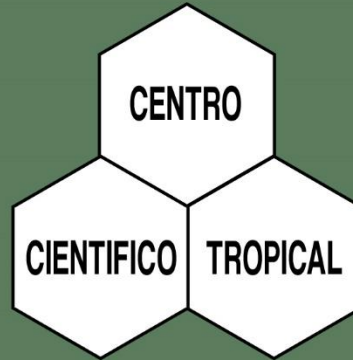




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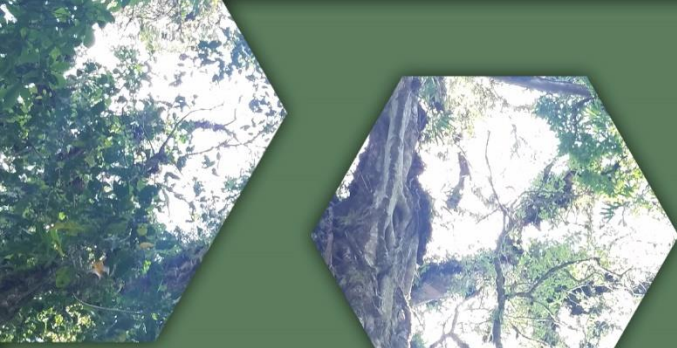
Localization of Monteverde's Economy

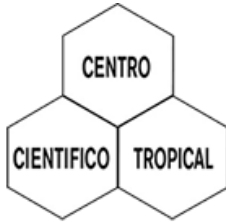
March 3rd, 2018
San Jose Project Center

An Interactive Qualifying Project Report
submitted to the faculty of Worcester
Polytechnic Institute in partial fulfillment
of the requirements for the Degree of
Bachelor of Science

Submitted By:
Sara Cardona
Frank Ciliberto
Olivia Gray
Nathaniel Peura

Project Advisors:
James Chiarelli
Stephen McCauley





WPI

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Submitted on:
March 3, 2018

Submitted by: Sara Cardona, Frank Ciliberto, Olivia Gray and Nathaniel Peura

Submitted to: Professor James Chiarelli and Professor Stephen McCauley

Sponsoring Agency: Centro Científico Tropical

This report represents the work of four WPI undergraduate students submitted to the faculty as evidence of completion of a degree requirement. WPI routinely publishes these reports on its website without editorial or peer review. For more information about the projects program at

WPI, please see <http://www.wpi.edu/Academics/Project>

Abstract

Self-sustainability diminishes the reliance on product importation and reduces environmental impacts of an area. Our goal was to facilitate connections between enterprises in Monteverde and producers in Costa Rica's Bellbird Biological Corridor. We interviewed a sample of enterprises and producers to understand the supply chain. With this information, an effective financial tool was designed and implemented, the demand and reasons for using local and imported products were determined, and a preliminary list of local suppliers was created.

Acknowledgements

Our team would like to express our gratitude to all the people that consistently supported us during these seven weeks and assisted us in completing our project. We would not have completed our project if it were not for your expertise throughout our research process and we are grateful for all your help.

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Next, we would like to thank **Manrique Oviedo** from Cama-Pez for taking the time to meet with us and giving us access to complete, detailed information regarding his company's cost structure.

We would also like to thank **Esther Ledezma** and **Elieser Ledezma** of Mariposas del Golfo for hosting us in Costa de Pajaros while we conducted our interview with Cama-Pez and for taking us on a tour of the coast to show us the responsible fishing area.

Finally, we would like to thank **all enterprises** in Monteverde and in the Bellbird Biological Corridor area that agreed to interviews with us and provide us information about their business logistics and relations.

Executive Summary

Introduction

Costa Rica is one of the epicenters in the world when it comes to sustainability (López Peña, 2017). As a non-profit environmental advocacy organization, the Centro Científico Tropical (CCT) has worked with businesses and communities to preserve and educate them about the relationship between human and nature (CCT, 2016). The CCT's efforts toward sustainability are noticeable in Monteverde, where the organization aims to expand the relationships between local businesses and suppliers of food and other products within the Bellbird Biological Corridor. To the CCT, self-sustainability refers to being independent from resources outside the Bellbird Biological Corridor. By localizing the supply of products, Monteverde can make steps towards becoming more self-sustainable and localizing their economy.

Project Background

Monteverde is home to 71 enterprises that include hotels, restaurants, and adventure parks. The town has a reputation for sustainability and conservation of the environment. Currently, the CCT focuses on environmental education and encouraging the purchase of responsible fish in Monteverde. Responsible fish are caught using only hand rods within a designated area in the Gulf of Nicoya, as shown in Figure ES 1 below (Poder Ejecutivo, 2009).



Figure ES 1: Responsible Fishing Marine Area of Costa de Pájaros, Costa Rica (MarViva)

The CCT has made efforts to localize fish supply and hopes to focus on other products in the area in the future to create a more self-sustainable economy. To do this, it is necessary to identify current and potential producers that supply Monteverde.

Local Production in the Bellbird Biological Corridor

The Bellbird Biological Corridor is a vast land preservation that contains numerous microclimates due to its varying elevations, thus allowing for the production of a wide variety of products (A. Gonzales, personal communication, January 15, 2018). Monteverde is a small town within the corridor that has had an increase in the number of enterprises in the past few years. In order to achieve the goal of self-sustainability in Monteverde, the CCT is working towards identifying producers in the corridor, evaluating whether these producers are able to meet the demand of enterprises in Monteverde, and establishing connections between producers and enterprises.

Fishing Relations in the Gulf of Nicoya

One of the key producers that the CCT had previously identified was Cama-Pez, a small responsible fish distributor in the Gulf of Nicoya that supplies a few enterprises in Monteverde. The CCT had recently been working with Cama-Pez in order to help the company expand its market and determine if the business was profitable. Based on this previous work, the CCT had asked our group to further investigate the cost structure of Cama-Pez and work to create a systematic tool to assist Cama-Pez in meeting their desired profit margin.

Project Goals and Objectives

The goal of our project was to help the CCT advance the initiative of establishing connections between enterprises in Monteverde and local producers in the Bellbird Biological Corridor. This will contribute to Monteverde becoming the first self-sustainable destination in Costa Rica. We completed three objectives in order to achieve our project goal.

1. Analyzed and Improved the Current Cost Structure Used by Cama-Pez

To complete our first objective, we traveled to Costa de Pájaros to go on a boat tour to understand more about the responsible fishing area and interview Manrique, the owner of Cama-Pez. In this interview, we aimed to gain insight about how he monitors the expenses of his business and to simplify and organize the financial aspect of the business so that it is easier to interpret and understand.

2. Conducted a Market Analysis and Determined Demand of Products in Monteverde

For our second objective, we conducted 20 interviews with hotels and restaurants in Monteverde to gain insight about the local and imported products they purchase. We analyzed this data to determine product needs and trends between enterprises, as well as to obtain suggestions on how Monteverde can become more self-sustainable. A few other topics that we

investigated were the reasons why enterprises import certain products, and the demand of each product the enterprises purchase.

3. Investigated Producers in the Bellbird Biological Corridor and Logistics of their Businesses

For our third objective, we gathered a list of local producers and conducted phone interviews with four local producers in the corridor that currently have an established relationship with enterprises in Monteverde. We then analyzed the data to determine the products they sell to promote these to enterprises in Monteverde and to formulate advice for local producers in the area.

Results

Cost Structure Assessment of Cama-Pez

In our interview with Manrique Oviedo, we obtained information about the cost breakdown structure of Cama-Pez. This was in the form of an Excel workbook. He provided us with insight into the organization and functions of this workbook and later requested that we improve it and add any necessary expenses.. Manrique specifically wanted the cost structure to be easier to use, have an organized and categorized list of all his expenses, and show what percentage of his total costs he was spending on each category of his business.

Market Analysis of Monteverde

During our visit to Monteverde, we were able to interview 20 hotels and restaurants. We found that 15 out of the 20 enterprises purchase at least one product locally; some of the most common locally-purchased products were lettuce, coffee, eggs and tomatoes. Other products like meats, vegetables, and fruits were imported by the majority of enterprises. Figure ES 2 below presents the reasons why enterprises import these products.

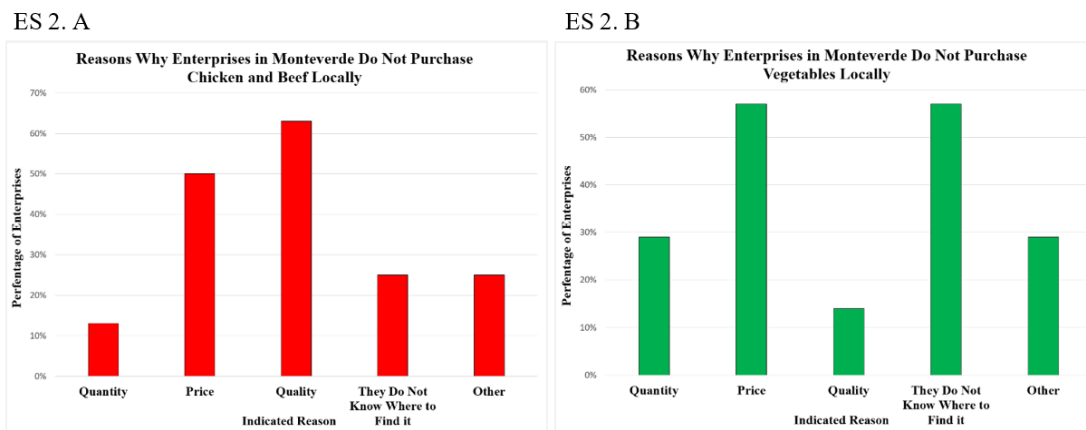


Figure ES 2: Reasons Why Enterprises in Monteverde Do Not Purchase Products Locally

As shown in Figure ES 2.A, enterprises do not purchase chicken and beef locally primarily due to the price and quality. In Figure ES 2.B, the price and not knowing a supplier are the dominant reasons for not purchasing vegetables locally. In general, we noticed that most enterprises import products because they believe local products are significantly more expensive.

Evaluation of Suppliers in the Bellbird Biological Corridor

Our group conducted phone interviews with four local distributors in the Bellbird Biological Corridor. From the interviews we obtained general information about the products the companies produced and their experience with supplying to the local community. Of the four producers, two primarily focus on selling their products to enterprises in Monteverde, the other two producers have additional outreach with international companies. All four enterprises are satisfied with selling their products locally in Monteverde. They particularly like how it allows them to have more personal relations with the enterprises they supply and that it is an opportunity to incentivize the localization of the economy. The distributors recommended that potential producers do a market analysis to better understand the market they are entering in Monteverde to ensure it is beneficial and profitable.

Deliverables and Recommendations

After analyzing the results from each objective we developed a new cost structure for Cama-Pez, recommended ways to develop sustainable business practices, and identified local producers. The deliverables we constructed are tailored for enterprises and producers in the Bellbird Biological Corridor to review and utilize for their businesses and the recommendations we have formulated are for the CCT to further develop our project in the future.

Recommended Changes to Cama-Pez's Current Cost Structure

We created an income statement that is capable of both determining the profit margin by inputting the price at which fish is sold, as well as projecting required selling prices based on a desired profit margin. This allows Manrique's cost breakdown to work alongside our income statement and become a tool that suits his business needs. Our income statement also has the ability to create a pie chart where the percentage of money spent on each category of the business is seen. This tool is versatile and can function well as a profit/loss projection tool for different types of businesses.

Developing a Local and Sustainable Market

We recommend that the CCT organize meetings and conferences in Monteverde, so that they can inform enterprises of the importance of purchasing responsible fish, localizing their supply chain, and helping businesses connect with local suppliers.

Identifying Local Producers

Since we were only able to interview four suppliers within the Bellbird Biological Corridor, we were unable to identify strong trends in our data. We recommend that the CCT continue interviewing suppliers in the area to gather more information regarding how to start supplying in Monteverde and the viability of creating more connections with enterprises. We also suggest compiling a larger list of suppliers that the CCT can give to enterprises so they can begin to explore the possibilities of making new connections.

Future Work

To help the CCT advance their initiative in making Monteverde more self-sustainable, we made other suggestions for future projects. To reduce littering and encourage recycling, waste collectors should come more often and garbage and recycling cans should be added to the center of town. Methods should be investigated to improve water filtration so that waste products are not polluting waterways in the area. We also recommend they continue their efforts to pave roads, introduce available local producers to enterprises through community meetings, and supply the people of Monteverde with appropriate environmental education will help move this project forward.

Authorship

Section	Author	Editor
Abstract	All	All
Executive Summary	All	All
Introduction	All	All
Background		
Centro Científico Tropical's Impact on Environmental Conservation	Frank Ciliberto & Olivia Gray	Nathaniel Peura
The Developing Bellbird Biological Corridor	Olivia Gray & Sara Cardona	Nathaniel Peura & Frank Ciliberto
Fishing in Costa Rica	Nathaniel Peura	Sara Cardona
From the Gulf of Nicoya to Consumers	Frank Ciliberto	Olivia Gray
Tools for Supporting Local Sustainable Businesses	Frank Ciliberto	Sara Cardona
Methods		
Objective 1	Frank Ciliberto & Olivia Gray	Sara Cardona
Objective 2	Nathaniel Peura	Olivia Gray
Objective 3	Sara Cardona	Frank Ciliberto
Results		
Cost Structure Assessment of Cama-Pez	Olivia Gray & Nathaniel Peura	Sara Cardona & Frank Ciliberto
Market Analysis of Monteverde	Sara Cardona	Olivia Gray, Frank Ciliberto, & Nathaniel Peura
Evaluation of Suppliers in the Bellbird Biological Corridor	Nathaniel Peura & Olivia Gray	Sara Cardona
Deliverables and Recommendations		
Recommended Changes to Cama-Pez's Current Cost Structure	All	All
Developing a Local and Sustainable Market	Nathaniel Peura & Olivia Gray	Sara Cardona & Frank Ciliberto
Identifying Local Producers	Sara Cardona & Olivia Gray	Nathaniel Peura & Frank Ciliberto
Conclusions	Sara Cardona	Nathaniel Peura & Olivia Gray

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Introduction

Costa Rica is one of the epicenters in the world when it comes to sustainability (López Peña, 2017). One of the major organizations responsible for promoting local economy while protecting biodiversity in Costa Rica is the Centro Científico Tropical (CCT). As a non-profit environmental science and advocacy organization, their mission is to promote policies and practices that are benefiting the environment, specifically the tropics (CCT, 2016). Over the past 56 years the CCT has worked to facilitate the coexistence between humans and tropical forests. During this time, the CCT has preserved and protected many biodiverse regions in Costa Rica through the implementation of projects pertaining to community development and environmental education.

The CCT's efforts to protect the environment by educating Costa Rican natives are especially noticeable in the Bellbird Biological Corridor, where the community stresses environmental conservation and a localized economy. These aspirations are an important part of Monteverde's initiative to become the first certified self-sustainable destination in Costa Rica. To the CCT, self-sustainability refers to being independent from resources outside the Bellbird Biological Corridor. This can only be possible if there are sufficient producers in the corridor to supply the demand of enterprises in the Monteverde. Products such as fish, meat, eggs, and coffee are commonly purchased locally in the corridor and thus have high importance to be sourced locally, rather than be imported from elsewhere (S. Smith, personal interview, February 13, 2018). The CCT's relation with distributors in the region and enterprises in Monteverde has opened up the possibility of localizing the supply of products. We worked with the CCT to expand these connections and recommended markets that have yet to be explored.

