# Community-Based Homestay Service: A Proposed Livelihood Project for the Dumagats

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## ABSTRACT

The study is founded on a sustainable eco-tourism built on indigenous peoples' economic empowerment without compromising their cultural heritage. The main objective of the study was to assess the economic viability of the community-based homestay service as a livelihood project to help improve the quality of life of the Dumagats who are native residents of Daraitan. The main service of the project is to provide accommodation and campsite for tourists who usually go for trekking at Mt. Daraitan. The descriptive survey method was employed in this study. Validated survey questionnaires were given out to 430 local and foreign tourists who visited the nature reserve. Data were tabulated and analyzed using the descriptive statistics and financial ratios; such as liquidity ratios, test of return on sales, gross profit ratio, and return on capital. The financial assessment of the homestay service yielded an average of 21.7% return on sales; 83.47% gross profit ratio, and 79.37% return on capital. A portion of the profit will be appropriated for charitable purposes. Mt. Daraitan is one of the to-go-to spots in the Philippines, where nature still can be seen at its most pristine state. Results of financial estimates showed that the economic viability of the project, through development, preservation of the natural architecture of the park, and a livelihood program for the natives that inhabit the area, are very strong reasons to push through with the proposal.

**Keywords**: Dumagats, Mt. Daraitan, community-based homestay service, livelihood.

## INTRODUCTION

Several development projects were, during the administration of former president Benigno Simeon Aquino III, have been proposed Under Republic Act No. 8371, also known as the Indigenous Peoples Rights Act of 1997. One of these proposed projects was the USD374 million-dollar Centennial Water Source-Kaliwa Dam Project. Another project was proposed by San Miguel Corporation in partnership with the Metropolitan Waterworks and Sewerage System under the Public-Private Partnership program of the Philippine Government. These proposed projects were scrapped due to the opposition of the native inhabitants, fearing that

these projects will create flooding to the thousands of hectares of watershed in the lower side of Daraitan and Tinipak rivers, where most of them and other indigenous families live. On the other hand, the local government of Tanay intends to develop an eco-park in the same area with a budget of USD220,000, for the purpose of boosting the eco-tourism potential of Daraitan Village.

This study aims to develop a strategy on sustainable eco-tourism program, together with keeping the natural biodiversity of the area and the local culture of the native inhabitants. Daraitan is part of an ancestral domain of the native Dumagats, declared under Republic Act No. 8371, also known as the Indigenous Peoples Rights Act of 1997. According to the ancestral domain law, development projects should be culturally-sensitive to their needs and their cultural identity as citizens with lawful rights to uphold an ancestral domain and natural environment to protect.

Furthermore, the only known eco-lodge known as Kuta Bungliw located at Pagsangahan Village in General Nakar, Quezon and the nearest inn is at Sampaloc at downtown Tanay, which vastly enhances the potential for tourism in Daraitan.

## LITERATURE REVIEW

For the past 20 years has been a way of conservation of community. Ecotourism has brought achievement in maintaining the nature and the culture of the local community, creating new business and additional source of income for the locals. The boom of the industry of ecotourism led to address its impact and sparked interest of those in-charge with the protection ancestral land to act and protect the place where natives are living (Philippine Council for Agriculture; Forestry and Natural Research and Development; Department of Science and Technology; Ecosystem Research and Development Bureau and department of Environment and National Resources, 2010).

Ecotourism is a form of sustainable tourism within existing nature in the local area where the community is being help at the same time protecting the nature and the culture of the natives and indigenous practices and environment education and ethics as well as economic benefits to help improve of communities where the business is place and contentedness of visitors. Ecotourism is a concept that delivers a "win-win" situation specifically in protected areas and natural destinations that is sensitive and might be endangered to acts of humans. For the past years there are confusion about ecotourism for some people who are promoting places for ecotourism even though there will not demonstrate the sustainability principle (Ecotourism

Philippines, n.d.). Ecotourism often combines cultural and natural resources in one product or event. Some of the key cultural resources, which are considered as potential ecotourism products, are festivals and events, museum, handicraft, local cuisine, and traditional villages (Philippine Council for Agriculture, Forestry and Natural Research and Development, 2010). Ecotourism is emerging as a niche tourism that is sustainable. It is founded on the principles of sustainable development, so it is a capable natural resources management strategy. In the ecotourism development, carrying capacity refers to the number of persons an ecotourism site can accommodate without destroying or harming the state of the nature, satisfaction of the tourists, and the socio-cultural standards of the local community (Calanog, 2012).

