

Global Sustainable Development: Loma Linda Guatemala  
Interactive Qualifying Project Report completed in partial fulfillment  
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## Abstract

The goal of this project, accomplished in partnership with Seven Hills Global Outreach and Asociación Sostenible Para El Desarrollo Integral y Turístico De Loma Linda (ASODILL), was to address the economic downturn caused by the recent outbreak of coffee rust in Loma Linda, Guatemala by sourcing new volunteers to participate in an educational tourism program in the community. Through our research on Loma Linda and the community's needs, and by conducting surveys and multiple interviews, we have developed a list of recommendations in sourcing parties interested in future travel, itineraries for each trip, and marketing strategies.

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## LIST OF SYMBOLS & ABBREVIATIONS

ASODILL: *Asociación Sostenible Para El Desarrollo Integral y Turístico De Loma Linda*

Edu-tourism: Educational Tourism

Eco-tourism: Ecological Tourism

GDP: Gross Domestic Product

IQP: Interactive Qualifying Project

Q: Quetzal (currency)

SHGO: Seven Hills Global Outreach

WCR: World Coffee Research

WPI: Worcester Polytechnic Institute

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## Chapter 1: Introduction

Guatemala has been undergoing economic hardship and is looking to stimulate new growth. Its economy can be divided into three categories: agriculture, industry, and services. The agricultural sector accounts for 13.5% of the gross domestic product and 30% of the Guatemalan workforce. Guatemala's primary export and source of revenue is coffee which accounts for 9.7% of the country's exports (Guatemala Economy Profile 2014, 2014). It would be advantageous for Guatemala to establish additional sources of income in order to lessen the country's reliance on the coffee crop.

Coffee plantations and smaller family owned plots are concentrated in the rural areas of Guatemala, where about 51% of the Guatemalan population live (Rural poverty in Guatemala, n.d.). The community of Loma Linda is an example of how dependent Guatemalans communities are on agriculture. According to an interview with Jesse Mattleman from Seven Hills, Loma Linda's income is based heavily on its coffee production. Located in the Western Highlands of Guatemala, Loma Linda has ideal conditions for growing and harvesting coffee. However, a recent outbreak of *Hemileia vastatrix*, also known as coffee leaf rust, has infected a large portion of the community's coffee plants. This fungus causes the plant to prematurely defoliate, inhibiting next season's berry production (Arneson, 2011). Jesse Mattleman explained that an outbreak that took eight years to fully recover from put tremendous strain on many community members who rely on a high coffee yield to support their families. This economic hardship that is being caused primarily by agricultural being faced by members of the community is the main problem that we hope to solve through this project.

The goal of this IQP is to address the problem described above through collaboration between Seven Hills Global Outreach, Asociación Sostenible Para El Desarrollo Integral y



Turistico De Loma Linda (ASODILL), and volunteers from universities/professional organizations. The result of this collaboration will be the development of educational tourism and service learning initiatives in Loma Linda.

A major component of this project is to connect Loma Linda with volunteers who are willing and able to make a difference in the community. This will enable service learning work to be done on the basis of a specific project. International service learning programs are described by Pless (2014) as “corporate volunteering initiatives designed to give employees the chance to work for a short spell abroad (often in a developing or emerging market) on a service assignment with a partner for the social sector.” Volunteer groups will begin by first assessing the current needs of the community and then travelling to Loma Linda to engage in an edu-tourism based service learning program. Our overarching vision for this project is to improve the economy in Loma Linda, Guatemala while improving the quality of life for its residents and preserving the environment.

Volunteer edu-tourists will travel to Loma Linda to complete specialized tasks and projects that are catered to their aptitudes. For example, professionals from botanical associations would be especially interested in investigating the coffee fungus while engineering students might be more apt to build infrastructure or make trails. According to Pitman (2010), educational tourism, often referred to as “edu-tourism” is a niche tourism market that is “populated by clients motivated by a desire or need to learn.” The objective of edu-tourism is to establish a mutualistic relationship between both participating parties. Tourists benefit from edu-tourism as they satisfy learning goals and gain new cultural appreciation and understanding. In his study, Kalyani (2013) summarizes the methods by which learners benefit from edu-tourism. He states that “through the integration of education, language, culture, and leisure activities, educational

adventures capture the imagination, interest, and spirit of the tourist.” Edu-tourism also proves to be advantageous for host communities as it provides an economic stimulus. The influx of people in the area stimulates the economy as tourists spend money in the community. Furthermore, any research findings can be used toward solving the problems in the community. Ideally, the professional volunteers from botanical associations will be able to conduct research on the coffee fungus and make recommendations towards remedying the situation. Additionally, professionals from zoological institutions might be interested in studying the local biodiversity around Loma Linda. ASODILL could then use this information to attract eco-tourists to the area. Eco-tourism is an important subset of edu-tourism. Eco-tourism is described by the International Ecotourism Society as “responsible travel to natural areas that conserves the environment and improves the well-being of local people.” Loma Linda is home to lush environments and a wide array of exotic bird species, making it an ideal eco-tourism destination.

ASODILL has been actively pursuing different projects in an effort to stimulate the economy. After careful deliberation, the twenty five active members of the association organized an eco-tourism project. As a result of these efforts, a series of tour routes have been established and utilized by many visiting groups. A tourist hostel, largely built with donated Association labor, was also constructed to promote travel to Loma Linda. The hostel is a converted *casa patronal* (house of the boss) with ten beds and four rooms. ASODILL volunteers constructed the hostel using wood from trees that had fallen on the Sierra Madre mountainside. To advance the efforts of ASODILL and Seven Hills Global Outreach, we plan to expand on their existing progress by changing the project’s focal point to edu-tourism.

One of the greatest obstacles that will be encountered during this project is communication. Both cultural and language barriers may slow our progress, especially in the

initial stages of the project. Not only will we meet people who do not speak our native language, but we will encounter many who see from a different perspective. Our values and beliefs may completely differ from those of the community members in Loma Linda. This obstacle can be overcome through collaboration with SHGO. Working with SHGO will be beneficial since they are well established in Loma Linda and will better know the needs of the community.

Communication will also be instrumental in determining what solutions are actually feasible.

Theoretical solutions may not always work when put to practice, making constant communication with the community members of Loma Linda vital to the success of this project.