The end goal of this project was to help the CCT advance the initiative of establishing connections between enterprises in Monteverde and local producers within the Bellbird Biological Corridor in order to promote local sustainability. This was accomplished by constructing an income statement that enterprises can use for their business, analyzing the demand for products in Monteverde and where these were sourced from, and then identifying producers in the corridor to understand the reasons for their success and whether they would be able to support enterprises in Monteverde. It was important to the CCT that an economic analysis

was done on a local distributor in the corridor in order to have a better understanding of the feasibility of expanding local markets. To achieve this goal, we analyzed the cost structure used by Cama-Pez, a local fish distributor based in Costa de Pájaros in Costa Rica, and designed a tool that estimated profitability. In this analysis, we considered the costs related to human labor, business maintenance, processing of the fish, product value, and transportation of the products. Once our analysis was complete, we were able to accurately estimate the market price for the business to achieve a desired profit margin for their distributed products. The goal is to give this tool to other enterprises so it can serve as a support for their economic decisions. From there, we worked to determine what products are being purchased locally by enterprises in Monteverde and what products have a demand for local distributors. Information was gathered through the process of interviews with hotels and restaurants within the town of Monteverde. A few variables that were considered through these interviews were the demand of products, the fluctuation of these demands throughout the year, as well as their willingness to source local sustainable products. With this information, we then contacted known local producers within the Bellbird Biological Corridor that already had connections with enterprises in Monteverde for interviews. The main aspects of these interviews was to evaluate their ability to meet product demands of enterprises in Monteverde and obtain information about how they established their local connections and grew their business so that we can provide this information to other growing producers in the corridor and promote their success. These objectives were important first steps in localizing Monteverde's economy and allowing the area to ultimately become self-sustainable.

Background

Sustainability and ecotourism are two important ideals that Costa Rica strives to accomplish (Weaver, 1999). Organizations in Costa Rica are committed to projects and programs that help them achieve these goals. In this section, we discuss the CCT's previous work and commitment to making Costa Rica more self-sustainable, the development of the Bellbird Biological Corridor, fishing practices and fisheries on the Pacific Coast, and the tools local businesses can use to help their economic decision-making.

Centro Científico Tropical's Impact on Environmental Conservation

The Centro Científico Tropical (CCT) is a non-profit organization that was established to protect nature by regulating businesses. Since 1962, the CCT has researched climate change, conducted Environmental Impact Studies (EIS), provided financial support for the Payments for Environmental Services (PSA), contributed to debt-for-nature swap transactions, and held educational programs in efforts to mitigate the negative impact industries can have on the environment (CCT, 2016). The CCT has promoted the conservation of three of Costa Rica's biological corridors, San Juan-La Selva, Bellbird, and Alexander Skutch (Centro Científico Tropical, 2009), by developing strategies to maintain a balance between human activities and wildlife. The purpose of the corridors is to protect endangered species, like the three-wattled bellbird (*Procnias tricarunculata*), that use the corridors for migration (Powell & Bjork, 2004). The movement to establish the Bellbird Biological Corridor was initiated in 1992 by the CCT and other organizations (Cavanagh, 2005) through the identification of critical conservation gaps around Costa Rica. Finally, in 2009, the corridor was officially established. Today, this corridor covers 165,000 acres of land between Puntarenas and Guanacaste in Costa Rica, thus providing respective species the proper migration routes and providing protection to major areas such as the Monteverde Cloud Forest and the Pacific Slope (Penner, 2017). Recently, the Bellbird Biological Corridor has been the CCT's main focus for environmental projects.

The CCT's Previous Projects

The CCT's current initiatives within the biological corridors include sustainable agriculture and environmental education projects. These projects included the creation of the Life Zone System, contributions to the technical base to create several of the National Parks of Costa Rica, and the implementation of the design for the sustainable land use plan, which helps mitigate the harm to the environment (CCT, 2016). Each of these studies focused on promoting the preservation of the environment and spreading awareness about the impact of climate change. These projects have been successfully executed since the establishment of each corridor.

In 2017, a group of WPI students collaborated with the CCT to complete a research project that focused on analyzing Corporate Social Responsibility (CSR) practices within the Bellbird Biological Corridor and improving the application of the model for businesses in the

corridor region (Carnein, Emrick, Nemes, & Venter, 2017). The CSR model is a series of guidelines that mitigate harm inflicted by businesses on the surrounding environment. These guidelines help businesses within the Bellbird Biological Corridor coordinate with community, politics, and nature. This tactic is used by 92% of the world's 250 largest companies to help define their social, environmental, and economic responsibility ("About GRI," n.d.). Although the goal behind business is to profit, the CSR model drives corporations to structure their businesses to account for societal and environmental means (Holme, 1999). The objectives of the CSR model are parallel with those of the CCT in that they aim to promote local sustainability. In 2017, a WPI team was asked to create an action plan for the CCT in order to increase the efficacy of the CSR platform among enterprises in the Bellbird Biological Corridor (Carnein, Emrick, Nemes, & Venter, 2017). This was the first phase of a five-phase project to develop a CSR program that reinforced the economic decision-making and the social accountability of the local communities. Moving forward, the CCT will use the analysis completed in the first phase to enact projects that will improve businesses' use of the CSR program. Our phase and the next phases to come include:

- Phase II - implement the actions developed for CSR activities at the community level
- Phase III - implement the actions for the CSR model at a municipality level
- Phase IV - apply the CSR model at the biological corridor level
- Phase V - systemization of the experience

WPI's previous project team concluded that the CSR had weak involvement in the community category. The second phase, our phase, analyzed the economy of Monteverde and suggested projects to work towards making the area the first self-sustainable destination in Costa Rica. This entails connecting local producers with business in Monteverde.

The Developing Bellbird Biological Corridor

The Bellbird Biological Corridor is a large region in Costa Rica where a land preservation act is in effect. This region encompasses a vast range of microclimates that hold promise for a wide variety of livestock and product cultivation (A. Gonzales, personal communication, January 30, 2018). As a result, Monteverde, a small town within the corridor, is an epicenter for sustainability that holds strong potential to localize their product consumption

through importation from local producers within the corridor. This section discusses the local production within the Bellbird Biological Corridor, the recent economic growth of Monteverde, and the CCT's initiative to enhance and establish new connections between the producers in the corridor and enterprises in Monteverde. The CCT is doing this to work towards making Monteverde the first certified self-sustainable destination in Costa Rica.

Local Production in the Bellbird Biological Corridor

There are three main land uses in the Bellbird Biological Corridor: cultivating agriculture, rearing livestock, and preserving forest. The agricultural use is characterized by the growth of vegetables in small farms within the corridor. During the 1960's and 1970's, the use of pastureland was the largest and most profitable due to cheese and milk production. However, over time the economy has shifted to become dependent on tourism (Historia de Monteverde, 2016). The forest area remains very similar to that of the 1950's, when the Quakers first settled and began to develop Monteverde, since there has been minimum destruction of the area. There are approximately 12,355 acres that make up the Biological Reserve of Monteverde and 54,363 that make up the International Children's Rainforest. These areas of land are in their natural state and are home to diverse and abundant flora and fauna (Historia de Monteverde, 2016). The existence of these vast lands with low temperatures make for fertile lands and thus support the growth of a wide variety of crops.

The area made up by the Bellbird Biological Corridor has an altitude gradient from the coast, resulting in many different microclimates and ecosystems within a concentrated geographical region. The corridor encompasses part of the coast, which includes the Gulf of Nicoya. Throughout the years, overfishing has caused a depletion in fishing resources. In the gulf, a transition towards responsible fishing is occurring since the community has seen a necessity to care for their degraded ecosystem. There are currently 90 boats in the gulf with approximately two to four people on each. Most fisherman use hand rods to catch fish, although a few still use nets outside of the responsible fishing area (E. Ledezma, personal interview, January 30, 2018). Since responsible fishing allows only hand rods to be used, it is difficult to catch specific species of fish. For this reason, it is necessary to ensure that potential buyers of responsible fish in Monteverde are willing to sell whatever fish are caught. There is a significant demand for products in Monteverde since there are currently around 71 enterprises in the area

that offer restaurant or lodging services with approximately 200,000 people visiting the area per year (A. Gonzales, personal communication, January 15, 2018).

Geography of Monteverde

Monteverde is a small town located within the Bellbird Biological Corridor in Costa Rica. Because of its location in this land preservation area, Monteverde is a town in which environmental education is stressed (Cavanagh, 2005). In Figure 1 below, you can find Monteverde at the northern border of the corridor.



Figure 1: Map of the Bellbird Biological Corridor (CCT, 2017)

Due to its isolated location in the corridor, Monteverde is still a relatively developing area. In fact, Monteverde had established its own municipal government only two years ago, previously being directed only as a district of Puntarenas. Since the establishment of its government, Monteverde has been able to begin implementing regulations for residential areas, business property and buildings, as well as for conservation areas (Cavanagh, 2005). Stretching from the Cloud Forest Reserve, a main stone road leads to the small town of Santa Elena and then leads

into a paved road as it gets closer to the center of town where restaurants, cafés, supermarkets, hotels, banks and much more are abundant.

The Effects of Tourism in Monteverde

Since the late 1980's and the early 1990's, Monteverde has grown to be a wildly popular tourist attraction, receiving visits from approximately 200,000 tourists annually (A. Gonzales, personal communication, January 15, 2018). Some of Monteverde's most admirable attractions are its diverse wildlife including quetzals, three-wattled bellbirds, numerous types of hummingbirds, rich vegetation due to significant rainfall, and a famous tropical cloud forest reserve that extends through 25,946 acres (Cavanagh, 2005). Due to the large increase in tourism, Monteverde now takes pride in its numerous restaurants, quaint hotels and cottages, souvenir shops, and tourist attractions that it offers throughout the area, thus making the once remote town now flourish with income (Himmelgreen, 2006).

Monteverde, along with other high traffic tourist areas, has felt the significant social, economic and environmental impacts of tourism. Being a popular vacation destination has pressured many local businesses in Monteverde to meet the increased demand of goods and services. In doing so, companies often disassociate social and environmental responsibilities from their economic decision-making, which means they are more likely to import foreign products instead of buying from local producers (Curtin & Busby, 1999). This has led business owners to dramatically raise their prices for food and other goods to account for high costs of transportation and processing fees imposed on importing goods (A. Gonzales, personal communication, January 15, 2018). Another contributing factor to the rise of prices in Monteverde stems from the outsourcing of raw produce to larger companies in San José for processing.

Production in Monteverde

The high prices in Costa Rica impose issues for local residents, as these high fees make it difficult for them to pay for everyday goods (Cavanagh, 2005). Because of this, a push to establish connections with enterprises in the Bellbird Biological Corridor has been set in motion so that products can be purchased locally. Sourcing produce locally rather than importing will

not only allow local producers to gain access to the thriving Monteverde markets, but also allow enterprises to reduce their budget towards transportation and processing fees. Therefore, enterprises will potentially be able to reduce the selling price of their products and still receive the same profit. This will be the first step in making Monteverde the first self-sustainable destination. In order to accomplish this initiative, the CCT had asked that our group identify and analyze the different product demands of these hotels, restaurants, and other enterprises in Monteverde and determine how they may vary throughout the year based on the fluctuation of tourist visits. From there, the appropriate local connections can then be initiated and thus increase the efficiency of product sourcing to Monteverde.

The same types of food and products can be grown in different places in the world but are linked to different environmental impacts (Kastner & Nonhebel, 2011). It has been determined that even though imported food is generally transported long distances, the environmental impact with food is dominated by the production method (Weber & Matthews, 2008). Imported products are typically owned and produced by large corporations and have a large pool of suppliers. However, the products must be transported long distances and are produced in unknown environmental conditions, making it difficult to determine whether the production is sustainable and environmentally friendly. Local products are generally only supplied by a few farms and have a smaller quantity of supply. This could affect their ability to meet the demand of enterprises throughout the year. On the other side, the local products are only transported short distances, environmental impacts of their production can be easily verified for sustainability, and the increase in business will help the local economy. The utilization of localized products has been studied and it was determined that harnessing the economic resources in new ways, such as creating a new local supply chain, promotes an increase in sustainable rural development (Marsden & Smith, 2005). The imported and localized supply chains both have their advantages and disadvantages, but the CCT's mission is to encourage enterprises in Monteverde to buy locally wherever possible. This would cut down on food miles as well as allow the CCT and enterprises to determine the sustainability of each supplier's local production. This effort is part of CCT's overall goal: to make Monteverde the first certified sustainable destination in Costa Rica.

Initiative in the Bellbird Biological Corridor

The CCT has a goal of achieving self-sustainability in Monteverde by creating a local economy. This local economy is dependent upon whether the distributors of products in the Bellbird Biological Corridor are capable of fulfilling the demand of the community. At the start of our project, the CCT was only aware of four known suppliers in the corridor that were distributing their products locally to Monteverde: Cosméticos Monteverde with natural cosmetics; Mirasam with egg production; Hortalizas Brenes with vegetables; and Asociación de Apicultores de Guacimal with honey. Although there are currently restaurants, hotels, adventure parks and local consumers in Monteverde that are buying from these enterprises, the majority are importing their products from other areas (A. Gonzales, personal communication, January 15, 2018). There is still potential for new local producers to fulfill the demand of the community by distributing to Monteverde instead of exporting. To pursue this ideal, the CCT had asked that our group identify additional local producers in the corridor so that they may be promoted and utilized by enterprises in Monteverde. If more enterprises were to distribute locally it would allow the money in Monteverde to stay in the town, which would create a more localized economy. A local economy would ultimately create a Monteverde that is self-sustainable.

Fishing in Costa Rica

Costa Rica is located between two major bodies of water: the Caribbean Sea and the Pacific Ocean. The Gulf of Nicoya within the Pacific Ocean is the fishing area our project focused on due to its location in the Bellbird Biological Corridor and the CCT's connection with a local fish distributor along the coast of the gulf. This section discusses fishing regulations in the Gulf of Nicoya and responsible fishing in the area.

Fishing Regulations in the Gulf of Nicoya

The Gulf of Nicoya is the main fishing ground of the country, accounting for 30% of annual landings, or of total fish caught, in Costa Rica (Wehrtmann & Nielsen-Muoz, 2009). Commercial fisheries are not common in the Gulf due to bottom trawling being illegal within the inner part of the Gulf. Bottom trawling is a method typically used by industrial fisheries where a large net is dragged across the seafloor which catches everything in its path. This is a very

disruptive and environmentally unsound method that has been banned in the area. Since this method is illegal, the region is home to a majority of small and medium-scale fisheries. Despite the lack of commercial fisheries, the Gulf of the Nicoya accounts for more than half of the share of landings in the country's fishing areas in the Pacific. In the past, the Gulf has been a region that has been overfished and has had its resources exploited. The increase of tourism in Costa Rica has been observed to lead to a rise in demand for fish products (Salas, 2011). In 2013, fishing in the region was banned for 15 days to allow the marine life to reproduce and not become depleted (Arias, 2013). Though the Gulf has been struggling with overfishing for years, Costa Rica has been careful to prioritize the marine life over the fisheries and the local economy.