Building trust and manage to get attention from potential investor is one of the major obstacles for small and responsible tourism businesses. Florie Thielin, Latin American Ambassador of the collaborative non-profit Hopineo platform has been developing a marketing manual for small tourism companies. The manual is developed by feedbacks and by working together. The manual is free to be accessed by the companies to help responsible tourism develop (The International Ecotourism Society, 2016 ).

Ecotourism is a business of nature tourism wherein you help not only the community but preserve the nature and culture of the natives. Community-based tourism is focused to people and nature and at the same time is a source of jobs for the natives. Promoting ecotourism gives lots of benefits are like creation of jobs, protection of the environment, preserving the biodiversity, environmental education within the community is promoted and understanding of local peoples and culture are fostered to the tourist as they interact with the locals (Armstrong, 2012).

## METHODS

Research Design

The research design used in this study is Descriptive and Exploratory method. Descriptive research is a scientific research which involves observing and describing the behavior of the subject without influencing it in a way. Descriptive method gives enough information and data to be analyze. Some of the samples of descriptive that can give a huge contribution to the study are survey, interview and interactions. The exploratory research depends on data from customers, employees, and competitors.

Various means were used to gather inputs for the success of this study. Survey questionnaires were distributed to determine demand and supply rates. Structured interviews were rendered, and observations were used to come up with reliable data.

Population and Sampling Technique

Survey includes all the eco-tourism workers such as local tour guides, the indigenous travel guides, village officials manning the barangay hall where tourists register for the eco-tourism activities to be undertaken, and the tourists themselves.

However, the study target market is the visiting tourists in the area. The researchers will use the single-stage sampling design wherein the observation units involve the backpackers who intend to trek up the hills and Daraitan Mountain, swim at the Tinipak River or simply go there for selfies with the scenic beauties around.

Data Gathering Procedures

The sample size is simply limited to the actual tourists who register at the barangay hall before the uphill trek. Since the survey questionnaires are to be entrusted to the barangay officials tasked to supervise the incoming tourists, these instruments will be retrieved only after seven days or one week, hence only the tourists who visit Daraitan are to be included in the sampling frame. In short, the researchers will use a convenience sampling method – or first come, first served system – for the whole duration of the survey. The margin of error is 5% of the survey population with a confidence level of 95%.

Analysis of Data

Liquidity Ratios. Measure a company's ability to pay debt obligations and its margin of safety through the calculation of metrics. Current liabilities are analyzed in relation to liquid assets to evaluate the coverage of short-term debts in an emergency. Liquidity ratios indicate cash flow positioning (Kenton & Hayes, 2019).

Current Ratio. The current ratio can also be used to take a rough measurement of a company's financial health. The higher the current ratio, the more capable the company is of paying its obligations (Kenton, 2019b).

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

Acid Test Ratio. It is an indicator of a company's short-term liquidity. The acid test ratio measures a company's ability to meet its short-term obligations with its most liquid assets, which excludes inventories. The higher the acid test ratio, the better the company's liquidity position. (Kenton, 2019)

$$Acid\ Test\ Ratio = \frac{Quick\ Assets}{Current\ Liabilities}$$

Average Rate of Return. This is a method used for acquiring the annual percentage of the average net income an asset can produce divided by average cost. This is used to know whether continue with the project or not. When it comes to decision making, the project is acceptable when the ARR is greater than or equal the required rate of return. (Corporate Finance Institute, 2018a).

$$Average\ Rate\ of\ Return = \frac{Net\ Income}{\frac{Initial\ Year\ Cash\ Flow}{2}}$$

Payback Period. This is the time needed to recover the cost. This will allow the researchers compare and choose the best investment opportunities available. The shorter payback period, the better it is (Corporate Finance Institute, 2018b).

$$Payback\ Period\ in\ Years = \frac{Initial\ Year\ Cash\ Outflow}{Succeeding\ Annual\ Net\ Cash\ Flow}$$

Capital Budgeting. This is a process used to determine whether the project is worth pursuing. A project is acceptable when it increases the value of the company (Peterson, 2002).