The team plans to analyze the effectiveness of the project through a progress report that assesses the economic stability as well as the percentage of children enrolled in school in Loma Linda. This study will be conducted one, three, and five years after the project has been implemented. This progress report will provide essential feedback on the impact of the project on the economy and the quality of life in Loma Linda. The report will also allow for the opportunity to make revisions to the project in order to better benefit the community.

## Chapter 2: Background

### 2.1 Guatemala

Guatemala is located in Central America, bordering the North Pacific Ocean, the Gulf of Honduras, El Salvador, México, Honduras, and Belize. (The World Factbook, 2014). In 1821 Guatemala won its independence from Spain. Through the mid-20th century Guatemala practiced a variety of military and civilian governments and soon went into civil war. The war accounted for the deaths of 200,000 people and an estimated one million refugees. The government signed an agreement in 1996 to end the conflict (The World Factbook, 2014).

Guatemala today is a constitutional democratic republic. The government is separated into three branches which include executive, legislative, and judicial branches (The World Factbook, 2014). The current leader of Guatemala is President Otto Perez who took office in January of 2012 (Guatemala, 2014). Guatemala's population as of 2013 was 15.47 million. The country has high rates of poverty and struggles in several areas such as health and development. Some of the more prevalent issues include malnutrition and high mortality rates of infants (The World Factbook, 2014). The country recognizes the difficulties that they are experiencing with their economy and high poverty rates. New plans and ideas for improving the country are constantly being developed and implemented, such as edu-tourism programs.

Guatemala has a suffering economy and must seek out new opportunities for economic development and expansion. The GDP of the country in 2013 was \$53.8 billion (Guatemala, 2014). Guatemala is a multi-cultural country that has made significant progress in achieving macroeconomic and democratic stability after the civil war. There has been an increase in the economic growth through trade, regional integration, and tourism. The key agricultural exports

include coffee, sugar, bananas, and vegetables. Regional integration is the “process by which two or more nation-states agree to co-operate and work closely together to achieve peace, stability and wealth” (EU Learning n.d.). In 2012 there was a 3% increase in economic growth and an estimated 3.3% increase in 2013. Guatemala has the biggest economy in Central America, but out of all the Latin American countries Guatemala is one of the countries with the highest levels of inequality. The agricultural sector accounts for 13.5% of GDP and 30% of the labor force.

## 2.2 Loma Linda

Loma Linda, located in the Sierra Madre Mountains of Guatemala, is home to a small, resolute community. According to Jesse Mattleman (Unpublished Raw Data), Loma Linda is a fairly new community in terms of the history of Guatemala as it has been in place for less than a generation. Although Loma Linda is in relatively close proximity to Xela, the second largest city in Guatemala, it is completely rural and removed from the city. Since Loma Linda is a cooperative, catholic community, there is “A real sense of people knowing each other” and “A definite need to work as a team when doing agricultural activities, primarily” (Mattleman, Unpublished Raw Data). This idea of working as a team to accomplish goals extends to other aspects of life in Loma Linda, lending to the tight-knit community that has been established.

The community of Loma Linda is self-sufficient in many ways. According to Mattleman (Unpublished Raw Data), citizens grow much of their own food and raise chickens and ducks. The small town contains an education center and school, as well as a hostel that was built by the primary community association ASODILL. Through ASODILL, the citizens of Loma Linda have been working with Seven Hills to “Emphasize and teach a deep appreciation for the outdoors through community education, campaigns, and training” (Seven Hills Global Outreach,

2012). The community is as respectful of the land as it is reliant on it. Jesse Mattleman explained that “it is a really beautiful relationship that is both spiritual and economic.” Similar to other communities in Guatemala, Loma Linda’s economy is heavily dependent on the production of coffee. The citizens of Loma Linda take great pride in their production of quality coffee. “The coffee of Loma Linda is protected by various shade trees, which provide plant and animal biodiversity to the area as well as producing consumable items such as plantains, avocados and papayas” (Sands, 2013). Organic coffee is also produced which is kept separate from traditionally grown coffee throughout processing and is stored in a different part of the warehouse. Loma Linda does possess its own roasting facilities, allowing the community to export small amounts of coffee that is grown on the hills surrounding the town.

### 2.3 Coffee Significance

Coffee production impacts many aspects of life, playing a role economically, environmentally, and socially. Coffee accounts for 9.7% of Guatemala’s total exports (Guatemala Economy Profile 2014, 2014). In rural areas of the country, where about 51% of the Guatemalan population live, the production of coffee plays a much bigger role (Rural poverty in Guatemala, n.d.). About 40% of the rural population works in an agriculturally based field, making coffee production a major income source in these areas. However, low prices and a recent outbreak of the *Hemileia vastatrix* fungus greatly limit the income of many families. To make up for this loss of production, many children leave school to work on the coffee plots with their family. Enrollment rates in school can be as low as 20% in the poorest areas, compared to 65% in Guatemala City (Rural poverty in Guatemala, n.d.). Poverty rates skyrocket in an area known as the “poverty belt”, which suffered from over three decades of civil war in the mid-

1990s (Rural poverty in Guatemala, n.d.). This civil war has made locals wary of the government, influencing their choices in joining organizations that protect farmers from unfair prices, and stunting their ability to gain more income.

Environmentally, coffee production can be very beneficial. In Guatemala, 98% of coffee is shade grown. Shade grown coffee has become a common practice because the forest not only provides protection, but it also keeps the soil rich with nutrients (Green Book, 2011). In return, coffee stabilizes soil, decreasing the amount of soil erosion when rain falls. Coffee production also contributes to carbon sequestration, the process of removing carbon from the atmosphere, and preserves the biodiversity of the area it is planted in (ICO, 2014). On the other hand, coffee production contributes to water pollution due to a process called wet milling. Wet milling is a process used to remove the mucilage that is created during the pulping process of coffee production. It can use as much as 1200 liters of water per 45 kilogram bag, which can produce as little as 16 pounds of green coffee (Sheridan, 2012). The waste water produced after this process is filled with sugars and pectins. When released into water, the sugars and pectins ferment into acetic acids. To be removed, these acids require more oxygen than the natural ability of waterways provide, therefore creating an anaerobic effect that threatens marine life and human health (Sheridan, 2012). To address this issue, groups such as The International Coffee Organization are working to assist and encourage water filtration and implement more sustainable washing processes to prevent further pollution (ICO, 2014).

