on the focal implementers' conformity. To measure the same mean effect among all groups, Tukey Range Test was derived. A synthesis was presented in a matrix to better understand the overall perception of the observational groups.



#### **Results and Discussion**

Table 1 shows the descriptive statistics and testing of significance on comparing and among groups on the risk management, waste management and socio-economic scores of the respondents. It also shows a post hoc test on the variables that shows a significant difference among the group to know which groups displays the same mean effect. It shows that Risk Management and Waste Management scores were significantly different among groups. Moreover, Tukey range test shows that Visitor scores tend to differ from both SaMaMi and DENR scores for both variables.

Table 1.Comparison between and among groups on the Risk Management, Waste Management and Socio-Economic Scores of Respondents

		N	Mean	Std. dev.	Stat	Sig.
Risk Management	Visitors	214	3.75 <sup>a</sup>	1.350		
	Sammi	71	5.76 <sup>b</sup>	0.459	76.583 <sup>1</sup>	0.000*
	DEAR	3	5.11 <sup>b</sup>	0.509		
Waste Management	Visitors	214	4.11 <sup>a</sup>	1.061		
	Sammi	71	5.37 <sup>b</sup>	0.273	51.563 <sup>1</sup>	0.000*
	DEAR	3	5.56 <sup>b</sup>	0.444		
Socio-Economic	SaMaMi	71	5.87	0.334	$-1.262^2$	0.211
	DEAR	3	6.12	0.548	7-1.202	0.211

Note: \*Significant at 5% level

Letter was assigned to mean scores of the groups with the same mean effect, test was done using Tukey range test

<sup>&</sup>lt;sup>1</sup>Test was done using Analysis of Variance, F-statistic was computed

<sup>&</sup>lt;sup>2</sup>Test was done using t-test for Independent Samples, t-statistics was computed



Table 2 presents the comparison among groups of respondents on the Risk Management Scores of the respondents. It also displays a post hoc test on the components that shows a significant difference among the group to know which groups displays the same mean effect. It presents that across all components of risk management, mean scores were significantly different among groups. The letter assignments indicated the same groups with the same mean effect.

Table 2. Comparison among groups on the Risk Management Component Scores of Respondents

		N	Mean	Std. dev.	F	Sig.
1. Guidelines on risk management were	Visitors	214	3.98 <sup>a</sup>	1.703		
introduced to the community;	Sammi	71	5.13 <sup>b</sup>	1.158	14.625	0.000*
	DEAR	3	5.33 <sup>b</sup>	1.155		
2. Upon entry, visitors were hold on a	Visitors	214	3.11 <sup>ab</sup>	1.858		
briefing area to discuss on the park's	Sammi	71	$5.08^{b}$	1.328	34.512	0.000*
activities, rules, regulations and safety measures.	DEAR	3	3.00 <sup>a</sup>	1.000	34.312	0.000
3. There were ways on how to warn	Visitors	214	3.75 <sup>a</sup>	1.844		
visitors on hazards on water like warnings	Sammi	71	6.03 <sup>b</sup>	0.985	51.996	0.000*
flags and the presence of lifeguards around the area.	DEAR	3	6.33 <sup>b</sup>	0.577	31.990	0.000
4. Emergency/Safety Measures were	Visitors	214	3.91 <sup>a</sup>	1.646		
available and Rescue Team / Medical	Sammi	71	5.77 <sup>b</sup>	1.085	41.015	0.000*
Facility was/were made available around the area.	DEAR	3	5.67 <sup>b</sup>	0.577	41.013	0.000
5. Local guides were designated among	Visitors	214	4.98 <sup>a</sup>	1.537		
groups of visitors to assist them during	Sammi	71	6.42 <sup>b</sup>	0.710	30.253	0.000*
their stay.	DEAR	3	6.33 <sup>b</sup>	0.577		
6. Guidelines on the carrying capacity of	Visitors	214	2.79 <sup>a</sup>	1.874		
the ecotourism destination were observed.	Sammi	71	6.11 <sup>b</sup>	0.820	105.600	0.000*
Notes *Significant at 50/ Lund	DEAR	3	4.00 <sup>ab</sup>	1.000		

Note: \*Significant at 5% level

Letter was assigned to mean scores of the groups with the same mean effect, test was done using Tukey range test

<sup>&</sup>lt;sup>1</sup>Test was done using Analysis of Variance, F-statistic was computed

<sup>&</sup>lt;sup>2</sup>Test was done using t-test for Independent Samples, t-statistics was computed

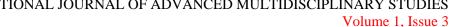




Table 3 shows the comparison among groups of respondents on the Waste Management Component Scores of the respondents. It also shows a post hoc test on the components that presents a significant difference among the group to know which groups displays the same mean effect. It can be gleaned that across all waste management components, mean scores were significantly different among groups, except for the permission of use of plastic in the area. The letter assignments indicated the same groups with the same mean effect.