Net Present Value. This showed the difference between the present value of cash inflows and outflows over a period. If the NPV is negative, the project is not a good one. However, if it's positive, the project should be accepted. The larger the positive number, the greater the benefit to the company (Gallo, 2014).

$$Net\ Present\ Value = \frac{b_i - c_i}{(1 + r)^n}$$

Internal Rate of Return. This method is used to measure the profitability of the project. The IRR makes the net present value (NPV) of the potential investment equal to zero. Through this method a decision can be made whether the project is acceptable or not.

$$Internal\ Rate\ of\ Return = NPV = \frac{b_i - c_i}{(1 + r)^n} = 0$$

Benefit-Cost Ratio. This ratio attempts to identify the relationship between the cost and benefit of the project. This is essential to the proposed project for it will give us the overview of the benefit and cost that the project will hold.

$$\text{Benefit-Cost Ratio} = \frac{\dfrac{b_i}{1 = a\,(\,1 + r\,)^n}}{\dfrac{c_i}{i = a\,(\,1 + r\,)^n}}$$

Where: $b_i$ = benefit in period i

Where: $c_i$ = cost in period i

Where: r = discount rate

Where: n = discount period

## RESULTS

Demand Analysis

The target market of the study is the local and international tourist who visits Barangay Daraitan Tanay, Rizal. There is no age limit and gender selection as to who the customers will be if they want to enjoy the beauty of nature in Daraitan, they are fond of hiking and swimming and can pay for the services that the proposed business is offering.

The population given by the municipality was increasing for the past years. There was a substantial growth in the population of tourist arrival in the year 2016 due to the opening of trails for mountain trekking and the discovery of the Tinipak River, the cleanest inland body of water in REGION IV-A CALABARZON. The municipality's high participation in developing and promoting the municipality's tourist destination also added to this growth.

Table 1. **Historical Number of Tourist who Visited Daraitan**

| Year | Number Tourist | Increase (Decrease) | Growth Rate |
|---|---|---|---|
| 2013 | 20,677 | | |
| 2014 | 21,862 | 1,185 | 6% |
| 2015 | 38,975 | 17,113 | 78% |
| 2016 | 371,183 | 332,208 | 852% |
| 2017 | 392,222 | 21,039 | 6% |
| Total | 844,919 | 371,545 | |
| Average | 168,983.80 | 92,886.25 | |

The researchers decided to use the average difference between prior years in projecting the tourist arrival in Daraitan for the next five years. This method is ideal because the variable of

the historical population shows that at the year 2016 the tourism flourished in Daraitan. The projections are still considered statistically reliable even if the actual population varies from the projection computed. The table below shows the projected tourist arrival for the next five years. The average growth of the population arrival per year is 3%.

Table 2. **Projected Number of Tourists**

| Year | Number of Tourist | Increase (Decrease) | Growth Rate |
|---|---|---|---|
| 2018 | 414,577 | | |
| 2019 | 438,206 | 23,629.02 | 5.70% |
| 2020 | 463,182 | 24,975.76 | 5.70% |
| 2021 | 489,581 | 26,399.27 | 5.70% |
| 2022 | 517,485 | 27,903.91 | 5.70% |
| 2023 | 546,979 | 29,494.30 | 5.70% |
| Total | 2,870,009.38 | 132,402.26 | |
| Average | 131,434.20 | 26,480.45 | 5.70% |

The researchers have distributed all the survey questionnaire to Barangay Daraitan because all the tourist who are going to hike and swim will pass through the Barangay Hall and have them registered. Due to lack of time and resource the researchers choose to find a person whom they can trust and pay him to distribute the remaining questionnaire. He was positioned in the Barangay Hall where he can wait for the tourist to be registered and then give them the survey question so that it will all be answered.

Table 3. **Questionnaires Distributed and Retrieved**

| Location | Population | Sample Size | Questionnaires Distributed | Questionnaires Retrieved |
|---|---|---|---|---|
| Barangay Daraitan | 392,222 | 399 | 430 | 400 |
| Total | 392,222 | 399 | 430 | 400 |

Table 4. **Projected Total Demand in Quantity and in US Dollar**

| Year | Demand in Quantity | Increase (Decrease) | Growth Rate | Demand in US Dollar | Increase (Decrease) | Growth Rate |
|---|---|---|---|---|---|---|
| **2018** | 124,373 | | | 3,400,317.24 | | |
| **2019** | 131,462 | 7,089 | 5.70% | 179,035,156 | 9,019,294 | 5.30% |
| **2020** | 138,954 | 7,493 | 5.70% | 189,546,320 | 10,511,164 | 5.87% |
| **2021** | 146,874 | 7,920 | 5.70% | 200,349,606 | 10,803,286 | 5.70% |
| **2022** | 155,245 | 8,371 | 5.70% | 211,768,631 | 11,419,025 | 5.70% |
| **2023** | 164,094 | 8,848 | 5.70% | 223,838,489 | 12,069,858 | 5.70% |
| **Total** | 861,003 | 39,721 | | 1,174,554,065 | 53,822,627 | |
| **Average** | 143,500 | 6,620 | 5.70% | 195,759,011 | 8,970,438 | 5.65% |