## 2.4 Coffee Fungus

Many parts of Guatemala, including Loma Linda, have been affected by an outbreak of *Hemileia vastatrix*, also known as coffee leaf rust. This fungus infects many coffee plots and

plantations causing the leaves on the plants to prematurely fall, reducing the photosynthetic capacity (Arneson 2000). This in turn damages the plant, impacting the following season's yield. Decreased yield, in addition to the low price of coffee, limits the income of many rural farmers.

## 2.5 ASODILL

*Asociacion Sostenible Para El Desarrollo Integral y Turistico De Loma Linda* also known as ASODILL is an association that is established in Loma Linda, Guatemala. ASODILL is an active community-based organization that was formed on October 15, 2006 by Pascual Rafael Escobar. The organization started with only twelve members that had a common goal for the betterment of the community. They presented their proposal to the general assembly of the Cooperative of Loma Linda. As a part of the proposal it states that all inhabitants of the community were welcome to join ASODILL. Today it has twenty five active members (ASODILL's Guatemalan Eco-tours! n.d.). The goals of the association are to supercharge the local economies, protect the diverse wildlife, and educate people about the environment. Their goal to boost the economy is motivated by developing their eco-tourism industry. The organization recognizes that the mistreatment of natural resources and unregulated hunting of wildlife are destroying the ecosystem surrounding Loma Linda. Through their work ASODILL looks to stabilize these issues.

To help educate visitors to the community, about the environment, ASODILL facilitates tours that provide a great learning experience for guests who want to learn more about the ecosystem in the region (ASODILL's Guatemalan Eco-tours!, n.d.). The mission of the organization is to seek a “means of formation, training and educative growth on the personal as well as collective level. We support learning and transformation through sustainable livelihoods



and promote the advancement of teaching and learning in the Guatemalan community”. Another goal of the association is to transform the monoculture productive practices into crop diversification. ASODILL tries to be an example of new methods of living that works toward economic enhancements and growth for both the members of the association as well as the community.

ASODILL has been actively pursuing different projects in an effort to stimulate the economy. The association looks to be a model of work and production for their community. They do this through agriculture, tourism and animal husbandry (ASODILL's Guatemalan Eco-tours! n.d.). ASSODIL has had success helping the community in the past and are currently working towards the betterment of the community. One of the association's biggest accomplishments is they constructed a hostel, using mainly voluntary labor, for tourists to stay when visiting the community (ASODILL's Guatemalan Eco-tours! n.d.). The hostel is a converted *casa patronal* (house of the boss) with ten beds and four rooms. ASODILL volunteers constructed the hostel using wood from trees that had fallen on the Sierra Madre mountainside. To advance the efforts of ASODILL and Seven Hills Global Outreach, we plan to expand on their existing progress by changing the project's focal point to edu-tourism.

The association is currently working on multiple initiatives. One of these is the development of an organic community garden project in Loma Linda for food security. In 1996 the World Food Summit defined food security as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life” (Food Security, n.d.). The crops grown in the community garden include corn, beans, bananas, bok choy, beledo, carrots, beets, peppers, raspberries, and chayote. A second program is an ecotourism initiative. This initiative revolves around developing hiking and bird-watching trails in addition to lookouts

and resting areas. After careful deliberation, the twenty five active members of the association organized an eco-tourism project. As a result of these efforts, a series of tour routes have been established and utilized by many visiting groups. Also this initiative works to develop the infrastructure of the community by focusing on cleaning, hospitality, etc. To further the goals of the community, ASODILL is collaborating with Seven Hills Global Outreach. Señor Escobar invited SHGO representatives to visit Loma Linda to look in on ASODILL and their community workshops. The representatives looked to improve general capacity, training methods, and means of taking strategic action (Mattleman, unpublished raw data).

## **2.6 Seven Hills**

The Seven Hills Foundation is an organization that provides exceptional support for communities by providing clinical, educational, and community-based supports to people with disabilities and significant life challenges. The foundation has been around for the last sixty years. Since the beginning of the foundation, over one hundred and sixty locations have been established. These locations include Massachusetts, Rhode Island and seven countries abroad including Guatemala (Seven Hills Foundation, 2014). The mission of the foundation is “to promote and encourage the empowerment of people with significant challenges so that each may pursue their highest possible degree of personal well-being and independence” (Seven Hills Foundation, 2014). The vision of the foundation is to be a reliable resource in the “identification of unmet community needs; in the promotion of professional and compassionate models of service; and as an advocate of emerging public policy which exemplifies the dignity of all persons regardless of physical, social, or emotional condition.” (Seven Hills Foundation, 2014)

Seven Hills has a subsidiary called Global Outreach. The goal of this organization is to set up the grassroots of community development that fosters local ownership, capacity-building, and empowerment. The three areas that the organization tries to develop in a community are the environment, social aspects, and the economy. Seven Hills likes to use a partnership-based approach when dealing with international development. They prefer to partner with organizations that are established in the area of interest to help with community-driven and locally-owned initiatives. (Seven Hills Global Outreach, n.d.).

One way that Seven Hills helps develop economies is through Microfunds. Microfunds allow people to donate money over the internet to entrepreneurs and students. The intent is for the recipients of the donations to use the money to sponsor projects that aim to alleviate poverty. According to *The Entrepreneurial Mind* (2010), “Microfunds are part of the changing landscape in new venture financing.” Microfunds are so effective because they make it easy to connect lenders with people who can make a difference through innovative projects. The SHGO Microfund distributes small loans to global partner organizations. SHGO’s partners then extend funds to local community recipients. A second way that SHGO helps to improve a community’s economy is through social enterprise. When SHGO helps a community’s environment they study the community’s problems and look to establish grassroots partners within their global ecosystems. The initiatives that SHGO focus on in relation to the environment are agriculture, clean water, and environmental protection. To support agriculture in a community the organization looks to increase food security, grow economic development, and uplift communities from hunger and poverty. SHGO and its global partners work to provide reliable drinking water to the communities they help as well. One of SHGO’s goals is to maintain the

natural world and preserve and strengthen the natural connections to their land (Seven Hills Global Outreach, n.d.).