Responsible Fishing

Costa Rica imposes a fishing ban on the Gulf of Nicoya, known as the low season, or "veda". This ban is primarily enforced on the most popular fish, sea bass (corvina), in an effort to prevent overfishing and takes place during the spawning seasons to allow them to reproduce during this time (FAO, 2005). The ban is an indication that the government has realized the dangers of overfishing and has begun efforts to promote and enforce responsible fishing. Apart from the imposed ban, responsible fishing includes enforcing sustainable fishing methods as well as managing, processing, and marketing the fish products sustainably (Poder Ejecutivo, 2009). The government agency, Costa Rica's Institute of Fishing and Aquaculture (INCOPECA), is in charge of implementing fishing regulations for the country by determining the requirements that must be met to be considered a responsible fisher (Poder Ejecutivo, 2009). These requirements include the strict use of hand rods in designated responsible fishing areas, such as Costa de Pájaros, as well as the use of a net that has larger holes to catch large mature fish and allow the young, underdeveloped fish to pass through. Figure 2 below shows the marine area of Costa de Pájaros which is designated for handline fishing.



Figure 2: Responsible Fishing Marine Area of Costa de Pájaros, Costa Rica (MarViva)

The responsible fishing area is outlined by six yellow buoys. This outlined area was designed to protect the mangroves where fish reproduce and lay their eggs and to support the bird population that feeds on the fish along the coast (E. Ledezma, personal interview, January 30, 2018). Because of this, all responsible fishing practices are strictly enforced within this area.

Though these methods are only enforced by the Costa Rican Civil Guard Coast Guard in certain areas, it is encouraged that each fishery implements responsible fishing practices to reduce the damage imposed on the environment from harmful fishing practices (E. Ledezma, personal interview, January 30, 2018). By strengthening the connectivity between the sustainable fisheries and enterprises in Monteverde, enterprises will be able to supply their consumers with local produce, while encouraging fisheries to practice responsible fishing.

From the Gulf of Nicoya to Consumers

After raw produce is caught on the coast, it is then sold to distributors. These distributors process the raw goods either by outsourcing to packaging companies in larger cities, such as San José, or by cleaning and preparing their produce themselves before transporting and selling the fish to enterprises. One distributor the CCT has made connections with is Cama-Pez, a small distributor who is using a similar process to move produce from the Gulf of Nicoya to hotels,

restaurants, and other consumers in Monteverde and elsewhere. After purchasing fresh fish from fisheries on the Gulf of Nicoya, Cama-Pez processes the produce before distributing it to enterprises. However, because the fishing of sea bass is prohibited during the veda season, Cama-Pez is only able to distribute sea bass that was frozen and stored during the high season and other less sought-after fish until the fishing ban is lifted (M. Oviedo, personal interview, January 30, 2018). Despite this shortcoming, Cama-Pez is able to maintain a connection with enterprises throughout the whole year.

The CCT previously conducted a preliminary interview with Cama-Pez to get a better understanding of the company's cost structure in order to expand their market and determine whether the business is profitable. During this meeting, the CCT collected information about the pricing structure used by Cama-Pez. Explicit questions asked during this interview and information provided by Cama-Pez are located in Appendix A. At the time, Cama-Pez's cost structure broke down the price for consumers into three segments: produce, transportation, and processing fees. Because the pricing structure was very broad, the CCT wanted our group to further investigate the key components of Cama-Pez's cost structure through a follow-up interview and analysis. From there, the objective was to create a systematic process that ensured a stable profit margin with the growth of this fishing distributor.

Tools for Supporting Local Sustainable Enterprises

All businesses use similar tools that allow them to manage information regarding customers, expenditures, revenue streams, and employees. In order to ensure profit and growth, companies often use an income statement to compare these factors. Creating a systematic process for Cama-Pez meant we needed to investigate expenditures and profits made in the past and compile them into a formal income statement. An income statement is a tool used by businesses to measure assets, liabilities, and net worth at any given span in time (Davis, 1999). The use of this tool is crucial for producers so that they may either estimate the current profit earned for a specific product or determine the pricing for a product, so that the company may earn a desired profit margin. These estimations will be useful to determine whether the distribution of products between local producers, such as Cama-Pez, and enterprises will be profitable and sustainable. The income analysis is achieved by closely comparing the expenses related to the business with

how it is profiting. There are two main components necessary for the creation of an effective income statement: determining the cost of each activity and the revenue streams. First, it is necessary to compile a list of all expenses related to the business with a detailed description of what each one entails. Once activities are classified, they are split into direct and indirect costs (Engle, 2012). Direct costs include factors that directly impact the product that is being sold, such as transportation and the cost of goods sold (COGS). COGS refers to the purchase price of raw material. By subtracting the direct costs from the revenue of a business over a fixed period of time, we are able to calculate gross profit.

$$\textit{Gross Profit} = \textit{Revenue} - \textit{Direct Costs}$$

This is helpful for later calculation but does not accurately represent a business's profit. In order to conclude whether a business is profiting, the indirect costs must be accounted for. Indirect costs are expenses that do not pertain to the product itself but are associated with running a business. The costs listed in this category are fixed expenses, meaning they remain relatively consistent over time. This portion of an income statement includes cost categories such as equipment, maintenance, rent, taxes, and payroll services. The difference between the revenue and the sum of all expenses is a business's net profit. To determine the profit margin, or the percent profit, net profit is divided by the revenue.

$$\textit{Net Profit} = \textit{Gross Profit} - \textit{Indirect Costs}$$

$$\textit{Profit Margin \%} = \frac{\textit{Net Profit}}{\textit{Revenue}} \times 100$$

Each business may need to adjust the properties of their income statement and tailor it to fit their unique business needs in order to measure profits or losses. Table 1 below is an example of a basic income statement.

Table 1: Example Income Statement

Income Statement

(Business Name)	Month 1	Month 2
Revenue	\$ 2,050	\$ 3,025
Cost of Goods Sold	\$ 512	\$ 650
Salaries	550	550
Gross Profit	\$ 988	\$ 1,825
Gross Margin %	48.2%	60.3%
Operating Expenses (indirect)		
Payroll Services	\$ 15	\$ 15
Advertising	\$ 26	\$ 26
Equipment	\$ 45	\$ 45
Maintenance	\$ 14	\$ 14
Processing	\$ 5	\$ 5
Utilities	\$ 5	\$ 5
Rent	\$ 42	\$ 42
Insurance	\$ 24	\$ 24
Taxes	\$ 18	\$ 18
Miscellaneous	\$ 3	\$ 3
Total Operating Expenses	\$ 197	\$ 197
Net Profit	\$ 791	\$ 1,628
Profit Margin	39%	54%

The top of this table shows revenue streams along with direct costs per month. In this case, direct expenses are salaries and cost of goods sold. Underneath, gross profit and gross margin is calculated. From there all indirect costs are listed. By categorizing each expenditure into subsections, a company can use the income statement as a tool to acknowledge and visualize the extent of variation between each cost category. As shown in this table, it is fairly common that the operating expenses remain consistent throughout the year. By subtracting the monetary values of the direct and indirect expenses, the profit margin can be calculated. Using this model, businesses are able to analyze expenditure and revenue made to get a better understanding of their company's profits or losses.

Methods

The goal of our project was to help the CCT advance the initiative of establishing connections between enterprises in Monteverde and local producers in the Bellbird Biological

Corridor. This was done with the intention of localizing the corridor's economy as well as reducing the environmental impact caused by the import of products. To achieve this, it was necessary to do previous research in San José with our sponsor, the CCT, travel to the Gulf of Nicoya to obtain information about responsible fishing and interview one of the responsible fish distributors in the area, undergo field research in Monteverde to collect data about the products obtained by enterprises, and contact producers within the Bellbird Biological Corridor to gain an understanding of their production quantities and what has contributed to their success of selling within the corridor. In order to ensure profitability and sustainability of local businesses within the corridor and to strengthen the relationships between enterprises in Monteverde and local producers, we completed the following objectives:

1. Analyze and improve the current cost structure used by Cama-Pez
2. Conduct a market analysis and determine the demand of local products by enterprises in Monteverde
3. Investigate producers in the Bellbird Biological Corridor and the logistics of their business

Objective 1: Analyze and improve the current cost structure used by Cama-Pez

Our first objective was to analyze the current model used by a fishing distribution company, known as Cama-Pez, and create a new model to accurately determine their costs and potential profits. The analysis focused on the processes involved with Cama-Pez's business. To undergo this analysis, we obtained information by interviewing Manrique Oviedo, the owner of Cama-Pez. This information included, but was not limited to, the operating expenses of his business, expenses related to the purchase, transportation and processing of the fish products his company distributes, as well the current business model he uses to estimate his company's profit. We first organized the company's expenses into categories and later used this to create a cost breakdown structure so that Manrique could have an idea of what his expenses were broken into every month. We then used our findings to improve upon the current business management model so that it more accurately estimated the company's profits. In this section, we will go through the information that was obtained through the interview with Cama-Pez and the

responsible fishing tour as well as our proposed methods of improving Cama-Pez's current cost structure.

Interview with Cama-Pez

The first step to completing the first objective was to conduct an interview with Cama-Pez to gather information about their cost structure. This interview was conducted with Manrique Oviedo, the owner of Cama-Pez. Manrique was selected to be interviewed since he is the decision-maker of the company and was able to provide us the most valuable and detailed information for the purpose of our objective. The interview itself took place in Manrique's office at the Cama-Pez facility, so that we had a private environment and he could easily access information during the course of the interview. The interview was conducted in Spanish, as that is the only language Manrique is able to speak. Because of this one of our group members served as a translator throughout the interview, as she is fluent in the Spanish language. The interview was recorded in order to later review topics discussed during the interview for further analysis.

This interview was primarily focused on determining the current expenses Manrique considers in his cost structure. Specifically, we discussed whether he factored in the value of the different fish distributed as well as costs relating to operation, maintenance, transportation, packaging, and labor into his currently used profit analysis. Explicit questions asked and his responses during the interview are located in Appendix B. The information obtained during the interview was used to create a systematic process for Cama-Pez to use to accurately estimate product selling prices based on the company's desired 30% profit margin.

Responsible Fishing Tour

During our visit to interview Manrique Oviedo in Costa de Pájaros, we went on a boat tour through a portion of the Gulf of Nicoya to get a better understanding of the designated responsible fishing area and the fishing restrictions that are enforced within it. This allowed us to gather additional information regarding the dimension of the area as well as the specific regulations that must be followed. The tour was led by Elieser Ledezma, one of the fishermen on the coast that sells produce to Cama-Pez. During the course of the two-hour tour, Elieser told us about the specific fishing practices enforced in the area, his and other fishermen's personal

anecdotes about what it is like to be a responsible fishermen, and the different areas within the gulf that the fish reproduce and thrive. Similar to our interview with Cama-Pez, the tour was presented in Spanish and our group member who is fluent in the language served as a translator. Because we wanted to provide our findings to the CCT as well as review information shared during the tour for further interpretation, a group member was appointed to take detailed notes of the topics discussed and we asked follow-up questions to information we did not understand or needed further clarification. This tour provided us the opportunity to understand the reasoning behind the CCT's initiative and Costa Rica's current efforts to enforce regulations as well as raise awareness of its importance. Overall, this tour allowed us to obtain valuable insight on the fishing community, ecosystem, and regulations of the Gulf of Nicoya, which fostered a deeper comprehension of responsible fishing and its possible role in creating a local economy.

Improving Cama-Pez's Current Cost Structure

Using information already collected by the CCT and through our interview, we created an income statement that Cama-Pez can use to set their desired profit margin as a constant in order to accurately calculate the suggested selling price of each fish product per kilogram. This income statement provides gross profit data by calculating the difference between the cost of goods sold and direct costs, such as labor and transportation. From there, indirect costs can be subtracted, like operating costs and taxes, from the gross profit to give net profit/loss. Dividing the net profit/loss by revenue will then give Cama-Pez an accurate profit margin percentage. By adjusting these properties of a typical income statement, we tailored it to account for the different types of fish Cama-Pez processes and sells. Standardizing the pricing method will help Cama-Pez expand its market to other enterprises within the Bellbird Biological Corridor region while maintaining a sufficient profit margin. If this task is successful, the CCT can give our income statement to other small businesses within the corridor to use as a standard cost structure, thus helping to strengthen the local economy.

Objective 2: Conduct a market analysis and determine the demand of local products by enterprises in Monteverde

Our second objective was to study the market of enterprises in Monteverde and determine the demand of products. This data was used to determine products that could be locally supplied rather than having enterprises import them from elsewhere in Costa Rica or internationally. To gather information for this objective, our group traveled to Monteverde for nine days to conduct interviews with a range of hotels and restaurants in the town. The CCT helped us facilitate the scheduling by contacting the enterprises themselves. However, it was difficult to schedule interviews due to short notice and the busy schedules of the enterprises during the high season of tourist visits. One setback was that the only road connecting the Monteverde Cloud Forest Reserve, the location in which our group was housed during our stay in the area, and the town was closed for road construction for two of the seven days of our stay. Because of this, we had to cancel all interviews that were scheduled during those days. Due to this setback, our group decided that the best approach for us to interview as many enterprises as possible was to visit enterprises without appointments and ask to have a walk-in interview or schedule one for a later time. Although we faced a few issues with this method, we were able to meet with 20 enterprises out of the 71 total in Monteverde by the end of our trip.

Interviews with Enterprises

Interviews with the enterprises in Monteverde were conducted over the course of five days. The questions were split up into five separate parts: information about the enterprise, consumption of products, responsible fishing, sustainable supply chains, and sustainability in Monteverde. A complete list of the questions asked during the interviews are presented in Appendix C. The first section of the interview provided information about the specific employer so that he or she can be contacted for further reference. The second section included the current and previous product consumption data. This provided general insight on the types and number of products needed in order to determine if there is enough local supply in the area to meet the demand of the enterprises. The third section included questions regarding their knowledge about responsible fishing, if they source products from Cama-Pez and whether they are satisfied with their business if they do, and whether they recommend the use of local fish for another

enterprise. The fourth section acquired information about a new sustainable product chain. This section included determining their interest in developing a sustainable product chain, the barriers they believe the sustainable product chain would face, and their ideas about the types of products that can be produced locally. This provided the necessary information that the CCT will need to consider to expand the connections between local producers and enterprises in Monteverde and possibly introduce additional local products to the area. The last part of the interviews asked about the enterprises' current sustainability practices, if they had any certifications in sustainability, and what they believe is required to make Monteverde the first self-sustainable destination in Costa Rica. This section provided general insight on the enterprise's current sustainable commitments and their insight on how to make Monteverde a more sustainable place. The interviews were arranged with employees who were in charge of the economic decision-making of their enterprise and were able to encourage local products within the enterprise.