The result of the survey questionnaires was used to compute the total demand of tourists visiting homestays, lodges and campsites in Daraitan. The total demand of the target market was measured based on the number of questionnaires retrieved, which is 400. Everyone in the sample represents a certain number of the population. Based on interviews with the barangay officials and locals, only 30% stay at Daraitan overnight.

Total demand was computed based on the prices of accommodations. It was noted that 61% chose lodge as their accommodation. The number of samples that chose lodge was then divided by the total sample to get the ratios of each accommodation of lodge. These ratios were then multiplied by the population and the corresponding prices of cottage chosen to get the total demand in an annual basis. The same method was used to compute for the demand in tent accommodation. For a more detailed computation see

Table 5. **Projected Organization's Demand in Quantity and in US Dollar**

| Year | Demand in Quantity | Increase (Decrease) | Growth Rate | Demand in US Dollar | Increase (Decrease) | Growth Rate |
|---|---|---|---|---|---|---|
| 2018 | 105,095 | | | 143,663,403 | | |
| 2019 | 111,085 | 5,990 | 5.70% | 151,851,570 | 8,188,167 | 5.70% |
| 2020 | 117,417 | 6,331 | 5.70% | 160,506,426 | 8,654,855 | 5.70% |
| 2021 | 124,109 | 6,692 | 5.70% | 169,654,569 | 9,148,143 | 5.70% |
| 2022 | 131,182 | 7,074 | 5.70% | 179,324,115 | 9,669,546 | 5.70% |
| 2023 | 138,659 | 7,477 | 5.70% | 189,544,782 | 10,220,667 | 5.70% |
| Total | 727,547 | 33,564 | | 850,881,462 | 45,881,379 | |

| Average | 121,257.90 | 6,712.79 | 5.70% | 141,813,577 | 9,176,275.73 | 5.70% |

Based on questionnaire results, out of the 400 respondents, 85% confirmed their willingness to patronize the project. Results also showed their preferred accommodation and the rate per night of their choice. The answer will be multiplied to the quantity of the sample.

According to the survey, the most preferred accommodation is the air-conditioned cottage for two with private comfort room and the tent for rent both at 26%. This is due to affordable rates and beautiful settings. Surprisingly the least preferred accommodation is the one where the respondents must bring their own tent considering that most of our respondents are hikers.

Supply Analysis

The rural barangay of Daraitan have five accommodation businesses. Three of which is found within the barangay vicinity and the remaining two accommodation businesses are found alongside the river of Tinapak.  According to the results of the survey, the most frequently visited accommodation is Tinapak Lodge and Restaurant due to its popularity and quality service and Tinipak Camping Grouds if you want to enjoy the nature. The researchers were able to gather data about the capacity and prices of the five accommodations in the vicinity of the barangay. However, some of the figures were considered as estimates. Though some owners and managers interviewed were unsure of the amounts given for capacity these figures are still reliable because of its closeness to the actual capacity.

Tinipak Camping Grounds and Tinipak Lodge and Restaurant is the biggest competitor of the proposed business. Tinipak Camping Grouds features the Tinipak River, the cleanest inland body of water in Region IV-A CALABARZON, and a cave while Tinipak Lodge and Restaurant features its high quality of service. Peak season for arrival of tourist is in the month of March, April and May while slack season starts from June and end in July. The influx of tourist arrival goes back to normal in the month of August.

The supply is computed based on the annual maximum capacity of each in quantity and in peso. Earnings of the accommodations were computed based on the accommodation capacity of the businesses. These were multiplied by the frequency and their respective prices. Only the supply based on the Tent rent fee, accommodation and cottages were considered for it to be comparable to the annual total demand.   Presented below is the total number of accommodations found in the target barangay and their annual maximum capacity in quantity and in peso.