## 2.7 Sustainable Development

A recent change in the tourism industry has been one toward travel that encourages and enables sustainable development in tourism destinations. Boxill (2004) claims that “the global trend in tourism is not in the direction of sea and sand tourism, but more attraction, cultural, heritage and green tourism.” Under this new tourism model, an emphasis is placed on development of tourism programs that are enticing to prospective tourists while increasing cultural awareness, advancing the economy, and utilizing sustainable practices. In order to develop a sustainable tourism program, “tourism training must embrace the humanities, the social sciences and the natural sciences” (Boxill, 2004). From this, it can be concluded that it is no longer sufficient to focus solely on the hospitality aspects of tourism. When implementing an edu-tourism program in Loma Linda, it is imperative that training is focused on the preservation of the environment. If the land is degraded to the point that coffee crops cannot be sustained, then there would no longer be a basis for edu-tourism in Loma Linda.

With any development, there is some perturbation to the surrounding environment. When an area is developed for tourism, an inevitable compromise must be made between preserving the natural environment and exploiting it for economic expansion. However, the development of effective public policy can serve to mitigate the negative effects of tourism development. In her article “Environmentally Sustainable Development and Tourism: Lessons from Negril, Jamaica,” Barbara Olsen describes the challenge of sustainable development in Negril, Jamaica. Olsen (1997) claims that “In the absence of public policy for planned

development, the community has experienced severe deterioration of its ecosystem.” When planning for tourism development in Loma Linda, Guatemala, the community must establish public policy that enables economic growth and contains checks and balances that ensure control. The need for tourism is apparent in Loma Linda as it was in Negril, Jamaica. According to Olsen (1997), “Development for tourism has definitely benefited many local residents by giving them access to income that traditional farming and fishing could never have provided.” This is reflective of the current state of Loma Linda, especially since the coffee fungus problem has taken root.

Planning for sustainable development in the tourism industry must aim to achieve a balance between humanistic and ecological values. This can be measured by “meeting present needs in a harmonious interchange without harm for future opportunity” (Colby 1990). Colby (1990) argues that sustainable development can only be accomplished when there is a high level of community involvement and responsibility. The community is responsible for ensuring that any development that is made is in their best interest. Citizens should attend all town meetings pertaining to proposed development to voice their opinions. This type of planning process would work ideally in Loma Linda where there is a strong sense of community and a deep appreciation for the land present. Through collaboration with ASODILL and the community as a whole, sustainable development can be achieved.

## **2.8 Edu-tourism**

Edu-tourism is the key mechanism by which this project plans to stimulate economic growth in Loma Linda, Guatemala. Simply put, edu-tourism can be defined as “travel for the purpose of formal and informal education and training in life-long learning experiences in the

host country's unique natural and multi-cultural environment" (Kalyani, 2013). Edu-tourism is an underutilized tool that can be effective in providing technical training outside of the classroom through real-world experiences. Educational tourism is a niche tourism market consisting of adult learners and students that can prove to be advantageous for both the tourist and the host country. Tourists benefit from "an in-depth engagement with other cultures through the opportunities they provided to gain contextualized knowledge as well as a deeper appreciation of particular sites" (Pitman, 2010). Edu-tourism provides a level of depth beyond what traditional tourism can offer due to complete immersion into another culture. Tourists also get first hand insight into problems faced by host communities. On the other hand, host countries undergo an economic stimulus due to the presence of tourists. In his report on edu-tourism in Malaysia, Samah (2013) claims that "nowadays, educational tourism is one of the most prominent segments of tourism around the world as it creates employment opportunity along with educational, socio-cultural, environmental, and economic development." An influx of people in an area leads to an increase in money being spent within the community. Based on the tabulated results of the survey that was distributed in regards to edu-tourism in Malaysia a conclusion was made. That conclusion is "it is evident that the benefits of educational tourism consist of both tangible (e.g. job creation) and intangible (e.g. cultural impacts) effects which impact on community development plans in Malaysia" ( Samah, 2013). It is clear that edu-tourism is a fast-growing tourism market with boundless potential.

Several types of edu-tourism exist including foreign exchange programs, study tours, and location-specific projects. In his paper, Ankomah (2000) presents edu-tourism opportunities in Sub-Saharan Africa, where the population is faced with a failing economy similar to the one faced in Loma Linda. Ankomah identifies the edu-tourism resources available in Sub-Saharan

Africa and classifies them into four main groups including cultural/historical resources, ecotourism/nature resources, rural tourism resources, and study abroad programs. Examples of possible edu-tourism programs are also outlined such as “studying dolphins in South Africa to discover their ecological limits; monitoring bird migration to restore declining populations and manage habitat change; tracking the habits of rare endemic carnivores; and measuring the impact of public health traditional herbalists to preserve indigenous knowledge” (Earthwatch, 1999). Many of these proposed project ideas for Sub-Saharan Africa could be easily transferrable to Loma Linda. Despite the differences in culture and the natural environment in the two areas, many of the problems faced by the communities are quite similar.

An important consideration when investigating the possibility of edu-tourism is the host community’s attitude toward tourism. A preliminary step in implementing edu-tourism activity is surveying the community to determine whether or not they would accept the foreign aid. It is also imperative that tourists are able to feel welcome and comfortable in a host country in order to establish a successful program. Studies on edu-tourism in Klang Valley, Malaysia concluded that attitudes varied widely depending on factors such as age and occupation of subjects (Samah 2013). It was found that “administrators and managers had significantly a more positive attitude towards international students in Malaysia” (Samah, 2013). This shows that it is important to gauge the attitudes toward edu-tourism from all parties involved including tourists, residents, and local government officials. It is also imperative that all members of the host community are represented when conducting a questionnaire survey. Data should be collected based on gender, education level, race, religion, and occupation in order to attain accurate public opinion. If it is discovered that the host community does not desire foreign intervention, then an edu-tourism program may not be possible.