Objective 3: Investigate producers in the Bellbird Biological Corridor and the logistics of their business

Our third objective was to identify local producers in the Bellbird Biological Corridor that are in close proximity to Monteverde, determine their ability to support enterprises in Monteverde, and determine their business logistics to which the local producers contribute their success. The CCT has a goal of creating a local economy for Monteverde. This would allow the town to prosper by circulating money within the community and creating new jobs. To achieve this goal, it was necessary to contact and gather information from the local producers within the Bellbird Biological Corridor that are currently selling to enterprises in Monteverde and are benefiting from this business. These producers will later serve as mentors for prospective businesses that could potentially serve the community with new local products. Ideally, the CCT hopes that Monteverde will become self-sustainable and develop into an area that promotes local economy.

Interviews with Producers

Due to project time constraints and difficulty in coordinating transportation to the producers in the corridor, interviews with the current producers that have relationships with

enterprises in Monteverde were conducted over the phone. To do this, we contacted producers from a list of local producers that had been collected through informal interviews with Monteverde Whole Foods, a Monteverde distributor of local products, and Stella's Bakery, a small café in Monteverde. We also obtained the contact for the local producer, Monteverde Natural Cosmetics, through one of our sponsors at the CCT, Alexander González. From this compiled list of local producers, we contacted each producer by phone and were able to conduct interviews a total of four of the producers. The enterprises that were interviewed were the following:

1. Monteverde Natural Cosmetics
2. Café Monteverde
3. La Campesinita
4. Café Cabure

During each interview, we asked questions regarding the success of their business and what they believe to be the reason for this success. Each interview was conducted in a similar manner to that of Cama-Pez and the enterprises in Monteverde. Because the employees from the producers that we interviewed either only spoke Spanish or had difficulty speaking English, each interview was conducted in Spanish. We asked a set of standard, predetermined questions that are located in Appendix D; we also added some if we needed clarification for answers given by the interviewee. The first section of the interviews investigated the types of products the producers specialized in making, the quantities in which they made these products, and how their production may vary throughout the year. This type of information was collected so that enterprises will be able to evaluate producers' ability to meet their product demands. The next section of the interviews discussed the logistics of each producer's business. This was so we could understand the extent of the connections the producers currently have with enterprises in Monteverde, how they initiated these connections, the barriers they may have faced in establishing these connections, and whether they believe distributing to Monteverde is a profitable business. The last section of the interview focused on obtaining recommendations from the producers for new or growing producers in the corridor that wish to sell locally to enterprises in Monteverde. Particularly, we looked to obtain recommendations pertaining to the strategies the producers believed were most efficient to establishing connections with local

enterprises and the product markets they believed would be most profitable. Similar to the interviews we conducted with enterprises in Monteverde, these interviews were administered with the decision-makers of the companies so that we could obtain as detailed and complete information as possible.

Results

In this section, we will be presenting our findings for each objective of our project. We will discuss our assessment of the cost structure of Cama-Pez, our key findings from our market analysis of Monteverde, and our evaluation of suppliers in the Bellbird Biological Corridor. We will examine the results from our methods and the data we collected in each section.

Cost Structure Assessment of Cama-Pez

Our group traveled to Costa de Pájaros to interview Manrique Oviedo, the owner of Cama-Pez. We determined that the original cost analysis method that Cama-Pez used was insufficient to accurately account for all costs associated with the business. Manrique provided us with an Excel workbook that accounted for the costs of his business. The expenses were organized in four different sheets: general costs, transportation fees, salaries, and cost of raw produce. The items for each sheet included details such as item description, cost, frequency, and cost per month. Although Manrique documented all his expenses, he was not accounting for them when estimating the selling prices of his fish products. Cama-Pez's current method for calculating price is to divide his monthly expenses by an estimated quantity, in kilograms, of total product sold each month. He then takes this portion of the monthly expenses and distributes it evenly across each fishing product and the resulting cost is the selling price. The main issue with this method is that the uncertainty of selling the estimated quantity of fish per month is causing Cama-Pez to overcharge for products sold less frequently and under charge for products that are more popular. Without accounting for the frequency of sales, there is no way for Manrique to determine an accurate product price to reach his intended profit margin for his business.

After we had identified the shortcomings of Manrique's current cost structure, he asked us to develop an efficient income statement for his company that is more organized and easy to

use. To do this, we first evaluated his current list of expenditures and made sure he was including all business expenses. This is so he can estimate product selling prices as accurately as possible in order to achieve his desired profit margin. Additionally, Manrique asked that we determine whether some costs he is currently accounting for in his list of expenses are not necessary or are not relevant in product price estimation. After identifying key expenses for his cost structure, we discussed the option for us to incorporate his expenses into an algorithm when estimating his prices. This aspect is important for his cost structure, as Manrique simply had a list of expenses he kept as a company record but did not actually consider them when determining the selling price of fish. At the end of the interview, we concluded that the best approach for constructing an efficient cost analysis tool for Manrique would be to combine our proposed income statement with Manrique's expenditure sheets. This way the income statement would be simple to use and allow Manrique to better visualize his business expense breakdown. The improved business management tools are presented in the "Recommended Changes to Cama-Pez's Current Cost Structure" section within the "Deliverables and Recommendations" chapter.

Market Analysis of Monteverde

We interviewed 20 enterprises in Monteverde to obtain information about the products that were being purchased. These enterprises consisted of a range of hotels, restaurants, and small cafés so that we would have a thorough understanding of the varying demands of the different enterprises in the area. Each enterprise that we interviewed was willing to provide detailed information about the types of products they purchase. We were able to collect extensive data pertaining to the types of products they consume, the quantities of these products they purchase, the providers from which they buy these products, and their associated costs. With this information, we made conclusions about which products could be purchased locally, which products have a demand but no feasible market, and the trends for purchasing responsible fish.

Trends Found Amongst Monteverde Enterprises

Our group determined that the majority of the enterprises we interviewed in Monteverde were passionate about using sustainable methods, such as the use of reusable packaging, recycling, and importing local products whenever feasible to reduce their environmental impact. The majority of the enterprises also indicated that they were open to the idea of learning more

about new sustainable products and local producers available in the corridor through organized community meetings. Of the 20 enterprises that we interviewed, we found that 15 of them purchase at least one product locally. The most common of these individual products and number of enterprises that purchase them can be seen below in Figure 3.

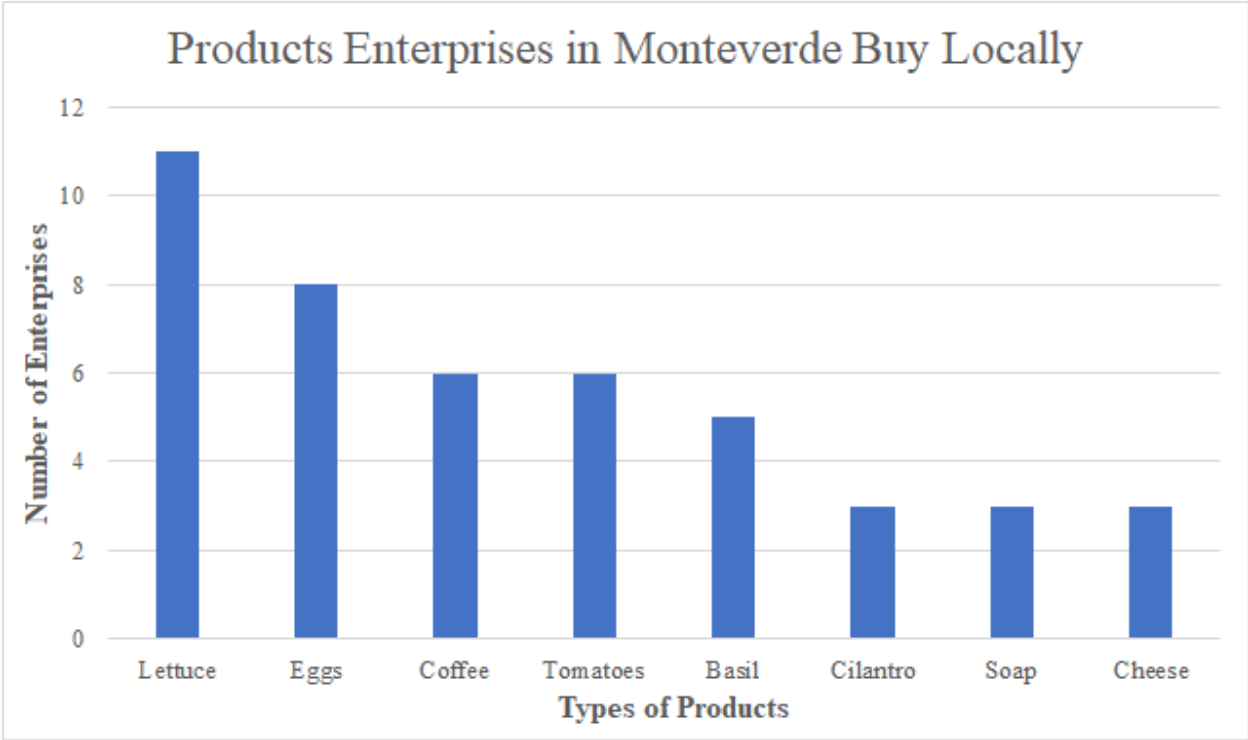


Figure 3: Products Enterprises in Monteverde Purchase Locally

Excluding marine products, this chart shows that vegetables, eggs, and coffee are the most commonly purchased local products among enterprises in Monteverde. Products that were only purchased locally by one enterprises, such as rice, beans, chocolate, cucumber, and silverware, were excluded from the chart for more convenient analysis. Though many enterprises already purchase products locally, the quantity and variety of local products has room to improve. During our interviews in Monteverde, numerous enterprises expressed their issues with the perceived high price of local, sustainable products and their lack of knowledge of available producers in the area, thus hindering their ability to solely purchase and rely on local and sustainable products for their business. Figure 4 below presents the average response for reasons why these enterprises do not purchase select products locally.



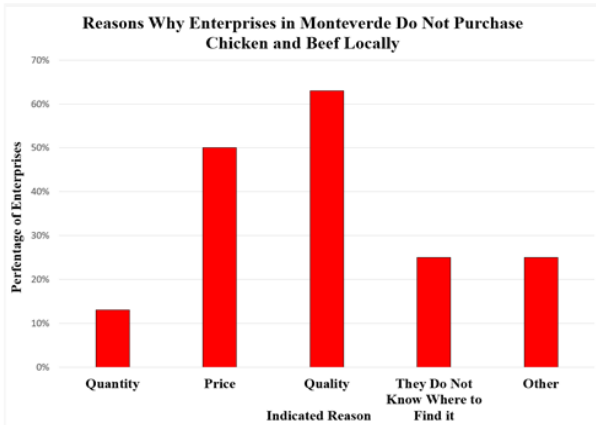
Figure 4: Reasons Why Enterprises in Monteverde Do Not Purchase Products from Local Producers.

The majority of the enterprises we interviewed believed local products were significantly more expensive and even if they were willing to purchase products locally, some did not know which producers in the corridor could supply their demand. Out of the total number of enterprises interviewed, 53% believed that products in Monteverde were overpriced and it would be a burden on their business to buy locally. In reality, we have found that businesses that purchase a wide variety of local products, such as Hotel Belmar and Cabinas Nuestra Kasa, are actually spending less than those importing the same products. This could be due to the significantly reduced transportation costs or because local connections do not require the intermediaries that imported products do, thus resulting in the inflation of the imported produce prices. Prices for responsible seafood from the Gulf of Nicoya have also been found to be lower than standard market fish. For example, squid was observed in interviews to cost approximately ₡3,800 per kilogram from responsible fishing companies while it can cost from ₡3,000 up to ₡25,000 from non-responsible distributors elsewhere. It is also important to note that 30% of enterprises felt that there was not enough product in the area to supply some of their product needs. It was also

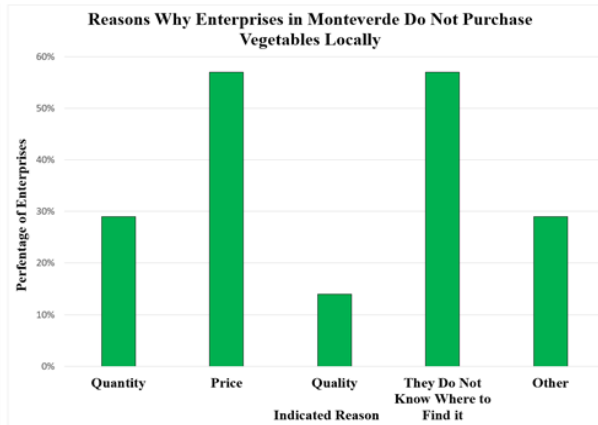
mentioned that it is not reasonable to buy certain products locally, like those sold in bulk, since most local producers do not have the means to produce large quantities of product. However, Shannon Smith from Taco Taco resolved this issue for her business by purchasing her products from several small producers instead of one so that they would not be overburdened by her company's large product demand. In addition to this, Shannon runs specials on seasonal products instead of importing them so that she can keep a consistent menu. However, even if this issue were to be resolved among other enterprises, the quality of these local products may also need to be improved, as 21% of the enterprises, primarily gourmet restaurants, claimed they believed the quality did not meet their standards.

Although there were consistent reasons why enterprises choose to import products rather than using local suppliers, we also found product-specific trends. Of the products that enterprises do not purchase locally, we found that chicken, beef, seafood, vegetables and fruit were amongst the most common products to be imported. The reasons why enterprises in Monteverde choose to import these products are depicted in Figure 5.

5. A



5. B



5. C



5. D



Figure 5: Reasons Why Enterprises in Monteverde Do Not Buy Specific Products Locally.

*Products include chicken and beef (5.A), vegetables (5.B), seafood (5.C), and fruit (5.D).

As shown in Figure 5.A, more than 60% of the enterprises who purchase chicken and beef indicated that they do not purchase these products locally due to the lower quality of the produce available in the corridor relative to their current suppliers. In addition to this, 50% of the enterprises said that they do not buy these products in the corridor because of their price. Figure 5.B shows that many enterprises import certain vegetables, such as eggplant, zucchini, and tomatoes, because of their high prices in the corridor. The majority of enterprises also said that they do not know where to buy vegetables within the corridor. Seen in Figure 5.C, 40% of the enterprises do not purchase seafood locally due to high prices. There are many reasons why fruits are not purchased locally. However, as shown in Figure 5.D, the majority of the enterprises indicated that they have other reasons for not purchasing these fruit products locally apart from price, quantity, or quality issues. These enterprises believe there are no local producers available

in the corridor for this produce; they believe that the incompatible climate in the corridor makes it difficult to cultivate certain types of fruits. For example, Richard Garro from Hotel Belmar stated that the reason why pineapples are not purchased by enterprises in the area is because organic and sustainable pineapples are very small in size and take one year to two years to grow, while imported pineapples only take six months to grow and are much larger when they are ripe. Many of the reasons enterprises are not buying locally stem from the lack of knowledge of producers in the corridor. With the subsequent information, enterprise may find that purchasing locally is a better option.