Table 6. **Supply in Quantity and in US Dollar**

| Competitor | Location in Tanay, Rizal | Capacity in Quantity | Capacity in US Dollar |
|---|---|---|---|
| 1. Tinipak Lodge and Restaurant | Brgy. Daraitan | 26,936 | 145,600.00 |
| 2. Tinipak Camping Grounds | Brgy. Daraitan | 62,972 | 116,116.00 |
| 3. Sabangan | Brgy. Daraitan | 20,020 | 138,320.00 |
| 4. Amja | Brgy. Daraitan | 36400 | 94,640.00 |
| 5. Adi Yak | Brgy. Daraitan | 18,200 | 73528.00 |
| Total | | 164,528 | 568,204.00 |

The total supply of USD568,204.00 was computed based on the capacity of the businesses to accommodate tourists. These five businesses can accommodate a total of 164,528 tourists for one year.

The researchers used the average growth rate of accommodations starting 2015 to 2018 in the target barangay. The computed growth rate was 38% based on the years the accommodations were established. The growth rate was multiplied to the annual supply of the previous years starting 2019 to project supply for the next six years.

Table 7. **Projected Capacity of Competitors (in US Dollar)**

| Year | Projected Capacity | Increase | Growth Rate |
|---|---|---|---|
| 2018 | 568,204.00 | | |
| 2019 | 807,536.30 | 219,405.77 | 38.6% |
| 2020 | 1,119,357.63 | 311,821.33 | 38.6% |
| 2021 | 1,551,585.37 | 432,227.73 | 38.6% |
| 2022 | 2,150,713.12 | 599,127.76 | 38.6% |
| 2023 | 2,981,187.53 | 830,474.40 | 38.6% |
| Total | 9,178,583.95 | 2,393,057.00 | |
| Average | 183,571.68 | 47,861.14 | 38.6% |

The supply of USD568,204.00 in 2018 was subjected to the 38% growth rate. Throughout the five years, there is an average supply of USD183,571.68.

Table 8. **Historical Capacity of Competitors (in US Dollar)**

| Year | Historical Capacity | Increase (Decrease) | Growth Rate |
|------|--------------------|--------------------|-------------|
| 2015 | 116,116.00 | | |
| 2016 | 254,436.00 | 138,320.00 | 1.19 |
| 2017 | 422,604.00 | 168,168.00 | 0.66 |
| 2018 | 568,204.00 | 145,600.00 | 0.34 |
| Total | 1,361,360.00 | 452,088.00 | 2.20 |
| Average | 340,340 | 150,696.00 | 0.73 |

The projected supply in quantity and in US Dollar will not increase based on the interview of the researchers to the business owners.

Table 9. **Projected Supply in Quantity and in US Dollar**

| Name of Competitor | Location | Capacity in Quantity | Capacity (US Dollar) |
|-------------------|----------|---------------------|---------------------|
| Tinipak Camping Grounds | Daraitan Tanay, Rizal | 62,972.00 | 116,116.00 |
| Amja | Daraitan Tanay, Rizal | 36,400.00 | 138,320.00 |
| Tinipak Lodge and Restaurant | Daraitan Tanay, Rizal | 26,936.00 | 145,600.00 |
| Sabangan | Daraitan Tanay, Rizal | 20,020.00 | 73,528.00 |
| Adiyak | Daraitan Tanay, Rizal | 18,200.00 | 94,640.00 |
| Total | | 164,528.00 | 568,204.00 |

Demand and Supply Analysis

Total demand less total supply equals the unmet demand. This pertains to the excess demand which the willing and capable customers in the target market will avail. The total demand in the entry year is being met, while the remaining 83% is still to be satisfied. The demand and supply were based on the projected computations presented below. Using these data, unmet demand was computed by deducting the supply for the year from the corresponding total demand. The unmet demand was then compared to the organization demand and the annual operating capacity of the business. It is estimated that the maximum capacity the camping ground can accommodate is 98 tourists per day. The value is then converted to annual capacity and multiplied by the prices of services, which yields an annual capacity of USD74,643.20. The researchers decided not to change the yearly capacity because the camping ground will not undergo expansion for the next five years.