## 2.9 Service learning

Service learning is a method of teaching that synthesizes classroom instruction with community service. The association between service and academic work first developed when the African National Conference government instituted a higher education transformation plan with the primary goal to change the racially divided institutions of higher education to non-racial merged organizations (Bringle, Niadoo, Smith-Tolken, & Thomson, 2011). Service learning is usually comprised of three parts. These components include classroom preparation, performing the service, and a structured reflection process (Definition of Service-Learning, 1993-2014). The intention of service learning is to benefit both the participants in the program and the recipients of the help equally. Also the program focuses on the services provided equally with the learning that is occurring. Service learning allows for students to further develop their critical thinking skills such as methods of analysis and synthesis. This is because students have the opportunity to get out of the classroom and have some real world experience (Definition of Service-Learning, 1993-2014). Working in the field outside of an academic setting gives students the opportunity to develop their skills of community engagement, all the while assisting the community with the adversity and problems they are experiencing.

Service learning projects benefit all parties involved. The participants of the projects have the opportunity to develop attributes including personal efficacy, personal identity, spiritual growth, and moral development (Center for Teaching, 2014). Some of the benefits for program participants include interaction with people of diverse cultures and lifestyles, practical career preparation, and a hands-on application that increases the relevance of academic knowledge (Definition of Service-Learning, 1993-2014). Participants can also develop their interpersonal



skills such as their ability to work well with others, build their leadership skills, and communication skills (Center for Teaching, 2014). In the Fostering Student Engagement Campuswide Annual Results from 2011, there is tabulated data showing that students reported significant gains in their personal development through participation in service learning programs. The subjects unanimously felt that contributing to the welfare of a community through service learning had a positive impact on their lives. (National Survey of Student Engagement 2011).

The community that a service learning project works in greatly benefits from the program. One benefit is communities have increased awareness of and ability to articulate community issues. This allows for them to develop short and long term solutions to community problems. Another benefit is the community develops a relationship with academic institutions, giving them access to the institutions resources. Lastly when a community is a part of a service learning projects, many opportunities are made available to the members of the community. These include recruiting future active community members and being an important part of the educational process (Definition of Service-Learning, 1993-2014).

## Chapter 3: Methodology

The ultimate goal of this project is to improve the economy in Loma Linda, Guatemala while bettering the quality of life for its residents and preserving the environment. Opportunity for economic growth was identified through the development of edu-tourism in the community.

The objectives are to:

1. Identify current problems in Loma Linda and evaluate the needs of the community
2. Establish and gain approval for a legacy project at WPI that will enable travel to Loma Linda each year.
3. Develop a marketing campaign to connect Seven Hills with volunteers from universities and professional organizations.
4. Develop an edu-tourism program itinerary for use in service learning tours.

### 3.1 Objective 1: Identify current problems in Loma Linda and evaluate the needs of the community

In order to accurately gauge the scope of the problems being faced by the citizens of Loma Linda, we contacted several employees from Seven Hills Global Outreach. We were initially given a short summary of the coffee rust problem in Loma Linda by Ashley Gilbert of Seven Hills. Ashley Gilbert then referred us to the employee at Seven Hills who directs the Guatemala initiative, Jesse Mattleman. We gathered data on the current state of the coffee fungus issue in order to determine if there had been any recent changes or developments. Data was also collected on the community in order to get a sense of how the community functions and what the general attitude toward tourism is in Loma Linda. This was accomplished by conducting an

informal interview with Jesse Mattleman through a Skype conference. Some additional documents such as past program itineraries and a tourism report from ASODILL were provided by Jesse Mattleman pertaining to our project. Additionally, data was sourced reviewing literature on the topic and utilizing related information from case studies in Jamaica and Malaysia.

We were referred to Pascual Rafael Escobar, our ASODILL liaison in Loma Linda by Jesse Mattleman. Pascual Rafael Escobar was interviewed in order to evaluate the needs of the community. Señor Escobar was an ideal candidate to interview as he is a leader in the community and will be able to provide crucial insight into the current state of the community. Having a firm grasp on the specific needs of the community allowed us to better understand how to make this project the most impactful. We conducted an informal interview with Señor Escobar via email as it is the most reliable form of communication we have established with our partners in Guatemala. Questions to be answered by Señor Escobar were written in both English and Spanish in order to minimize confusion in the interviewing process. The table below lists the contacts that were interviewed as well as their position, affiliation, and the purpose of our correspondence.

**Table 1: Names of contacts interviewed to gain insight into the problems and needs of the community.**

Contacts	Affiliation	Position	Purpose
Ashley Gilbert	Seven Hills Global Outreach	Director	To learn about the coffee rust and economic problems being faced in Loma Linda. Also, to discuss other project logistics.
Jesse Mattleman	Seven Hills Global Outreach	Director of the Guatemala initiative	To learn more about the current state of the problem and assess any recent changes. Also to learn more about the community and gauge attitudes toward tourism.

Pascual Rafael Escobar	ASODILL	Leader/Liaison	To learn about the specific needs of the community
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The interviews that were conducted were comprised of in-depth questions that were designed to maximize insight into the problems and needs of the community. While drafting our questions, it was necessary to “conduct an initial cycle of question appraisal, discussion, and modification” (Willis 2005). A list of questions were sent to our advisers and revised before being included in an interview. Subjects were chosen carefully based on their expertise on the problems and needs of Loma Linda in order to attain the most relevant information. When designing the questions to send Pascual Rafael Escobar, it was important that they were easy for the subject to read and understand. Questions were also screened for their clarity to ensure that the proper intent of the question was communicated to the respondent. This was especially important when writing our questions in Spanish as we did not want any of our meaning to be lost in translation. Lastly, the questions were assessed to ensure that no sensitive content or bias were present. (Willis 2005)

For face-to-face interviews including in-person and Skype conferences, verbal probing techniques were applied. Subjects were made to feel comfortable during verbal probing sessions and their permission was requested before any of their responses were recorded. As recommended by Willis (2005), questions objectives were revisited often in order to secure meaningful data, and the data that we sought out to find. Both think-aloud and interviewer-based probing techniques were utilized since there were both periods of brainstorming involved along with pre-conceived questions. In face-to-face interviews, quality was always emphasized over quantity to achieve the highest level of understanding between the interviewers and the subjects. Below is a table that demonstrates the types of questions asked of the subjects (Willis 2005). In

order to analyze the results from face-to-face interviews, each interview was first transcribed and interpreted.