Table 3. Comparison among groups on the Waste Management Component Scores of Respondents

				Std.		
		N	Mean	Dev.	F	Sig.
1. All litter and food scraps were carried out of	Visitors	214	4.95 <sup>a</sup>	1.387		
the site;	Sammi	71	6.66 <sup>b</sup>	0.559	52.957	0.000*
	DEAR	3	6.67 <sup>b</sup>	0.577		
2. Policy on proper waste disposal was observed;	Visitors	214	4.81 <sup>a</sup>	1.458		
	Sammi	71	6.11 <sup>ab</sup>	0.887	28.169	0.000*
	DEAR	3	$7.00^{b}$	-		
3. Properly labeled waste disposals were	Visitors	214	3.46 <sup>a</sup>	1.783		
distributed around the park;	Sammi	71	6.28 <sup>b</sup>	0.740	85.922	0.000*
	DEAR	3	5.67 <sup>b</sup>	0.577		
4. The use of plastic materials was not allowed;	Visitors	214	2.40	1.666		
	Sammi	71	2.70	0.962	1.928	0.147
	DEAR	3	1.33	0.577		
5. Bringing of food/beverage during swimming	Visitors	214	$3.56^{b}$	1.785		
and when on the raft was not allowed;	Sammi	71	1.96 <sup>a</sup>	0.764	27.190	0.000*
	DEAR	3	2.33 <sup>b</sup>	1.528		
6. There were designated staffs for the upkeep the	Visitors	214	5.43 <sup>a</sup>	1.265		
ecotourism site;	Sammi	71	6.72 <sup>b</sup>	0.453	37.121	0.000*
	DEAR	3	$7.00^{b}$	-		
7. Smoking was strictly prohibited;	Visitors	214	2.98 <sup>a</sup>	1.824		
	Sammi	71	4.48 <sup>ab</sup>	1.392	24.676	0.000*
	DEAR	3	6.33 <sup>b</sup>	1.155		
8. A Material Recovery Facility was available	Visitors	214	5.15 <sup>a</sup>	1.555		
within the area and the 3R's are practiced;	Sammi	71	6.86 <sup>b</sup>	0.350	44.030	0.000*
	DEAR	3	7.00 <sup>b</sup>	-		
9. Vandalism was strictly prohibited.	Visitors	214	4.26 <sup>a</sup>	1.778		
	Sammi	71	6.59 <sup>b</sup>	0.709	60.137	0.000*
	DEAR	3	6.67 <sup>b</sup>	0.577		

Note: \*Significant at 5% level

Letter was assigned to mean scores of the groups with the same mean effect, test was done using Tukey range test

<sup>&</sup>lt;sup>1</sup>Test was done using Analysis of Variance, F-statistic was computed

<sup>&</sup>lt;sup>2</sup>Test was done using t-test for Independent Samples, t-statistics was computed



Table 4 shows the comparison between groups of respondents on the Socio-Economic Component Scores of the respondents. It presents that, "Training program relevant to job designation were provided to employees and local community" and "Linkages were expanded with other government agencies and sectors to empower community and business enterprise for ecotourism" components, means scores were significantly different between SaMaMi and DENR responses.

Table 4. Comparison between groups on the Socio-Economic Component Scores of Respondents

		N	Mean	Std. Dev.	t	Sig.
1. Consultation and/or regular meeting	Sammi	71	6.54	0.556		
was/were undertaken to inform and elicit inputs from local residents on the development or operation of the activity;	DEAR	3	6.67	0.577	-0.400	0.690
2. Community group was formed to assist in	Sammi	71	6.90	0.300	0.565	0.574
the sustainable management of resources;	DEAR	3	7.00	-	-0.565	
3. Local residents were given priority to be	Sammi	71	6.94	0.232	0.417	0.670
part of the park's operations;	DEAR	3	7.00	-	-0.417	0.678
4. Community programs, workshops and	Sammi	71	5.83	0.941		
seminar were often conducted to uplift and empower the community and social responsibility;	DEAR	3	6.00	1.000	-0.304	0.762
5. Livelihood programs and trainings were	Sammi	71	4.87	1.055		
given to the community as means of support to income generate and employment and were monitored properly by the concerned agencies / sector who have conducted the said programs;	DEAR	3	5.00	1.000	-0.204	0.839
6. Fees collected were used to sustain the	Sammi	71	5.93	0.900	-0.755	0.453
environment, community and resources;	DEAR	3	6.33	1.155	-0.733	
7. Local community enterprises were created,	Sammi	71	4.90	1.136	0.857	0.394
promoted or expanded;	DEAR	3	4.33	0.577	0.037	
8. Training program relevant to the job	Sammi	71	5.04	0.963		
designations were provided to the employees and local community;	DEAR	3	6.67	0.577	-2.889	0.005*
9. Local government agencies continuously	Sammi	71	5.94	0.809		0.211
support the community in terms of training and employment;	DEAR	3	5.33	1.155	1.262	
10. Community were encourage to acquire	Sammi	71	5.76	0.870		
certification from government agencies such as TESDA in accordance to their job and competency.	DEAR	3	6.00	1.000	-0.465	0.643
11. Linkages were expanded with other government agencies and sectors to empower	Sammi DEAR	71	5.87 7.00	0.877	-2.210	0.030*





community and business enterprise for			
ecotourism.			