Table 10. **Comparison of Demand and Supply in Quantity**

| Year | Total Demand | Total Supply | Unmet Demand | Market Share | Organization's Demand |
|---|---|---|---|---|---|
| **2018** | 3,400,317.24 | 568,204.00 | 2,832,113.24 | | 2,873,268.06 |
| **2019** | 3,580,703.12 | 807,536.30 | 2,773,166.82 | 74,643.20 | 3,037,031.40 |
| **2020** | 3,790,926.40 | 1,119,357.63 | 2,671,568.77 | 87,455.70 | 3,210,128.52 |
| **2021** | 4,006,992.12 | 1,551,585.37 | 2,455,406.75 | 100,892.46 | 3,393,091.38 |
| **2022** | 4,235,372.62 | 2,150,713.12 | 2,084,659.50 | 113,280.26 | 3,586,482.30 |
| **2023** | 4,476,769.78 | 2,981,187.53 | 1,495,582.25 | 127,024.92 | 3,790,895.64 |
| Total | 23,491,081.28 | 9,178,583.95 | 14,312,497.33 | 503,296.54 | 19,890,897.30 |

Source/s of Funds

The capital needed to start the proposed business will come from investments of the partners, which is presented below. The business will not borrow from the bank or any financial institution. The capital investment of the partners is enough to shoulder the cost to start the organization of the business and expenses to be incurred within the first year of operations.

Table 11. **Source of Funds (in US Dollars)**

| Investor | Capital Investment |
|---|---|
| PAKISAMA | 32,916.00 |
| I love you trust foundation | 85,204.00 |
| Total | 118,120.00 |

Financial Statements

Statement of Comprehensive Income. The Statement of Comprehensive Income gives information about the financial performance of the business. This statement presents the revenue, gains, expenses and losses of the business that may result to profit or other comprehensive income. Creditors can refer to the income statement to determine the ability of the debtors to pay obligations. Investors can predict the earning capacity of the business through its past profits. The management can use income statement to effectively and efficiently utilize the resources of the business (Robles & Empleo, 2015).

The total income for the five years exceeded the total expenses of the business, thus resulting to net income. The profit to be retained by the business and to be distributed to the partners increases throughout the projected years. There is a greater increase in the total income of the business as compared to the increase of expenses since most of the expense accounts are affected only by 2.53% average inflation rate. On the other hand, the Service Revenue and Other Income increase due to the combined effects of increasing operating capacity and 2.53% average inflation rate. Profitability ratios and other analysis were used to further analyze the financial performance of the business.
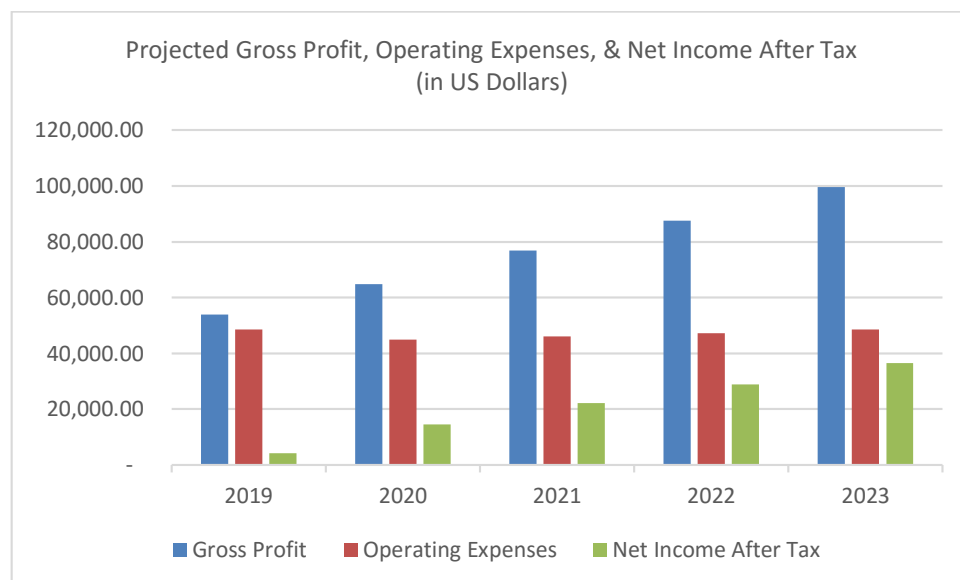


**Figure 1**. Projected Gross Profit, Operating Expenses, & Net Income After Tax (in US Dollars)

Financial Analysis

The projected financial statements will be used to compute the different ratios and returns of Daraitan Camping Ground given the formulas previously mentioned in this study.

Profitability Ratios. These ratios measure how well the business operates considering the costs. The profitability of the proposed business depends on the outcome of return on sales, return on investment and gross profit ratio.

Return on Sales. The return on sales for five years of the proposed business is at an average of 21.70%. This high and favorable amount of return on sales signifies that more than a quarter of the total income is earned as net income.