The data from these interviews were studied using a qualitative analysis as described by Talja (1999). This method of analysis involves identifying the most satisfactory responses from each participant's discourse and ignoring responses that are deemed unimportant or off topic. According to Talja (1999), "It is assumed that this procedure will result in a logical and coherent picture of the researched groups' actions or views and can be generalized into classes of social action." This type of qualitative analysis served to organize which responses that were most relevant to our project and helped to highlight the most important pieces of information that were gathered from each interview. Sample interview questions are shown in Table 2:

**Table 2: Sample Questions from an Interview with Jesse Mattleman**

<b>Sample Questions for Jesse Mattleman</b>
Can you describe the community of Loma Linda and give some background information on the problems faced there?
Has anything changed recently regarding the coffee rust problem?
What is the general attitude in Loma Linda towards tourism?
Do the residents of Loma Linda feel comfortable receiving foreign help when solving problems?

### **3.2 Objective 2: Establish and gain approval for a legacy project that will enable travel to Loma Linda each year**

The two major focuses of any trip is the risk and cost. Properly evaluating both aspects will improve our chances of having our project approved. This project will act as a trial run and will be adjusted accordingly for future travel.

Risk is typically identified before the project begins, but as the project progresses the number of risks increase. Risk is defined as “an event that has a probability of occurring, and could have either a positive or negative impact to a project should that risk occur (Risk Management Plan n.d.). The CDC labels events as high risk when they occur frequently or if they will be experienced continuously until some action is taken. Although some risk can be planned for, others are completely outside of the project team’s control. Risk awareness, identification, documentation, and communication are essential to a project’s success (Risk Management Plan n.d.).

Risk can be assessed qualitatively to determine the probability of an event happening and its overall impact on the project. The probability of an occurrence can be categorized in Table 3:

**Table 3: Probability of occurrence**

Probability of Event	Meaning
High	Greater than 70% probability of occurring
Medium	Between 30% and 70% probability of occurring
Low	Below 30% probability of occurring

Note: From (Risk Management Plan n.d.)

The impact risk has on a project can be assessed in a similar manner, split into categories from high to low. This is outlined in Table 4:

**Table 4: Impact of Risk on Project**

Impact of Event	Meaning
High	Risk that has the potential to greatly impact project cost, schedule, performance
Medium	Risk that has the potential to slightly impact project cost, schedule, performance

Low	Risk that has relatively little impact project cost, schedule, performance
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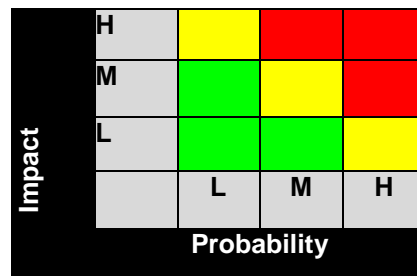


Figure 1: Matrix of Risk for Decision Making

The matrix above can be used to assess which risks need to be addressed. Risk falling within the red and yellow zones will require risk mitigation and a risk contingency plan (CDC Risk Management Plan). For each risk that needs to be mitigated, a plan to prevent the risk or reduce its impact will be created. Typically one of the following four approaches will be taken.

**Avoid** – Eliminate the threat by eliminating the cause

**Mitigate** – Identify ways to reduce the probability or the impact of the risk

**Accept** – Nothing will be done

**Transfer** – Make another party responsible for the risk (buy insurance, outsourcing, etc.)

Cost and safety are great concerns when looking into the impact of an event. This is where risk management and preparation becomes necessary.

Research into past events is the first step in calculating certain risks. For example, researching different types of crimes will supply us with multiple sample groups of varying sizes. You can then determine the likelihood of each event occurring based off of the frequency of past events and their locations. This can then be categorized using the system described previously. In this case we will categorize the likelihood of the driver not arriving at his destination on time. As this event occurs infrequently and has little effect on the project, you can

categorize it as low impact and low probability. Referring to the matrix above, being in the green zone will require little to no planning in preparation for this risk.

Investigating the previous trips taken to Guatemala, as well as talking to Jesse Mattleman was beneficial when determining the risk. Mattleman has worked with Seven Hills Global Outreach program and has spent much time in Loma Linda as well. Being familiar with the area, and having conducted previous trips, she was able to provide us with information regarding travel, dangerous areas to avoid, social conduct, and other possible risks. We gained this information through conducting an interview with Ms. Mattleman.

Interviews with both Jesse Mattleman and Anne Ogilvie helped us gain better insight on how international project centers are created and how costs and risk play a factor. Speaking to Jesse Mattleman has been beneficial when determining some risk. Mattleman has worked with Seven Hills Global Outreach program and has spent much time in Loma Linda as well. Being familiar with the area, and having conducted previous trips, she supplied us with information regarding travel, dangerous areas to avoid, social conduct, and other possible risks.

We contacted Anne Ogilvie, the Director of Global Operations for WPI, because she is an expert at analyzing risk in international projects. Mrs. Ogilvie works with hundreds of students and faculty every year, ensuring their international travels and projects go according to plan. She provided information on how large organizations, such as WPI, plan for these large scale projects. Issues such as risk management and total cost must be addressed in order for these trips to run successfully. As previously done with Ms. Mattleman and Señor Escobar, interview questions have been drafted and approved in order to efficiently use her time and gain the most information. Sample questions from interviews with Ms. Mattleman, Señor Escobar, and Anne Ogilvie can be seen in Table:



**Table 5: Sample questions pertaining to establishing travel destinations**

Interviewee	Questions
Jesse Mattleman	<ul style="list-style-type: none"> <li>• Do you consider Loma Linda to be a high risk travel destination?</li> <li>• In previous years, how have you introduced travelers to Guatemala?</li> <li>• How does Seven Hills Global Outreach select communities to help and what are their first steps to begin work in that location.</li> <li>• How have you dealt with issues that arose during previous trips?</li> </ul>
Pascual Escobar	<ul style="list-style-type: none"> <li>• Do you feel the people of Loma Linda would welcome annual travel to their community?</li> <li>• Would another housing structure be required to accommodate the heavier traffic flow?</li> </ul>
Anne Ogilvie	<ul style="list-style-type: none"> <li>• What are some aspects you look into when establishing a new project center?</li> <li>• How long is the planning process?</li> <li>• What would make you choose one project site over another?</li> <li>• How do you calculate the risk involved when traveling to a location?</li> </ul>

The overall cost of the trip is another major factor to consider when planning international travel. Although we do not know the exact costs yet, looking into the costs of similar projects helped us gain a better understanding of what to expect. WPI is currently working with project centers located in Costa Rica and Panama. As both are located in Central America, we can infer that the costs are similar.