Note: \*Significant at 5% level

<sup>1</sup>Test was done using Analysis of Variance, F-statistic was computed

Letter was assigned to mean scores of the groups with the same mean effect, test was done using Tukey range test

DENR was able to establish an ecotourism management plan at MNP, which serves as a guideline on addressing the current issues and concerns on the natural environment, and socioeconomic aspects. However, the focal implementers, SaMaMi, who were responsible for the reinforcement of the stated guidelines were not compliant with some aspects of the park's rules and regulations covering safety measures, risk management, carrying capacity, and waste management. Visitors were also negligent on the stated guidelines. For the Socioeconomic aspects, government agencies were able to conduct seminars and workshops to the local residents of Sitio Minalungao, however there were no monitoring schemes or follow up visits to see whether the objectives of the workshops and seminars were met. The local residents long for continuous support with the government agencies as MNP was their livelihood basket.

#### Conclusion

The major consideration for the success of ecotourism was the community. They were considered as the primary stakeholder who will benefit to ecotourism, and the initial component to absorb the positive and negative impacts of the site. It was observed that there was a need for community personal enhancement and learning with the assistance of various trainings, workshops, seminars, and community involvement in environmental activities, ecotourism development and management, revenue generation, partnership, and profit-sharing. Thus, MNP needs a socially responsible community which could possibly be achieved through various programs for the community to have initial knowledge on protecting, managing, and conserving the natural assets through a sense of ownership.

It was mentioned by DENR that they were conducting a regular consultation with the SaMaMi for the coordination of policies and guidelines and other announcements. With this, SaMaMi were given awareness on the current state of the protected landscape. The Samahang Makakalikasang Minalungao also holds regularly meeting with the officers and monthly general assembly to all the 80 members to coordinate the designation and roster, guidelines and other announcements. Matters arising on their consultation were mentioned to be raised to DENR and the MNP's operator for immediate response or action.

However, it was still mentioned that lack of continuous government support was the main problem of the local residents in Sitio Minalungao. Government agencies were able to conduct seminars and workshops to the local residents of Sitio Minalungao, however there were no monitoring schemes or follow up visits to see whether the objectives of the workshops and seminars were met. The local residents long for continuous support with the government agencies

<sup>&</sup>lt;sup>2</sup>Test was done using t-test for Independent Samples, t-statistics was computed



as MNP is their livelihood basket. And because of seasonality, the community also seeks other ways on how to cope with during the lean months of MNP's operations.

Another observed problem included in the ecotourism management plan was lacking of livelihood opportunities to the local residents of MNP. Based on the information provided by the residents, there was a need for enterprise development and livelihood opportunities such as souvenir and craft making, employment (tour guiding, caretaker, park attendant, rescue team), and restoration and rehabilitation projects. They also have emphasized on the promotion of their local produce and native delicacies or cuisine. The current state of MNP in terms of local enterprise was different from what was stated on the ecotourism management plan. Instead of encouraging the local produce and delicacies/cuisine, a Korean grocery and restaurant was established. The scenario deviated from the purpose of a Philippine ecotourism destination. MNP must embrace and support the unique culture of Novo Ecijanos, but as much as they are willing to, they lack the resources needed to sustain their livelihood. Thus, the study rejects the hypothesis that there was no significant difference on the level of implementation of the Ecotourism Management Plan outlined by DENR and the level of compliance of Samahang Makakalikasang Minalungao validated from the observation of the visitor-respondents.

Results of the study, conducted among the focal implementers - DENR and Samahang Makakalikasang Minalungao and the visitors' observation, showcased that there were existing problems in terms of the implementation and practices of the existing Ecotourism Management Plan. Guidelines on environmental protection and socio-economic aspects were present, but the conformity was not observed. As a protected landscape, MNP was perceived to be lacking in frequent implementation and reinforcement of its ecotourism regulations and guidelines, as well as community empowerment.

Based on the findings of the study, an Ecotourism Development Plan including the description and analysis of MNP's existing situation and the proposed guidelines and practices for the park which covered the revision of the park's current Vision and Mission Statements, Target Market, Carrying Capacity, List of Activities, Visitor Management, Marketing Strategies, Human Resource Development, and Community Building, Risk Management Plan and Waste Management Plan was created for the enhancement of the Minalungao National Park's operations towards sustainable and responsible tourism to everyone.



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