Table 12. **Return on Sales (in US Dollar)**

|  | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| Net Profit After Tax | 4,191.55 | 14,516.52 | 22,143.12 | 28,846.31 | 36,501.19 |
| ÷ Sales Revenue | 67,667.20 | 79,292.76 | 91,463.28 | 102,693.32 | 115,153.44 |
| Return on Sales | 6.19% | 18.31% | 24.21% | 28.09% | 31.70% |

Return on Working Capital. on the result, shows that for every peso of investment, an average of 59.43% is returned to the investors. This amount is high which means that the business is effective in using its assets to earn profits and it can be a good investment for potential investors.

Table 13. **Return on Working Capital (in US Dollar)**

|  | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| Net Profit After Tax | 4,191.55 | 14,516.52 | 22,143.12 | 28,846.31 | 36,501.19 |
| ÷ Total Investment | 49,478.28 | 44,758.51 | 40,038.73 | 35,318.96 | 30,599.18 |
| Return on Investment | 8.47% | 32.43% | 55.30% | 81.67% | 119.29% |

Gross Profit Ratio. The average gross profit ratio of the proposed business, which is its profitability after deducting the cost of services, is 83.47%. This indicates that the business has an adequate amount of gross margin to pay its operating expenses and that there is a low amount of cost in providing a service.

Table 14. **Gross Profit Ratio (in US Dollar)**

|  | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| Gross Profit | 53,959.50 | 64,833.641 | 76,870.62 | 87,604.64 | 99,574.45 |
| ÷ Sales Revenue | 67,667.20 | 79,292.76 | 91,463.28 | 102,693.32 | 115,153.44 |
| Gross Profit Ratio | 79.74% | 81.76% | 84.05% | 85.31% | 86.47% |

Liquidity Ratios. These ratios are used to find out the ability of the firm to meet its short-term obligations as they come due.

Current Ratio. As presented below, the current ratio of the proposed venture is averaging at 1:14.4. This means that for every one-dollar liability, there is an available of USD13.40 to pay it off. The result of Current Ratio indicates that there will be enough cash to cover the business' current liabilities.

Table 15. **Current Ratio (in US Dollars)**

|  | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| Current Assets | 58,822.40 | 82,497.29 | 112.642.69 | 149.095.88 | 193.612.17 |
| ÷ Current Liabilities | 2,334.34 | 6,772.93 | 10.055.42 | 12.942.53 | 16.237.86 |
| Current Ratio | 1:25.20 | 1:12.18 | 1:11.20 | 1:11.52 | 1:11.92 |

Test of Return on Capital Investment. Test of return on capital investment assesses the favorability of investments in the project.

Average Rate of Return. As shown below, the average rate of return of the proposed business is 30.34%. The result of the ARR is encouraging to the prospective investors because majority of the investment is returned.

Table 16. **Average Rate of Return (in US Dollars)**

|  | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|
| Net Profit After Tax | 4,191.55 | 14,516.52 | 22,143.12 | 28,846.31 | 36,501.19 |
| ÷Average Cash Flow | 50,887.40 | 71,107.20 | 71,107.20 | 71,107.20 | 71,107.20 |
| Average Rate of Return | 8.24% | 20.41% | 31.14% | 40.57% | 51.33% |

Payback Period. The payback period of the proposed venture is three years eleven months and twelve days. It is promising because it is shorter than the payback periods of other camping grounds interviewed.

Table 17. **Payback Period (in US Dollar)**

| Year | Cash Flow | Cash Flow | Payback Period (Years) |
|------|-----------|-----------|------------------------|
| 0 | -87,101.72 | -87,101.72 | |
| 1 | 8,951.70 | -78,150.02 | |
| 2 | 19,276.69 | -58,873.33 | |
| 3 | 26,903.32 | -31,970.01 | |
| 4 | 33,606.53 | 1,636.52 | 3.95 |
| 5 | 41,261.42 | 42,897.94 | |

Net Present Value. The proposed venture has an NPV of USD11,041.78 using the rate of 8.25%. It exceeds zero, thus the proposed business can be accepted.