**Table 6: Costs associated with existing IQP project centers**

	Costa Rica	Panama
Airfare	\$575	\$650
On Site Transportation	\$40	\$150
Food	\$410	\$650
Tourist Incidentals	\$800	\$800

Note. Adapted from (Global Project Programs n.d.)

The trips mentioned above last about eight weeks, while ours will occur over a span of five to seven days. That being said, costs for food, on site travel, and tourist incidentals will be much lower. This is a rough analysis based on the previous trips to Central America mentioned above.

The Guatemalan currency, the quetzal or Q, has an exchange rate of about Q7.65 per 1 US dollar as of the time this report was written. According to Jesse Mattleman, the largest expense will be transportation. This will include the plane ticket and paying for drivers that are able to provide transportation to and from the project site and other areas of interest throughout the trip. We have used the costs from previous trips to estimate the total cost of the proposed trip to Loma Linda in Table 7:

**Table 7: Estimated cost for Loma Linda tour**

	Estimated Cost in Quetzal (Q)	Estimated Cost in US Dollar (\$)
Airfare	Q4965.02	\$650*
On Site Transportation	Q181.41	\$23.75
Food	Q504.14	\$66
Souvenirs, Excursions, etc	Q763.85	\$100
Total	Q6414.43	\$839.75

\*Roundtrip Boston to Guatemala City

As our project progresses we will use this table to calculate the total cost, as well as edited it accordingly.

### **3.3 Objective 3: Develop a marketing campaign to connect Seven Hills Global Outreach with volunteers from universities and professional organizations**

Volunteers are the core to any service learning based organization. Therefore increasing the number of volunteers will be beneficial to both Seven Hills and ASODILL. One of our objectives as an IQP group is creating a marketing strategy to increase awareness about Seven Hills and their involvement with Loma Linda. By targeting college students at select schools, or certain organizations, we will create a group of individuals with the set of skills needed to address certain issues Loma Linda faces.

An important step in sourcing volunteers for a service learning trip is to gauge interest in potential candidates. In order to gauge interest in our program, we designed two online surveys using Qualtrics. We designed a student survey that can be distributed to students on university campuses and a professional survey that can be distributed to botanical specialists from professional organizations. The results of the surveys provided data on the types of people interested in participating in our program as well as their aptitude for performing relevant tasks effectively. The student survey was distributed to WPI students only through our own personal club and fraternity networks via email. The professional survey was distributed to several botanical and specialty coffee associations. The organizations that were contacted can be seen in Table 8:

**Table 8: Professional Survey Distribution**

<b>Company Name</b>
Sainsbury Laboratory
The Specialty Coffee Association of America
International Coffee Organization
World Coffee Research
USAID
Inga Foundation
John Innes Centre
The Genome Analysis Centre
The National Coffee Association USA
The Botanical Society of America

The professional survey was also sent to our fraternity alumni networks. These two surveys were used in order to gain insight on different types of edu-tourists. The survey was designed to gauge whether students and professionals had skills to do impactful work in Loma Linda. To do this, the student survey inquired about interest in building infrastructure and performing physical labor tasks while the professional survey included questions about the coffee fungus specifically.

According to Creative Research Systems, some of the advantages of an online survey are that “web page surveys are extremely fast” and “there is practically no cost involved once the set-up has been completed. Large samples do not cost more than smaller ones” (Survey Design Software). The survey also screened for competency and interest in certain subjects that have been deemed desirable in an ideal candidate such as biology and construction. When designing the survey we kept certain development criteria in mind. One such criterion can be portrayed by the phrase “keep it short and simple” (Survey Design Software). We made a list of possible questions and then we reviewed and edited it, eliminating any questions that we felt were redundant, and limiting the questions asked to yield only relevant data. Our final survey consisted of only eighteen questions. This also promotes more responses since people are less likely to spend their time answering longer surveys. To introduce our survey we included a short paragraph explaining why we were sending out the survey and about the opportunity that the survey presented (Survey Design Software).

According to Brace (2004), many problems can arise if we do not consider the ambiguity of the question, the order of the questions, and the amount of response codes. Questions should be worded in such a way that the respondent can understand. By keeping the wording of our questions simplified we can assure that there is no confusion as to what is being asked. The order

of questions should also be considered, as a previous question may elicit a certain response to the following questions. Ordering questions in a broad to more specific order will help prevent biased responses. Another consideration that must be taken into account is the amount of options the respondent can choose. We are using the Likert scale; where responses range from strongly disagree to strongly agree. This allows the respondent to more accurately represent their feelings toward the statement presented. The survey is short in length, consisting of 18 questions in total. Examples of questions asked in our survey are shown in Table 9:

**Table 9: Sample Questions from Student Survey**

I would be interested in participating in an alternative spring break program.
I would be willing and able to fund my travel to and from an international project site.
I would be comfortable living in the home of a foreign family during my service.
I have an interest in sustainable economic development and community growth.

We have also designed a flyer in order to spread information about upcoming tours and to attract potential tourists. These flyers will be distributed at universities and professional organizations in order to achieve maximum exposure to the ideal demographic. Each flyer will promote the project currently being offered, as well as encourage prospective edu-tourists to volunteer and make a difference. It will also give some insight to Guatemalan culture, allowing volunteers to gain some global perspective. As the projects change, so will the flyers as different projects will need volunteers with varying skill sets. With these we hope to increase awareness about the challenges being faced in Loma Linda, increasing travel and tourism there, and ultimately provide some direct benefit to the residents of Loma Linda. Although these trips themselves may not generate significant income for the community, they will lead to an influx of

skilled volunteers who are qualified for the work that is necessary to start solving the problems in Loma Linda.