During our interviews with the enterprises in Monteverde, we noticed that we were often receiving conflicting responses between enterprises regarding their ability to purchase select products locally due to producer availability and whether prices for local products were unreasonably high relative to imported products. In general, we found that enterprises who had more connection with local producers and were more knowledgeable about the sales market between local and non-local producers had a more positive outlook on purchasing products from local producers and strongly recommended that Monteverde organize community meetings to help businesses final local connections and introduce more sustainable practices. When we mentioned this suggestion to other enterprises who were less knowledgeable about the local product industry, we found that 95% of them were open to this idea. Federico Liton from Restaurante Morphos was particularly interested in this idea and further suggested that prices of products sold by local producers also be presented during these meetings. This would be very beneficial for the enterprises in Monteverde whose main concern about importing products locally is that they are too expensive, as they would then be able to directly compare the actual prices of local produce to those of the same products they purchase from non-local producers. This would then allow the enterprises to be able to make an educated decision regarding whether it is feasible for their business to buy more products.

Knowledge of Responsible Fishing

After analyzing a sample size of 20 enterprises, we found that of the 15 restaurants and hotels who indicated they sell fish produce, 73% believe they know what responsible fishing is and 12 of them claim they currently purchase fish produce from responsible fishermen. Figure 6

below presents a bar graph representing the most popular responsible marine products that these enterprises are purchasing.

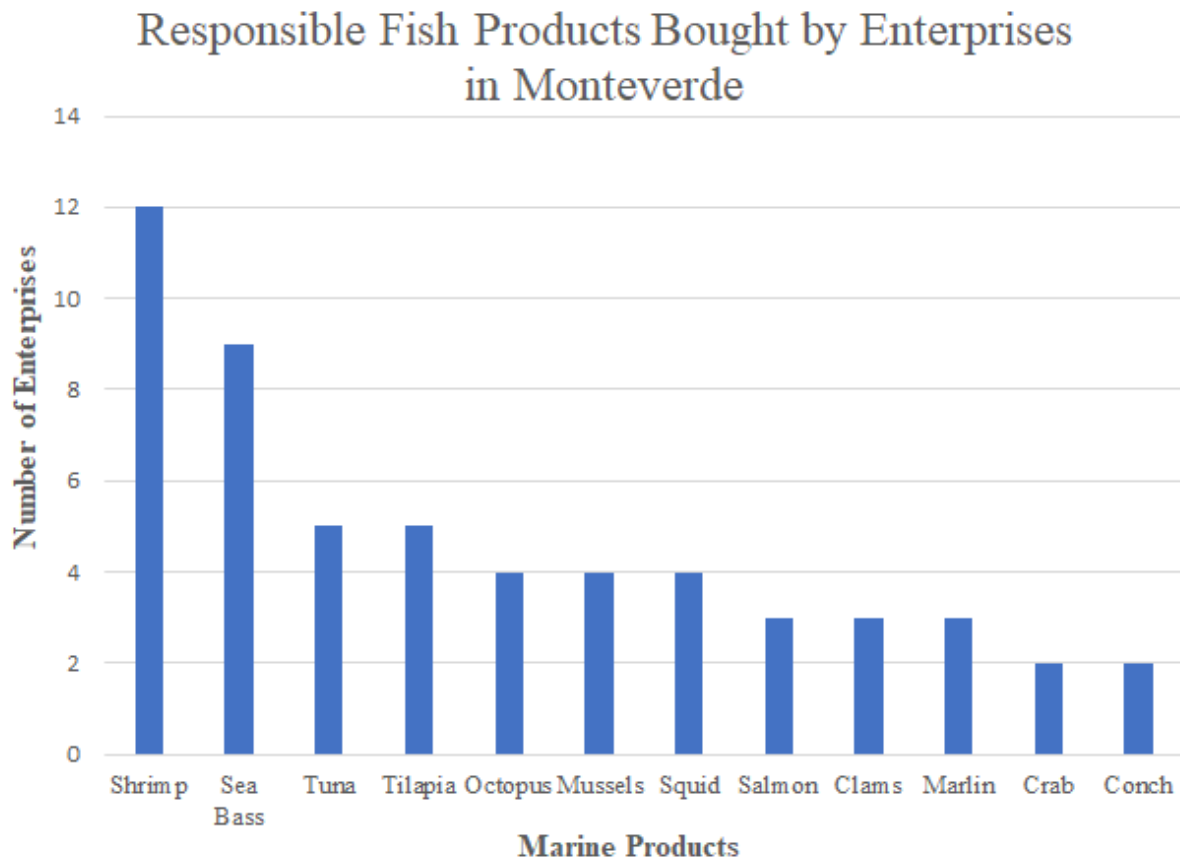


Figure 6: Responsible Fishing Products Enterprises Purchase in Monteverde

As shown on this graph, the most common responsible marine product bought by the enterprises is shrimp with all 12 enterprises purchasing them, followed by sea bass with nine of the 12 enterprises. Other marine products that the enterprises buy responsibly include tilapia and tuna with five of the enterprises, octopus, squid, and mussels with four of the enterprises, etcetera. As depicted by the graph in Figure 6, there is a diverse demand for responsible marine products by enterprises in Monteverde. However, although there was an observed similarity between the types of fish bought by the 12 enterprises, we noticed that there was a diverse group of suppliers. Between these enterprises, they claimed they bought responsible fish from a total of 14 different suppliers. This appeared unusual, as Alexander González from the CCT had previously told us that the CCT identified that there were only two to three responsible fish vendors, including Cama-Pez, in the responsible fishing area in Costa de Pájaros. This indicates that some of the

enterprises are actually not purchasing responsible fish as they had claimed during our interviews or that there are misunderstandings about what responsible fishing is. The reason for this is likely because these enterprises assumed that they are purchasing responsible fish products since there are laws in Costa Rica that restrict and regulate fishing practices, but the providers from which they buy their fish do not actually fish in the designated responsible fishing areas and thus do not sell certified responsibly-caught fish. This misconception between what kind of fishing practices are required for responsible fishing products and the definition of responsible fishing shows that there is currently not enough awareness and education about responsible fishing among enterprises in Monteverde.

The remaining three enterprises that sell fish produce do not purchase these products from responsible fishermen. These businesses stated that they do not buy responsible fish products because they believe the cost of these goods would be higher than if they were to purchase fish elsewhere, similar to the misconception that local products are more expensive than non-local products. Other enterprises also believed that the local supply of fish would not be able to fulfill the demand of the larger businesses. Because of this, these businesses often import large amounts of fish from hatcheries or larger distributors.

Of the 15 enterprises that purchase marine products, three of these businesses purchase fish from Cama-Pez. All three were very satisfied with Cama-Pez's service and mentioned the prices were much lower than other competitors. Shannon Smith from Taco Taco particularly expressed her contentment with Cama-Pez's professionalism and dedication to offering high quality produce by explaining how the company offered a unique cut of fish that was larger than the typical cut and when served would span the entire length of the tacos, allowing for minimal waste of the product. In addition to this, Richard Garro from Hotel Belmar said that Manrique Oviedo, the owner of Cama-Pez, talks directly with the chef every week and lets them know what is in season, what is not in season, as well as what products will be available the following week. Richard explained that he was very satisfied with this service and it was one of the reasons why he chose to source their fish products from Cama-Pez. This open line of communication is a prime example of what businesses need from sustainable distributors.

Local Purchasing Practices

During interviews, each enterprise was asked to name products they believed could be produced locally and they would be interested in purchasing. Nine of the enterprises we interviewed said they would be interested in purchasing local vegetables, three said they believe fruits should be produced, and three suggested to increase the cultivation of livestock for beef and lamb. The remaining products consisted of chicken, tilapia, cleaning and beauty products, clothing, mushrooms, eggs, butter, and multiple-use sustainable packaging. One of the interesting trends we observed was the number of restaurants and hotels that wanted an increase of vegetable production. During our interviews, we found that seven of the restaurants and hotels already purchased local vegetables from a local producer named Orlando Trejos. It is possible that the nine hotels and restaurants that were not purchasing the vegetables locally did not have knowledge of this producer, or there is a greater demand for product than there is supply in the area. We were also informed that some products cannot be produced in the area, such as certain fruits. This is because Monteverde's climate significantly differs from the rest of Costa Rica's due to its high altitude. These conditions are not suitable for the development of some fruits, such as mangos and pineapples, and thus make it difficult for them to be grown locally.

Evaluation of Suppliers in the Bellbird Biological Corridor

We conducted phone interviews with four producers in the Bellbird Biological Corridor to determine the logistics of their businesses and their ability to support enterprises in Monteverde. Although we were only able to gather information from a small sample size of producers due to project time constraints, the limited availability of the producers to meet with us, and the lack of willingness of some producers to provide information about their business's over the phone, we were still able obtain valuable advice for growing local producers as well as useful information regarding the products they sell to promote to enterprises in Monteverde.

From these interviews, we found that all four producers already have connections with enterprises in Monteverde and some even have connections elsewhere. Of the four producers, two primarily focus on selling their products to enterprises in Monteverde with 90% to 100% of their sales being focused in the area. The other two producers have additional outreach with international companies and have less connections with enterprises in Monteverde, consisting of

only 20% to 50% of their sales. Between these two companies, there are mixed reviews regarding how profits differ between selling products locally versus internationally. One company claimed that there is no difference when selling internationally while the other said that they are able to lower their prices locally due to the decrease in transportation and intermediary handling fees. There needs to be a larger sample size in order to determine the trends on this topic.

All four enterprises were satisfied with selling their products locally in Monteverde. They particularly liked how it allowed them to have more personal relations with the enterprises they supplied and that it was an opportunity to incentivize the localization of the economy. One company said that supplying products locally allowed them to sell to the enterprises directly rather than use an intermediary. This allowed them to avoid extra fees in transportation or handling that would cause their product to be more expensive.

Three of the four producers had to independently establish connections with enterprises in Monteverde. They did this by setting up their products in fairs in Monteverde, establishing their own distribution system, performing a sales analysis to determine the local demand for their products, and through personal connections and knowledge of the area. In addition to sharing their startup tactics, the businesses also provided specific suggestions for growing local producers that want to distribute to Monteverde. First, they recommended that growing producers establish a reliable means of transportation to the area in order to physically and consistently deliver their products to enterprises in the area. The other suggestion was to understand the market of their product that is currently being sold and the enterprises they should establish relations with based on product demand. The producers then gave suggestions on how growing producers can initiate their relations with enterprises in Monteverde. One suggestion was to conduct a market analysis of the area in order to identify the enterprises with which they could have potential relationships. Another suggestion was to look for strategic alliances with a group of enterprises and be knowledgeable on how to negotiate with these businesses so that a distribution plan that is beneficial for both businesses can be implemented. These suggestions will be helpful starting points for the growing producers within the Bellbird Biological Corridor area and will be the starting steps needed to successfully initiate relations with Monteverde enterprises.

Lastly, we discussed the several challenges the producers faced throughout the growth of their businesses. The most common challenges mentioned during our interviews included: climate change hindering the growth of their product, having insufficient equipment and facilities to grow and support their business, and finding a supplier for packaging and raw materials. These are many difficulties that businesses in the Monteverde area may face throughout their existence, so it is necessary that they overcome these challenges and continuously improve to prevent these challenges from majorly affecting their business. Overall, the producers interviewed believed it is a profitable market to sell products to enterprises in Monteverde and would encourage other producers in the corridor area to establish relations in Monteverde as well.

Deliverables and Recommendations

In this section, we will discuss the deliverables and recommendations we have produced after analyzing the results from each objective. We will present the recommended changes we proposed for Cama-Pez's current cost structure, our suggestions for developing a sustainable market based on the needs of enterprises in Monteverde, and future work that can be done to identify local producers in the corridor and establish connections between them and enterprises in Monteverde. The deliverables are for enterprises in Monteverde and producers in the Bellbird Biological Corridor to review and utilize for their businesses and the recommendations are for the CCT to further develop our project in the future.

Recommended Changes to Cama-Pez's Current Cost Structure

To make it easiest for Manrique Oviedo to use our business tool to calculate his profits for Cama-Pez, we decided it would be most beneficial to combine his current cost structure with our proposed income statement. To do so, it was necessary for us to adjust the current cost structure so that it was capable of processing all the expenses associated with the enterprise and was applicable for each specific type of fish product they sell.

Organizing Cama-Pez’s Company Expenses

Manrique’s Excel workbook consisted of four different sheets: general costs, transportation fees, salaries, and cost of raw produce. In order to make these expenses more organized and easier to analyze, we combined these four sheets into one large list comprised of all of Cama-Pez’s company expenses. A portion of this resulting list is shown below in Table 2.

Table 2: Breakdown of Individual Business Costs Spent Monthly by Cama-Pez
 *To protect confidentiality with Cama-Pez, numerical values on this chart were changed and do not accurately represent those actually used by the company