Table 18. **Net Present Value (in US Dollars)**

| | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|------|------|------|------|------|------|-------|
| Net Income | 4,191.54 | 14,516.52 | 22,143.12 | 28,846.31 | 36,501.19 | |
| Depreciation | 4,719.78 | 4,719.78 | 4,719.78 | 4,719.78 | 4,719.78 | |
| Cash Flow | 8,911.32 | 19,236.30 | 26,862.90 | 33,566.09 | 41,220.97 | |
| Present Value Factor | 0.9238 | 0.8534 | 0.7883 | 0.7283 | 0.6728 | |
| Discounted Cash Flow | 8,232.28 | 16,416.26 | 21,176.03 | 24,446.18 | 27,733.47 | 98,004.21 |
| Initial Investment | | | | | | 87,101.72 |
| NPV | | | | | | 10,902.49 |

Internal Rate of Return. With the same accept or reject decision as the NPV method, the 12.07% IRR of the proposed business can be accepted as it is greater than zero and is considered high. The higher the rate of return, the more profitable the business is.

Table 19. **Internal Rate of Return**

| | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|------|------|------|------|------|------|-------|
| Net Income | 4,191.54 | 14,516.52 | 22,143.12 | 28,846.31 | 36,501.19 | |
| Depreciation | 4,719.78 | 4,719.78 | 4,719.78 | 4,719.78 | 4,719.78 | |
| Cash Flow | 8,911.32 | 19,236.29 | 26,862.90 | 33,566.09 | 41,220.96 | |
| Present Value Factor | 0.8923 | 0.7962 | 0.7105 | 0.6340 | 0.5657 | |
| Discounted Cash Flow | 7,987.83 | 15,348.96 | 19,115.05 | 21,306.70 | 23,343.18 | 87,101.72 |
| Initial Investment | | | | | | 87,101.72 |
| NPV | | | | | | - |

Benefit-Cost Ratio. As shown in below, the benefit-cost ratio of the proposed business is 1.13. As the ratio is greater than one, it means that the benefits are greater than the costs, and thus the project is favorable.

Table 20. **Benefit-Cost Ratio**

|  | 2019 | 2020 | 2021 | 2022 | 2023 | Total |
|---|---|---|---|---|---|---|
| Net Income | 4,191.54 | 14,516.52 | 22,143.12 | 28,846.31 | 36,501.19 | |
| Depreciation | 4,719.78 | 4,719.78 | 4,719.78 | 4,719.78 | 4,719.78 | |
| Cash Flow | 8,911.32 | 19,236.30 | 26,862.90 | 33,566.09 | 41,220.97 | |
| Present Value Factor | 0.9238 | 0.8534 | 0.7883 | 0.7283 | 0.6728 | |
| Discounted Cash Flow | 8,232.28 | 16,416.26 | 21,176.03 | 24,446.18 | 27,733.47 | 98,004.21 |
| Initial Investment | | | | | | 87,101.72 |
| NPV | | | | | | 1.13 |

## DISCUSSION

This study is aimed at evaluating the economic viability of operating a Community-based Homestay Service in Daraitan, Tanay. The Community-based Homestay Service would have a three-fold impact when fully operational; first, the workers to be employed will be the native residents of the area, the Dumgats; second, the homestay operation will boost the eco-tourism program of the local government of Tanay; third, the development that will be done in the area of the homestay will be at a minimum, thereby maintaining a very large portion of the area, at its pristine architectural state.

Based on the results of the survey conducted by the researchers, for the next 5 years, starting 2019 until 2023, the potential of earning in operating the Community-based Homestay Service is very promising. The projected capacity of the homestay service, even with the presence of the existing accommodation services nearby, would be complementary to the need of both local and foreign tourists, who visit the famous hiking and camping grounds.

Various methods of financial analysis shows result all point to a very high likelihood of a successful operation of the service. An average of 21.70% of Return on Sales shows that the homestay service will surely be patronized by the tourists frequenting the area. Investors on the project also will be well compensated with the 59.43% Return on Working Capital and a

Payback Period of 3.95 years. The operations also show that liabilities will also be extinguished as they become due, proven by a 1:14.4 Current Ratio.

The financial analysis results are supported by the literature that ecotourism is an emerging niched in the tourism industry that is sustainable. Sustainability is a primary objective of the homestay service. A sustainable operation will be able to support one of the primary objectives of increasing the standard of living for the native residents of the area through the livelihood opportunity that it will provide.

**Conclusion**

Eco-tourism, a segment of the tourism industry is a fast emerging and promising avenue for possible business ventures. This area of the industry not only provides potential profits for businesses but also promotes social responsibility through the environmental component of the program. The Community-based Homestay Service not only meets the income potential, it also addresses the concern of development while keeping the pristine architectural landscape of Daraitan. Simultaneously, the standards of living for the native inhabitants will increase as well. With the foregoing findings and supported by the financial analysis results, this project is recommended for immediate implementation.

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