Artículo	Costo	Cantidad	Costo Total	Frecuencia	Costo Total por Mes	Categorías de Costo
Building Rent	€ 190,000.00	1	€ 190,000.00	1 año	€ 15,833.33	Arriendo - Rent
Ryan	€ 80,000.00	1	€ 80,000.00	1 mes	€ 80,000.00	Cargos Sociales Compartido - Medical Insurance
Jim	€ 40,000.00	1	€ 40,000.00	1 mes	€ 40,000.00	Cargos Sociales Compartido - Medical Insurance
Jill	€ 16,000.00	1	€ 16,000.00	1 mes	€ 16,000.00	Cargos Sociales Compartido - Medical Insurance
Kevin	€ 25,000.00	1	€ 25,000.00	1 mes	€ 25,000.00	Cargos Sociales Compartido - Medical Insurance
Melissa	€ 7,500.00	1	€ 7,500.00	1 mes	€ 7,500.00	Cargos Sociales Compartido - Medical Insurance
Chaira	€ 15,000.00	1	€ 15,000.00	1.5 año	€ 833.33	Equipo - Equipment
Congelador	€ 12,000.00	2	€ 24,000.00	5 años	€ 400.00	Equipo - Equipment
maquina congelacion depreciacion	€ 150,000.00	1	€ 150,000.00	5 años	€ 2,500.00	Equipo - Equipment
Cuchillos	€ 6,000.00	3	€ 18,000.00	1 año	€ 1,500.00	Equipo - Equipment
Descamador	€ 4,000.00	1	€ 4,000.00	2 años	€ 166.67	Equipo - Equipment
Empaque de Tapa Maquina de Vacío Grande	€ 40,000.00	3	€ 120,000.00	1.5 año	€ 6,666.67	Equipo - Equipment
Maquina de vacío Grande	€ 1,500,000.00	1	€ 1,500,000.00	5 años	€ 25,000.00	Equipo - Equipment
Maquina Selladora	€ 30,000.00	1	€ 30,000.00	1.5 año	€ 1,666.67	Equipo - Equipment
Mesas	€ 180,000.00	1	€ 180,000.00	15 años	€ 1,000.00	Equipo - Equipment
Palanganas de acero	€ 7,000.00	2	€ 14,000.00	5 años	€ 233.33	Equipo - Equipment
Piedra	€ 4,500.00	1	€ 4,500.00	7 meses	€ 642.86	Equipo - Equipment
Pistolas de Agua	€ 2,000.00	3	€ 6,000.00	3 meses	€ 2,000.00	Equipo - Equipment
Plafon Maquina de Vacío Grande	€ 15,000.00	2	€ 30,000.00	1.5 año	€ 1,666.67	Equipo - Equipment
Resistencia Maquina de Vacío Grande	€ 28,000.00	2	€ 56,000.00	1 año	€ 4,666.67	Equipo - Equipment
Romana troceo	€ 90,000.00	1	€ 90,000.00	5 años	€ 1,500.00	Equipo - Equipment
Pago Contador	€ 210,000.00	1	€ 210,000.00	1 año	€ 17,500.00	Equipo - Equipment
Permiso INCOPECA Compart	€ 90,000.00	1	€ 90,000.00	1 año	€ 7,500.00	Honorarios Legales - Legal Fees
Permiso SENASA Compart	€ 13,000.00	1	€ 13,000.00	1 año	€ 1,083.33	Honorarios Legales - Legal Fees
Impuestos	€ 830,000.00	1	€ 830,000.00	1 año	€ 69,166.67	Honorarios Legales - Legal Fees
Baterías termómetro-Control Aire	€ 1,800.00	1	€ 1,800.00	3 meses	€ 600.00	Mantenimiento - Maintenance
Cambio de Aceite Maquina de Vacío Grande	€ 18,000.00	1	€ 18,000.00	1 año	€ 1,500.00	Mantenimiento - Maintenance
Cambio de Aceite Maquina de Vacío Pequeña	€ 18,000.00	1	€ 18,000.00	1 año	€ 1,500.00	Mantenimiento - Maintenance
Mantenimiento Aires	€ 30,000.00	1	€ 30,000.00	1 año	€ 2,500.00	Mantenimiento - Maintenance
Mantenimiento romana	€ 35,000.00	1	€ 35,000.00	8 meses	€ 4,375.00	Mantenimiento - Maintenance
Cloro Granulado	€ 3,000.00	2	€ 6,000.00	1 mes	€ 6,000.00	Procedimiento - Processing
Alcohol gel	€ 4,000.00	1	€ 4,000.00	1 mes	€ 4,000.00	Provisiones - Supplies
Bolsa Gruesa 9x14	€ 1,850.00	15	€ 27,750.00	1 mes	€ 27,750.00	Provisiones - Supplies
Bolsas de vacío 7x14	€ 1,850.00	20	€ 37,000.00	1 mes	€ 37,000.00	Provisiones - Supplies
Bolsas de vacío 8x14	€ 1,000.00	35	€ 35,000.00	1 mes	€ 35,000.00	Provisiones - Supplies
Bolsa 6X8 Guesa	€ 2,000.00	20	€ 40,000.00	1 mes	€ 40,000.00	Provisiones - Supplies
Bolsas de Vacío 8x25	€ 1,500.00	5	€ 7,500.00	3 meses	€ 2,500.00	Provisiones - Supplies
Bolsas 17X25 gruesas	€ 2,000.00	10	€ 20,000.00	1 Mes	€ 20,000.00	Provisiones - Supplies

This list is broken down into columns to represent the name of each product, the cost per product, the quantity purchased, the total cost of the product, the utility life of the product, and the calculated cost per month of the product, respectively from left to right. By consolidating the company expenses into one sheet, we were able to simplify the organization of Cama-Pez’s expenses so that Manrique only needs to input the information required by the appropriate columns for a new expense on the bottom of the sheet, and then categorize it with the far-right column. This last column was edited to contain a drop-down list that can be used to split up the items by their perspective categories. The selected categories for this worksheet are the

following: medical insurance, insurance, legal fees, equipment, supplies processing, transportation, utilities, advertising, rent, maintenance, salaries, and miscellaneous. These selected categories were then linked with conditional formatting so that each category had an assigned color. For example, every time the “Equipo - Equipment” category is selected for an expense, the category box is highlighted light orange. This is to make category groups more visually distinct from one another. Once a category is assigned to each expense, Manrique can then sort the rows by category to see the breakdown of his expenditures. The purpose of this table is to allow Manrique and other employees of Cama-Pez to enter the individual costs of each item involved in the purchase and/or processing of fish. We wanted to ensure that the table was well-organized and easy to use and by grouping products into categories, Cama-Pez will have a clear visual of the breakdown of the type of costs they are incurring to run their business as well as have a rough estimate of how much money is spent on different aspects of the business.

Producing a Visual Cost Breakdown of Cama-Pez’s Expenses

Once each individual expense was organized into categories, our group then created a chart for Cama-Pez to use that measures the breakdown of the total business expenses spent per month in each category. An example of the chart presenting the breakdown of business expenses is shown below in Figure 7.

Delgose de Costos - Expense Breakdown

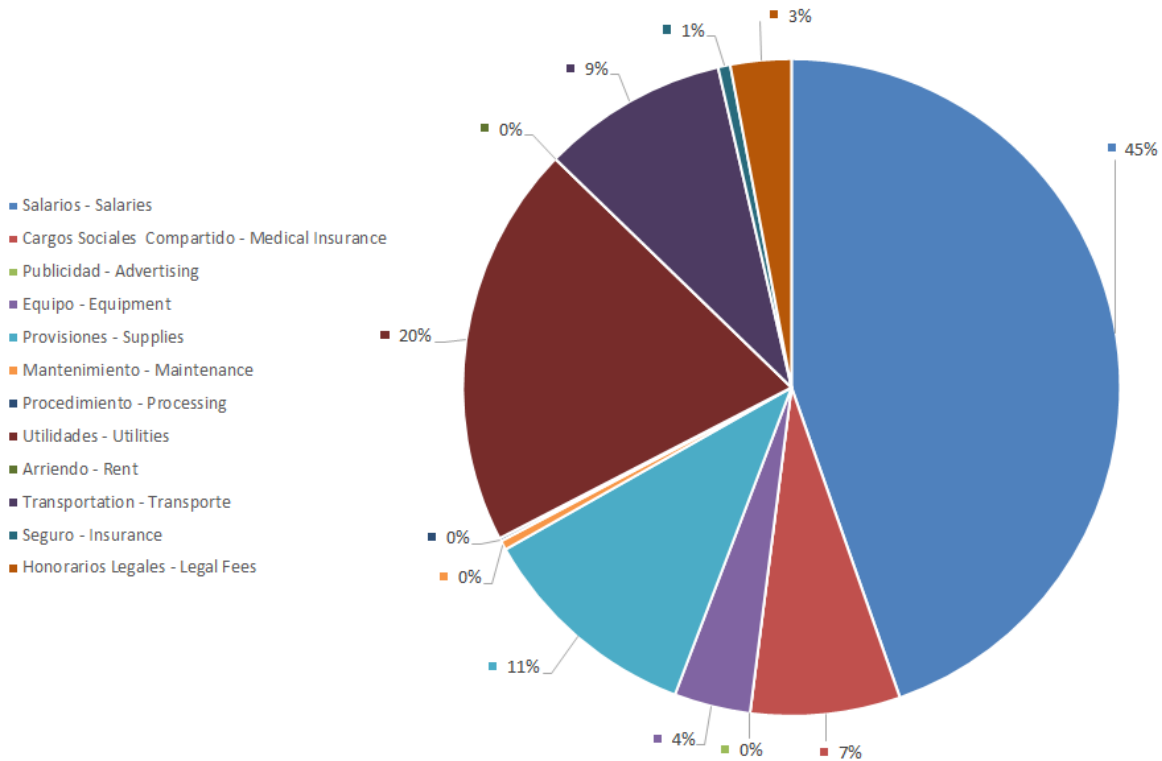


Figure 7: Cama-Pez Business Costs Breakdown by Categories

*To protect confidentiality with Cama-Pez, percentages shown in this graph were changed and do not accurately represent costs spent by the company

This chart represents the total expenses spent per month by Cama-Pez. Each portion size, or slice, is proportionate to and represents the percentage of expenses designated towards each specific category relative to the overall expense per month. Expenses that account for less than one percent of the total expenses spent per month are represented as zero percent on the chart. This chart will allow Manrique to easily visualize his total costs and cost percentage being spent towards each category each month. This can be helpful for Manrique if he chooses to manage his budget and adjust how much of his overall expense he dedicates to each cost category.

Fish Produce Reference Table for Cama-Pez

During our interview with Manrique, he also provided us with a list of the different types of fish he typically purchases from responsible fishermen in Costa de Pájaros as well as the prices associated with them. This list also provided information regarding the specifications of the type of cut for each fish since the price varies depending on the part of the fish that is

purchased. A table including a portion of the list of fish produce bought by Cama-Pez and their corresponding prices is shown below in Table 3.

Table 3: Cost of Fish Produce Purchased from Responsible Fishermen per Kilo

*To protect confidentiality with Cama-Pez, monetary and percent values were changed and do not accurately represent those used by the company.

Pescados	Precio (kilo)	% Merma	Subtotal (kilo)
Porcion Corvina Reina	€ 4,500.00	45%	€ 10,000.00
Filet Corvina Reina	€ 4,000.00	53%	€ 7,547.17
Filet Corvina P:P	€ 2,500.00	54%	€ 4,629.63
Filet Corvina Clase	€ 1,500.00	52%	€ 2,884.62
Filet Corvina Clase Piel	€ 1,500.00	53%	€ 2,830.19
Filet Corvina Combinado Camarones	€ 1,250.00	52%	€ 2,403.85
Filet Pargo Rojo Piel	€ 1,500.00	45%	€ 3,333.33
Picadura Corvina CL	€ 1,700.00	53%	€ 3,207.55
Porciones de Berrugate	€ 1,800.00	32%	€ 5,625.00
Porciones de Bagre	€ 1,300.00	32%	€ 4,062.50
Picadura Bagre	€ 1,300.00	50%	€ 2,600.00
Filet Berrugate	€ 1,600.00	45%	€ 3,555.56
Filet Bagre	€ 1,300.00	50%	€ 2,600.00
Filet Volador	€ 1,100.00	48%	€ 2,291.67
Filet Candado	€ 1,800.00	54%	€ 3,333.33
Palitos Bag Volador	€ 1,100.00	40%	€ 2,750.00
Fajitas Bag Volador Matequilla	€ 1,100.00	40%	€ 2,750.00
Filet Porcion Macarela Piel	€ 1,400.00	56%	€ 2,500.00
Chuleta Macarela	€ 1,400.00	50%	€ 2,800.00

This table serves as a reference for the initial price of fish and final sale price that is incorporated into Cama-Pez's income statement. This table is currently used by Manrique to determine what percentage of the total fish is useful in certain types of cuts (% Merma) and how this transfers from initial cost [Precio (kilo)] to final cost [Subtotal (kilo)]. Once fish are purchased by the fishermen, they need to be processed before being sold to the receiving enterprises. The method of processing is dependent on the type of cut the receiving enterprise desires, but always includes the removal of each fish's head, spine, and organs so that only the meat of the fish is remaining. Since only a portion of the fish is usable to sell to enterprises, Manrique uses this table to adjust the purchase price per kilo to account for the amount of fish actually being sold after processing. Because this table is essential for Manrique to quickly and efficiently be able to determine the

true selling price of each fish product, it is included as a separate worksheet in our proposed income statement model for Cama-Pez to use as a reference.

A Tool for the Final Income Statement

Based on the business expenses and product pricing information provided by Manrique in Table 2 and Table 3, our group structured two customized income statements that will allow Cama-Pez to better understand the economic breakdown of their business. Our proposed price dependent income statement will allow Manrique to use current product prices to accurately estimate his profit margin is shown below in Table 4.

Table 4: Proposed Price Dependent Income Statement

*To protect confidentiality with Cama-Pez, monetary and percent values were changed and do not accurately represent those used by the company.

Precio Dependiente- Price Dependent		Month 1
Precio por Kilogramo - Price per Kilogram	€	11,500.00
Kilogramos - Kilograms		150
Subtotal Costos Mensuales del Pescado		
Precio - COGS (kilo)	€	1,500,000.00
% Merma		45.00%
Precio Mínimo de Venta - Minimum Selling Price (kilo)	€	10,000.00
Beneficio Bruto - Gross Profit	€	225,000.00
Margen bruto % - Gross Margin %		13.0%
Los Gastos Mensuales de Explotación - Monthly Operating Expenses (Indirect)		
Salarios - Salaries	€	930,555.56
Cargos Sociales Compartido - Medical Insurance	€	168,500.00
Publicidad - Advertising	€	-
Equipo - Equipment	€	67,942.86
Provisiones - Supplies	€	295,322.22
Mantenimiento - Maintenance	€	10,475.00
Procedimiento - Processing	€	6,000.00
Utilidades - Utilities	€	440,290.91
Arriendo - Rent	€	15,833.33
Transporte - Transportation	€	238,138.89
Seguro - Insurance	€	8,880.95
Honorarios Legales - Legal Fees	€	77,750.00
Otro - Miscelaneous	€	-
Gastos Totales de Operación Mensuales - Total Monthly Operating Expenses		
	€	2,259,689.72
Porcentaje de ventas es este tipo de pescado - Percentage of sales is this type of fish		25%
Porcentaje de ventas es este lugar - Percentage of sales is this place		20%
Porción del Costo de Operación Usado - Portion of Operating Cost used	€	112,984.49
Ingresos - Revenue	€	1,725,000.00
Beneficio Neto - Net Profit	€	112,015.51
Margen de Beneficio - Profit Margin %		6.5%

This table requires Manrique to input information regarding the current price per kilogram at which a particular fish is being sold to consumers along with the quantity in kilograms sold per month. Through our interview, we found that the cost of buying fish per kilogram has to be adjusted depending upon the percentage of raw produce that is sellable after cleaning and processing. In the second section, the minimum selling price is calculated. This is the cost Manrique would have to sell per kilogram before indirect costs are added. This value is taken from Table 3 and used as a direct cost. Indirect costs are first categorized in Table 2 and then are transferred automatically by a macro-coding program that we developed when the button “Update Expenses” is pressed. This produces a summation expense for each indirect cost category. The indirect expenses are then divided toward each type of fish being sold at each distribution site. This is based on the percentage of that type of fish sold relative to the total amount of fish produce sold in a month. An estimated profit margin is then produced by factoring in these percentages towards the total expenses and selling price.

Similarly, a second customized income statement was also designed for Manrique to calculate the accurate selling price of fish products in order to achieve a desired profit margin. This constructed income statement is shown below in Table 5.

Table 5: Proposed Profit Margin Dependent Income Statement

*To protect confidentiality with Cama-Pez, monetary and percent values were changed and do not accurately represent those used by the company.

Margen de Beneficio Dependiente - Profit Margin Dependent		Month 1
Margen de Beneficio - Profit Margin %		7%
Kilogramos - Kilograms		150
Subtotal Costos Mensuales del Pescado		
Precio - COGS (kilo)		€ 4,500.00
% Merma		45%
Precio Mínimo de Venta - Minimum Selling Price (kilo)		€ 10,000.00
Beneficio Bruto - Gross Profit		€ 225,117.10
Margen bruto % - Gross Margin %		13.0%
Los Gastos Mensuales de Explotación - Monthly Operating Expenses (Indirect)		
Salarios - Salaries		€ 930,555.56
Cargos Sociales Compartido - Medical Insurance		€ 168,500.00
Publicidad - Advertising		€ -
Equipo - Equipment		€ 67,942.86
Provisiones - Supplies		€ 295,322.22
Mantenimiento - Maintenance		€ 10,475.00
Procedimiento - Processing		€ 6,000.00
Utilidades - Utilities		€ 440,290.91
Arriendo - Rent		€ 15,833.33
Transporte - Transportation		€ 238,138.89
Seguro - Insurance		€ 8,880.95
Honorarios Legales - Legal Fees	Actualiza	€ 77,750.00
Otro - Miscellaneous		€ -
Gastos Totales de Operación - Total Operating Expenses		
		€ 2,259,689.72
Porcentaje de ventas es este tipo de pescado - Percentage of sales is this type of fish		25%
Porcentaje de ventas es este lugar - Percentage of sales is this place		20%
Porción del Costo de Operación Usado - Portion of Operating Cost used		€ 112,984.49
Ingresos - Revenue		€ 1,725,117.10
Beneficio Neto - Net Profit		€ 112,132.61
Precio por Kilogram - Price per Kilogram		€ 11,500.78

This chart uses calculations very similar to those of the income statement presented in Table 4. The only difference between the two is that the supplementary information required in Table 5 uses a desired profit margin to output a respective selling price for specific produce. By utilizing these two income statement models, Manrique will easily and efficiently be able to determine whether he is currently earning his desired product profit of 30% and/or estimate the selling price of each fish product to ensure that he does meet his desired profit margin.

Through collaboration with Cama-Pez, we were able to finalize a tool that will help facilitate economic decision-making among small businesses in the corridor in efforts to expand their market. Some potential issues that we foresee in the future with our cost structure pertain to Manrique's lack of understanding of how the tool works. In the case that Manrique wants to add expenses to the Excel sheet, it would be necessary for him to code the expense to be

automatically added into the income statement. This may be difficult since sufficient Excel knowledge is necessary to add a dropdown arrow that will assign a category to the designated expense. However, these issues will be solved by providing Manrique explicit instructions on how to run the program and manage the Excel sheet in the case that any issue may arise. These same instructions, as well as instructions on how to use the Excel workbook, will be supplied to other enterprises who are also interested in incorporating this model into their business. The ability to adjust this tool will also allow other business to adopt the model. This tool will be malleable to fit the needs of other enterprises as well as Cama-Pez. Therefore, we advise that the CCT passes along both constructed income statement models to enterprises in Monteverde and other producers in the Bellbird Biological Corridor region so that they may implement this model into their decision-making efforts and utilize it to ensure the success of their business.

Developing a Local and Sustainable Market

After analyzing the data collected during our interviews with a sample of 20 restaurants and hotels in Monteverde, we developed recommendations to help increase the use of local and sustainable products in the area. We consider that the first and most important step is to educate businesses in Monteverde about the sustainable practices they can adopt. We believe that more businesses will utilize local sustainable products if there is a list of local suppliers available in the Bellbird Biological Corridor from which they can select producers to utilize for their business. Some enterprises believe that local producers cannot supply a sufficient amount of product for their business. In this case, we recommend that the enterprises utilize a network of smaller local producers to divide the demand and not overburden a single supplier. This method will also decrease the chances of losing product quality due to the high demand of a single supplier. This can be achieved through the list of producers we provide to the CCT.

It is important for the CCT to target the enterprises who do not currently utilize local, sustainable products, responsible fish, or sustainable methods within their business. An effective solution would be to share a list of current sustainable practices that other enterprises in Monteverde are utilizing successfully so that others can incorporate these practices in their businesses as well. In order to persuade enterprises to buy responsible fish and other local sustainable products, we believe it would be beneficial if the CCT gave enterprises that are

willing to become more sustainable a price incentive to switch providers. This could either be done by offering discount prices for the products or offering a comparative price list of the products from non-sustainable enterprises versus the local, sustainable enterprises to ensure that the sustainable products are being sold at a competitive price.

We also recommend that the CCT further promote Cama-Pez to the enterprises in Monteverde. As of now, the majority of businesses in Monteverde have not heard of the company. We believe that other businesses would be more likely to utilize the distributor if information about the company were more available. Cama-Pez has had positive reviews from its buyers in terms of service, competitive prices, and product quality and these experiences would be beneficial for other enterprises to hear. By promoting Cama-Pez and businesses alike, we can persuade more companies in Monteverde to supply their kitchens with certified responsible fish as well as help Cama-Pez grow as a business.

After being informed of the benefits of an open line of communication between Cama-Pez and businesses, we recommend this method to be utilized with every enterprise and their local suppliers. This communication provides enterprises with information about the supplier's production methods as well as product availability. One effective method is used by Taco Taco; they tailor their menu options based on availability of products and have specials when their providers have surplus of a product that is not typically supplied year-round. Compromise is reached between businesses and suppliers as an effect of an open line of communication.

We realize that not every restaurant will be willing to source their products locally and be sustainable. As of now, we believe it would be beneficial to provide the community with a list of producers from which they can select and establish connections as well as to provide education about the importance of sustainability not only in Monteverde, but worldwide. The goal of increasing environmental education is to start a movement in the area and encourage the less sustainable enterprises to buy products locally wherever possible as well as incorporate more sustainable methods into their business.

Identifying Local Producers

Our group was able to complete phone interviews with four producers in the Bellbird Biological Corridor. This small sample size was due to the limited time we had to complete our project. For this reason, we suggest that the CCT continue conducting interviews from the list of producers we have compiled through the informal interviews with Stella's Bakery and Monteverde Whole Foods. We also recommend that the CCT work towards identifying additional producers in the corridor and establishing relationships with them.

We recommend that the information we gathered from our interviews and those later conducted by the CCT is compiled and distributed to other producers in the corridor to serve as a guide for their businesses. This will provide them with information regarding how to be successful and expand their business into Monteverde, how to establish more local connections, and any challenges they should prepare for with their business when distributing locally. We also suggest that the results and conclusions gathered from this investigation are redirected back to the producers that were interviewed so that they can understand how the information they provided during interviews is being used to better the community. This is important so that enterprises feel comfortable disclosing information to organizations like the CCT, since they see that it is being used to benefit their community.

We also suggest that the CCT distribute the list of local producers that we compiled to enterprises in Monteverde. This can be done either directly or through organized community meetings. This will allow enterprises to become more informed about the local producers in the area and hopefully help to initiate more relationships between the two. We recommend that the CCT continue to identify additional producers in the corridor and add them to the list, since it is possible that we were unable to identify them all. These efforts will allow enterprises to learn more about the producers in the corridor with which they can establish relationships and buy products from that they may not have previously known.

Conclusions

After culminating our project, we have been able to draw conclusions based on our findings. These findings are related to the income statement we created based on Cama-Pez's

current cost structure, the products that enterprises in Monteverde buy locally in the Bellbird Biological Corridor, the logistics of the responsible fishing industry, self-sustainability in Monteverde, and local providers available in the corridor.

Our goal for the income statement was to allow Manrique Oviedo, the owner of Cama-Pez, to easily understand the profit his business is currently earning for each product they sell, the compiled list of expenses his company spends per month, and the percentage of these costs he is spending on each part of his business. We believe the tool we created will allow him to better organize his business and estimate his product profits and will be of benefit to other companies in the future.

We aimed to collect information regarding local product consumption, imported product consumption, knowledge of responsible fishing, and sustainability in Monteverde from enterprises to analyze trends of these businesses in Monteverde. When looking at the products that are purchased in the Bellbird Biological Corridor, our data indicates that there are products that are being purchased locally by several enterprises in Monteverde, while others products are almost always imported from elsewhere. Products like lettuce, tomatoes, eggs, and coffee are typically bought locally; for which reason we believe these are markets that can be expanded if there were to be investors, since there is clearly a demand for these products in the area. For some of the products that are not bought locally, such as vegetables like zucchini and eggplant, we believe it may be more difficult to create a market in the Monteverde area since the climate and elevation in the corridor make the production of certain products less feasible. If there were to be an investment to promote the purchase of more local products, it would allow areas like San Luis, which are within the corridor but have a warmer climate, to produce specific fruit that are adapted to this climate. Overall, we think that since there are many enterprises in Monteverde that have a high demand for products, it would be profitable for distributors to take advantage of this opportunity. Enterprises should become more informed about the prices of local products and eliminate the taboo that local products are more expensive.

Another important conclusion we were able to make was that there is a lack of knowledge of what responsible fishing is. The 12 enterprises in Monteverde that claimed they purchase responsibly-caught fish collectively buy their products from 14 different fish providers.

We believe that this claim is inaccurate since Alexander González from the CCT had previously explained to us there are only about two to three suppliers in the Gulf of Nicoya that are selling responsibly-caught fish. This shows us that there is a misunderstanding from part of the enterprises on what responsible fishing is and of what regulations it consists. For this reason, we think it is necessary to inform the enterprises and the community about responsible fishing and what the guidelines are for a fish to be responsibly caught.

An important observation we noticed while speaking with the local producers was that everyone believed that their business was profitable. Although the businesses ranged from small to large, they were all able to satisfy the demand of their clients. The producers that we were able to interview all sold unique products such as jams, coffee, chocolates, and natural cosmetics, which differed from what most of the enterprises said they would like to purchase locally. If these small producers with unique products are able to sell their goods, we believe it would be easier for producers to sell products that are in higher demand in the Monteverde community. We also observed that most of the producers we interviewed sold a percentage of their product outside of Monteverde, which leads us to believe that there are markets outside of Monteverde where producers are selling. This means there is opportunity for new producers to sell their products both locally and nationally. This shows the opportunity for a new market of enterprises of which we were previously unaware. We think one of the biggest issues with producers in the area is that enterprises have little knowledge of their existence.

The majority of the enterprises that we interviewed responded positively when asked if they would be interested in learning more about local and sustainable products. This shows us that there is interest in the community to attend meetings that will inform them about these types of products. It is important that when these meetings occur, there is sufficient information about the prices of the local and sustainable products so that the enterprises are able to compare these with the same products they currently buy from non-sustainable producers. Although there is still progress to be made in terms of the sustainability of Monteverde, we believe that these efforts will help the community advance in the right directions. If the community meetings and the recommendations that we previously suggested are implemented, we believe the community of Monteverde can become significantly more self-sustainable.

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Appendix A - CCT Interview with Manrique Oviedo from Cama-Pez

Centro Científico Tropical

Programa Corredores Biológicos y Gerencia de Desarrollo

Entrevista sobre Encadenamientos Productivos en el Corredor Biológico Pájaro Campana

Introducción

El objetivo de esta entrevista es conocer la percepción de Cama-Pez sobre los posibles resultados de las actividades realizadas con empresarios turísticos de Monteverde los días 26/08/2017 y 26/09/2017 en Costa de Pájaros y Monteverde respectivamente, para dar a conocer los productos generados a partir de las actividades de pesca responsable que realiza esta empresa.

I Parte. Información de la empresa

1. Nombre de la empresa:	Cama-Pez
2. Nombre del entrevistado:	Manrique
3. Cargo:	Dueño
4. Teléfono:	8392-4127
5. Correo electrónico:	
6. Sitio web:	
7. Año de creación de la empresa:	2007
8. Cantidad de colaboradores:	5 + 30 embarcaciones (90 familias aproximado)

II Parte. Producción

9. Capacidad de producción. Indique por favor el tipo y cantidad de productos que vende:

Tipo	Cantidad (Kgs) abril-agosto		Frecuencia	Precio de venta
Corvina aguada primera	1.938,7	11.554	mensual	7.000 k (sube a 7.500)
Corvina reina**	545,7	1.612	mensual	9.800 k (sube a 11.500)
Bagre**	1529,1	1745,40	mensual	5.700 k
Bagre volador***	889,08	685,27	mensual	4.800 k
Corvina aguada clase	937,37	3.243	mensual	6.000 (sube a 6.500)
Macarela**	12	110	mensual	4.900 k (porciones con piel)
Anguila**	1576,10	187,75	mensual	800 k
Anguila pequeña	524.38			
Pargo rojo***	9	123	mensual	6.400 con piel
Corvina cola amarilla***			mensual	
Chatarra****	569,75	991	mensual	900 entero
Camarón blanco	171	847,44	mensual	14.500 (jumbo en concha, sube a 17.000) U12 a 13.000 (sube a 14.500)
Tortas de pescado	1.000		mensual	350 la unidad
Mariscada	200 paquetes		mensual	4.500
Barracuda		378,26	mensual	2.400 (entera)
Berrugate	32	175.85	mensual	6.500 (en picadura) – se vende como reina por la competencia 9.000 (en Ppción)
Jurel	8			
Candado	51,8		mensual	

*Mínimo de producción total es de 9.000 kilos a 16.000 kilos máximo

** Son por temporada

***Permanente pero en poca cantidad

****China, Cinchada, Roncador, Zorra, Sierra (lucida), Bonito, Huesudo

La Tormenta Nate ha afectado la producción en un 80%. Incluso INCOPECA ha tenido que dar subsidios alimenticios.

Los precios compiten con pesca ilegal

10. Principales mercados. Indique por favor cuáles son sus principales mercados incluyendo Monteverde:

Los principales mercados serían 1) A granel (pescaderías y carreros) y 2) procesado (Mario, Monteverde, Victor Hugo, Sodas, comedores, catering y venta directa)

Dependiendo de la producción si es baja se vende 50% y 50%. En una producción grande se vende un 70% a granel y 30% procesado.

Tipo de producto	Mercado 1 Venta a Granel (Pescaderías, Carreros,		Mercado 2 (Sodas, comedores de empresas, catering)		Mercado 3 (Monteverde)	
	Nombre	Kg - %	Nombre	Kg - %	Nombre	Kg - %
Corvina Reina						
Corvina aguada primera						
Corvina aguada						
Camarón jumbo						

11. Mecanismos de distribución de productos. ¿Cómo distribuye sus productos? (% de distribución)

Tipo de producto	Directa	A través de intermediarios

III Parte. Relaciones comerciales con los empresarios de Monteverde

12. A partir de las actividades realizadas con estos empresarios, ¿se ha concretado alguna venta con empresas de Monteverde? ¿Con cuántas empresas?

Empresa	Producto	Cantidad	Frecuencia
Tramonti	Corvina primera	10-15 k	quincenal
	Atún	10 k	quincenal
	Calamares	10 k	quincenal
	Camarones	2k	quincenal
	Pulpo	10-15 k	quincenal
Taco Taco	Corvina especial / Bagre	20-35 k	semanalmente
	Camaron	3k	mes
Hotel Belmar	Pulpo	15	semanal
	Corvina reina	8	semanal
	Camaron jumbo	8	semanal
	Atún	8	semanal
	Trucha ahumada	2	semanal
	Bagre	6	semanal
	Pescado de temporada (dorado, merlin)	4	semanal
Víctor Hugo	Corvina	30-40 k	Semana
	Bagre	20K	Semana
	Macarela*	10-15 k	semana
	Tortas de pescado	20 paquetes (470grms)	Semana
	Mariscada	10 k	semana

13. Precios de intermediación:

Producto	Precio a Mario Zamora	Precio a Victor Hugo	Precio a Monteverde
Corvina Reina	Lonja entera 10.500		9.800
Corvina aguada primera	7.000	6.800	7.000
Corvina aguada especial			7.500

14. ¿Podría indicar porcentualmente la proporción que representan estas ventas con respecto a las ventas totales de Cama-Pez?

Producto	Total producción	% Venta a otros mercados	% Venta a Monteverde
Corvina Reina	300		30 kilos (en filete)
Corvina aguada primera	600 a 700		120 k
Camarón jumbo	250k		30-40 k

15. Estructura de costos:

15.a. ¿Usted ha calculado la estructura de costos y ganancia de los productos que distribuye en Monteverde?

Si – NO

15.b. ¿Cuáles son los costos del producto que lleva a Monteverde

Producto	Precio	Materia prima	Transporte	Ganancia	Proceso	Otros
Corvina Reina		3.900 – 4.000	200	1.000	1.300	
Corvina aguada primera		2.900	200	1.000	1.300	
Camarón jumbo		9.500				
Si lo consigue afuera		11.500				

* Ganancia debería ser de 30% pero para captar el mercado está poniendo margen de ganancia menor lo cual espera compensar al subir el volumen de las ventas.

Por ejemplo, en la corvina deberían ser 1.500

16. ¿Considera que distribuir productos en Monteverde es rentable para el negocio?

Al principio no era rentable pero conforme han ido aumentando las ventas se va volviendo más rentable.

17. ¿Podría indicar cuál sería el volumen de ventas que debería tener en Monteverde para que el negocio sea rentable?

150 kilos

18. ¿Cuáles han sido las dificultades más importantes que ha enfrentado para poder llevar su producto a Monteverde?

El camino de acceso (sin volumen).

19. ¿Cuál es su opinión sobre las actividades realizadas con los empresarios de Monteverde?

Buenísimo y le ha servido para tener acercamiento a nuevos clientes.

20. ¿Qué otras actividades se pueden hacer con los empresarios para ampliar el mercado?

Visitas personalizadas con conocimiento anticipado de los posibles clientes. Para ver las necesidades y las cantidades.

21. Cree usted que el centro de acopio Cama-Pez, ¿está en capacidad de cubrir con pesca responsable el 100% de sus necesidades de pescado y mariscos?

En la actualidad no tienen producto debido a que no tenían en funcionamiento el cuarto de congelamiento pero una vez lo puedan rellenar de producto considera que estaría en capacidad de hacerlo.

22. Pensando en la calidad del servicio que brinda Cama-Pez a sus clientes, mencione los 2 aspectos que más los destacan y los 2 aspectos en que más deberían trabajar para mejorar.

Positivos

- Producto fresco respetando todo el proceso de calidad y trazabilidad, el respeto de la cadena de frío y se procesa y empaca de inmediato al vacío para mantener la calidad
- Garantía de que el producto es del Golfo y a partir de pesca responsable

A mejorar

- La distribución teniendo un camión de frío y es prioridad

- Mejorar la capacidad para poder empacar con mayor rapidez y facilidad para hacerlo.

23. Comentarios adicionales:

Una de las claves para el éxito de Cama-Pez ha sido la transparencia y el hecho de pensar que en el cliente gane tanto como ellos.

Appendix B - Interview with Cama-Pez

Centro Científico Tropical

Programa Corredores Biológicos y Gerencia de Desarrollo

Entrevista sobre Encadenamientos Productivos en el Corredor Biológico Pájaro Campana

Introducción

Esta entrevista se realiza a Manrique el dueño de Cama-Pez el día 30/01/2018 con el propósito de obtener información pertinente a los costos de su empresa.

El objetivo de esta entrevista es conocer la información financiera de la compañía y obtener recomendaciones de algún método para estandarizar el costo de su producto para minimizar la pérdida de ganancias cuando la cantidad de producto vendido incrementa.

Parte I. Compras de Productos:

1. Cuales son los consumidores de estos productos en Monteverde?

Hoteles y restaurantes

2. ¿Con qué frecuencia compra la empresa productos del golfo de Nicoya?

Semanal. Pero también hay un intermediario que compra a la compañía y vende a sus clientes.

2.a ¿La empresa compra productos de otros proveedores?

SÍ- NO

2.a.i Si es así, ¿cuáles y con qué frecuencia compra la empresa productos de ellos?

Algunos son importados, los trae otra empresa cuando hay un pedido en específico.

3. ¿Qué productos vendidos por su empresa provienen de pesquerías responsables?

Corvina reina, robalo, corvina cola amarilla, corvina aguada, corvina picuda, colevagre, vague bolador, camaron jumbo y macarella.

3.a ¿Qué productos no?

N/A

4. Después de comprar productos crudos, ¿en cuánto tiempo se venderá a las empresas en Monteverde?

Es muy rotativo. Rota rápidamente, está llegando muy rápido a su destino pero más tardar quince días se demora, pero si hay producción puede demorar un mes si esta en almacenamiento y congelado. Al otro día ya se está procesando, se filetea, se empaca y se congela.

4.a ¿Cómo se almacena el producto?

Se hace inspección visual, se toma la temperatura, se pesa, se lava, se eniela en hielo escarcha y para el siguiente día sube a fileteo porciones y se congela. Tiempo previo a la veda se empieza a producir y almacenar. Solo hasta donde alcance.

4.b ¿Cuál es el costo asociado con el almacenamiento?

Hemos trabajado con congeladores, pero ahora metimos un equipo de congelamiento nuevo. Se elevó el costo pero todavía no hemos tratado en veda. 380,000 por mes por el equipo y 120,000 por congeladores.

5. ¿El costo de los bienes se correlaciona/cambia con diferentes estaciones (es decir, temporada alta versus temporada baja)?

SÍ - NO

5.a Si es así, ¿por cuánto?

Hay temporada alta en producción y baja en ventas. 2,200 por la corvina en mes bajo y en mes más alto 5,500.

Parte II. Gastos de la Empresa:

Por favor, rellene las cajas blancas en la siguiente tabla:

Precio Dependiente	Month 1	
Precio por Kilogramo	€	-
Kilograms - <i>Kilogramos</i>		0
Subtotal Costos Mensuales del Pescado	€	-
Precio - COGS (kilo)	€	-
% Merma		0.00%
Precio Mínimo de Venta - <i>Minimum Selling Price (kilo)</i>	€	-
Beneficio Bruto - <i>Gross Profit</i>	€	-
Margen bruto % - <i>Gross Margin %</i>		0.0%
Los Gastos Mensuales de Explotación - <i>Monthly Operating Expenses (Indirect)</i>		
Salarios - <i>Salaries</i>	€	-
Cargos Sociales Compartido - <i>Medical Insurance</i>	€	-
Publicidad - <i>Advertising</i>	€	-
Equipo - <i>Equipment</i>	€	-
Provisiones - <i>Supplies</i>	€	-
Mantenimiento - <i>Maintenance</i>	€	-
Procedimiento - <i>Processing</i>	€	-
Utilidades - <i>Utilities</i>	€	-
Arriendo - <i>Rent</i>	€	-
Transportation - <i>Transporte</i>	€	-
Seguro - <i>Insurance</i>	€	-
Honorarios Legales - <i>Legal Fees</i>	€	-
Otro - <i>Miscellaneous</i>	€	-
Gastos Totales de Operación Mensuales - <i>Total Monthly Operating Expenses</i>	€	-
Porcentaje de ventas es este tipo de pescado - <i>Percentage of sales is this type of fish</i>		0%
Porcentaje de ventas es este lugar - <i>Percentage of sales is this place</i>		0%
Porción del Costo de Operación Usado - <i>Portion of Operating Cost used</i>	€	-
Ingresos - <i>Revenue</i>	€	-
Beneficio Neto - <i>Net Profit</i>	€	-
Margen de Beneficio - <i>Profit Margin %</i>		0.0%

Parte III. Logísticas:

6. ¿Empaca el pescado usted mismo?

SÍ- NO

6.a Que material utiliza?

Bolsa plastica termica

6.b ¿De dónde saca su material de empaque?

San José. Usan material termico y normal. Si el producto se va rápido, es de plástico sino es térmico.

7. ¿Qué porcentaje de productos vende a granel?

Por kilo, se vende a granel pero se distribuye en tinas. Lo otro se empaqa.

7.a ¿El empaque de estos productos a granel difiere de los productos vendidos en cantidades más pequeñas?

SÍ - NO

8. ¿Hay otros factores que sugiere que incluyamos en nuestro estado de resultados?

Incluya el producto fresco y el proceso. Qué más puede ir en el costo, y ver una lista con todos los costos. Una revisión de lo hecho previamente.

Appendix C - Interview Questions for Enterprises in Monteverde

Centro Científico Tropical

Programa Corredores Biológicos y Gerencia de Desarrollo

Entrevista sobre Encadenamientos Productivos en el Corredor Biológico Pájaro Campana

Introducción

Esta entrevista se realiza a empresarios turísticos de Monteverde durante los días, 05/02/2018 – 13/02/2018, aquellos cuyo el Centro Científico Tropical cree que puedan beneficiar a la comunidad del Corredor Biológico Pájaro Campana por medio de la venta de sus productos

El objetivo de esta entrevista es conocer la percepción de los empresarios turísticos sobre el producto de pesca responsable y las posibilidades de encadenamientos productivos que se podrían generar con este y otros productos que se generen a partir de procesos productivos sostenibles.

I Parte. Información de la empresa:

1. Nombre de la empresa	
2. Nombre del entrevistado	
3. Cargo	
4. Teléfono	
5. Correo electrónico	
6. Sitio web	
7. Año de creación de la empresa	
8. Cantidad de colaboradores	

II Parte. Producción:

9. Si compra productos marinos: ¿Cuáles productos son de pescadores responsables?

Producto	Cantidad (Kgs)	Frecuencia	Proveedor	Precio promedio (Kg)	Plato que prepara

10. ¿Cuáles son los platos a base de productos marinos que más vende?

11. ¿Cuáles productos compra localmente (Corredor Biológico Pájaro Campana)?

Producto	Cantidad (Kgs)	Frecuencia	Proveedor	Precio promedio (Kg)	Plato que prepara

12. ¿Cuáles productos considera que no puede comprar localmente?

Producto	Cantidad	Frecuencia

13. ¿Por qué cree que no consigue localmente los productos que necesita? Por favor, marque las casillas abajo que se aplican:

Producto	Por Cantidad	Por Precio	Por Calidad	No sé donde ubicarlos	Otro

14. ¿Cree que la demanda de productos cambia durante el año?, y si es así ¿cuánto y durante cuáles meses?

15. ¿Cuáles son los métodos que se utilizan para transportar los productos?

III Parte. Pesca Responsable:

16. ¿Su empresa compra y vende pescado?

SÍ - NO

17. ¿Sabe qué es la pesca responsable?

SÍ - NO

18. ¿Está utilizando la pesca responsable?

SÍ - NO

18.a. ¿Por qué o por qué no está utilizando la pesca responsable?

18.b. Si no, ¿En qué condiciones se sentiría cómodo utilizando la pesca responsable?

19. ¿Considera que otros empresarios de Monteverde deberían conocer los productos que ofrece Cama-Pez?

SÍ - NO

19.a. ¿A quiénes invitaría a una próxima gira para visitar este emprendimiento?

IV. Consumo responsable:

20. ¿Adquiere usted actualmente productos de responsable o local en su empresa? ¿Por qué?

SÍ - NO

21. Si utiliza Cama-Pez: ¿Qué tal considera la calidad del producto y del servicio brindado por Cama-Pez? Mencione los 2 aspectos que más los destacan y los 2 aspectos en que más deberían trabajar para mejorar.

22. ¿Recomendaría a otros empresarios o amigos consumir productos de responsable o local?

¿Cuáles?

SÍ - NO

V Parte. Encadenamientos productivos sostenibles:

23. ¿Estaría interesado en adquirir otros productos locales generados a partir de procesos productivos sostenibles?

SÍ - NO

24. ¿Considera que existen barreras para que su empresa adquiriera o acceda a otros productos que se generan mediante procesos productivos sostenibles? ¿Cuáles son?

SÍ - NO

25. ¿Qué tipo de productos considera que se podrían producir sosteniblemente a nivel local y que estaría dispuesto adquirir para la operación de su empresa?

26. ¿Estaría interesado en participar de otras visitas o reuniones para conocer nuevos productos sostenibles?

SÍ - NO

27. ¿Qué actividades recomendaría realizar para dar a conocer este tipo de productos entre empresarios de Monteverde?

VI Parte. Sostenibilidad en Monteverde:

28. ¿La empresa implementa prácticas sostenibles o amigables con el ambiente? ¿Cuáles?

29. ¿Cuenta la empresa con alguna certificación en sostenibilidad? ¿Cuál?

30. ¿Qué se requiere hacer en Monteverde para volverlo el primer destino sostenible certificado de Costa Rica?

31. Comentarios adicionales:

Appendix D - Questions for Interviews with Local Producers

Centro Científico Tropical

Programa Corredores Biológicos y Gerencia de Desarrollo

Entrevista sobre Encadenamientos Productivos en el Corredor Biológico Pájaro Campana

Introducción

Esta entrevista se realiza a empresarios turísticos de Monteverde en el día 21/02/2018 que están vendiendo productos locales a la comunidad.

El objetivo de esta entrevista es entender cómo estas empresas han logrado éxito en sus ventas en la comunidad de Monteverde y del Corredor Biológico Pájaro Campana y obtener recomendaciones para empresas que vayan a compensar el proceso de vender productos locales.

I Parte. Información de la empresa:

1. Nombre de la empresa	
2. Nombre del entrevistado	
3. Cargo	
4. Teléfono	
5. Correo electrónico	
6. Sitio web	
7. Año de creación de la empresa	
8. Cantidad de colaboradores	

II Parte. Producción:

9. ¿Cuáles productos produce usted?

10. ¿Dónde está vendiendo su producto?

11. ¿Está vendiendo sus productos a algunos mercados fuera de Monteverde?

11.a. Si es así, ¿hay diferencias entre sus ventas en Monteverde y el exterior en términos de ganancias?

12. ¿Cuánto de su producto es vendido a empresas en Monteverde?

13. ¿Cuánto suministro de producto tiene durante el año?

III Parte. Logísticas del Negocio:

14. ¿Qué beneficios ha visto de vender localmente?

15. ¿Cómo empezó su distribución a Monteverde?

16. ¿Cuáles han sido algunas de las dificultades del negocio?

17. ¿De qué tamaño considera usted el negocio de venta a Monteverde?

18. ¿Cree que el negocio es rentable?

IV Parte. Recomendaciones:

19. ¿Cuáles son algunas sugerencias que usted tiene para otros que quieran distribuir a Monteverde?

20. ¿Cómo piensa que las empresas deben de comenzar el proceso de distribución a Monteverde?

21. ¿Cuáles mercados tienen alta demanda y poco suministro en Monteverde?

22. ¿Tiene usted algunos otros comentarios o sugerencias?