While designing the sample flyer, we made sure that the poster was informative, yet aesthetically pleasing and enticing to the viewer. In order to achieve effective flyer design, we took scrupulous care in selecting the images, words, fonts, and colors that were to be used on the poster. It is imperative that flyers in the tourism industry have a strong focus on the destination. The promotion should be based around where the tourists will be going and what they will be doing while they are there. According to Molina (2006), “Potential tourists frequently have limited knowledge about a destination not previously visited, often only from media or their social groups, and they formulate images of alternative locations, so that image emerges as a critical element in the destination choice process.” All images featured on the sample flyer were selected to evoke a strong sense of the environment. The theme that these images are linked to is sustainability which will help to attract the desired candidates. It was also of utmost importance to include all of the necessary information regarding our program while limiting the amount of text. Molina (2006) claims that “The information about a concrete destination, which is occasionally demanded by tourists, is a particularly important means of promotion for the tourism industry. Its value depends on its reaching consumers and satisfying their interests and needs.” We made sure to include information that would excite prospective volunteers and leave them with a desire to request further details. This flyer design will optimize our ability to recruit our target edu-tourists and market this opportunity appropriately.

### **3.4 Objective 4: Develop an edu-tourism program itinerary with an emphasis on service learning for use in annual tours**

Loma Linda has established successful edu-tourism programs through the work of ASODILL. We wanted to further their goals by continuing to develop their edu-tourism efforts. ASODILL has had many successes in the past due in great part to the assistance from SHGO. One way that Seven Hills helps a community is they organize regularly planned small expeditions to the communities in which they work. They provide an opportunity for small educational and volunteer groups to engage in meaningful experiential learning in another country over a short period of time. This is the kind of program that we will like to establish. To do this, we collected data from other organizations that have set up successful programs such as Seven Hills (Mattleman, unpublished raw data). Seven Hills has had successful trips to Loma Linda. One trip sent twelve Clark students to stay in Loma Linda from January 3<sup>rd</sup> through the 11<sup>th</sup> in 2013. There, the students were split into teams that worked on a variety of projects including ecotourism, agriculture and soccer clinics. We used these past trips to help develop the itinerary for our trip, by evaluating how well the participants liked the trip and by how effective the trip was in helping the community.

For our preliminary work on the itinerary, we studied the resources provided by Jesse Mattleman. These give a good framework for the itineraries we developed. To help develop our itinerary we communicated with Ms. Mattleman again. We researched more of the logistical information that was necessary to set up a program that is similar to a Seven Hills project. Also through communicating with Ms. Mattleman, we received an accurate and up to date status of the community's needs. We also contacted Pascual Escobar and inquire about the common schedules of the community members and how we could integrate our itineraries with them. We also asked Señor Escobar about the available accommodations currently in place for the volunteers. More specifically, we asked if there are available host families and what the schedule

would be for volunteers staying with one of the families. To develop the itinerary steps that occur before the participants leave for Guatemala we contacted Anne Ogilvie and others in administrative positions at WPI and other organizations. This helped to establish the steps that need to be taken to guarantee safe travel and hospitality for the program participants. We also discussed the actions that need to be accomplished before volunteers leave for the trip. This included organizing a timeline of when a passport needs to be obtained and the recommended time to receive the necessary vaccinations. Interviewees and sample questions are shown in Table 10:

**Table 10: Questions to ask Contacts Pertaining to Creating an Itinerary**

Interviewee	Questions
Jesse Mattleman	<ul style="list-style-type: none"> <li>• How can we shape an itinerary to the needs of the community?</li> <li>• What has worked well in previous program itineraries used in Loma Linda?</li> <li>• What are Seven Hills' steps and policies when organizing and establishing a new itinerary?</li> </ul>
Pasquel Escabar	<ul style="list-style-type: none"> <li>• What is the common day to day schedule of the citizens in the community?</li> <li>• What are the available accommodations?</li> <li>• How many families in the community are willing to accept tourists into their homes for home stays?</li> </ul>
Anne Ogilvie	<ul style="list-style-type: none"> <li>• How does the IGSD approach the development of program itineraries for its global project centers?</li> <li>• Do you have access to any of the current program itineraries?</li> <li>• How structured should the itinerary be?</li> <li>• Should there be a strict schedule of activities set or a more flexible approach for setting up daily activities?</li> </ul>



## Chapter 4: Results and Discussion

### 4.1 Initial Interviews and Preliminary Data Gathering

The team first spoke with Ashley Gilbert, who introduced us to the project and gave us a “big picture” overview of the goals and challenges associated with it. We then conducted an initial interview with Jesse Mattleman to talk about the direction of our IQP and to learn about Loma Linda and the complex problems being faced in the community. Lastly, we sent a list of questions to Pascual Escobar to gain a first-hand account of the current issues in the community and what projects are being pursued by ASODILL. The results of these interviews were analyzed qualitatively as outlined in the methodology section in order to identify barriers to our project and highlight critical areas in need of improvement in Loma Linda.

#### 4.1.1 Interview 1 with Jesse Mattleman

On November 19th, we conducted an interview with Jesse Mattleman via Skype. Ms. Mattleman was able to provide key insight into the problems being faced in Loma Linda. She explained how heavily reliant Loma Linda’s economy is on their coffee crop. Ms. Mattleman linked the recent decline in the economy to a recent outbreak of a coffee fungus which destroys the plant, resulting in a significantly diminished yield. Ms. Mattleman explained that in order to recover economically, the citizens of Loma Linda must either find a way to increase the yield of their coffee production or find some other source of income.

From this information, we decided that it would be beneficial to implement an education program in Loma Linda. This program would be able to address many issues in the community simultaneously. The occasional influx of tourists will stimulate the economy to some

degree, but the real benefit is the work that can be completed by the volunteer tourists. We decided to dedicate this project to sourcing volunteers from universities and professional organizations that are willing and able to make a real difference in Loma Linda.

#### **4.1.2 Responses to our Inquiry to Pascual Rafael Escobar**

We sent a master list of our questions intended for Pascual Rafael Escobar to Jesse Mattleman. Since Ms. Mattleman maintains contact with Señor Escobar, she offered to facilitate our correspondence with him. Ms. Mattleman did not feel comfortable sending such a large list of questions to Señor Escobar, as it would create a considerable amount of work for him. Instead, Ms. Mattleman was confident that she could answer the questions as Señor Escobar would, as these were questions that she had discussed at length with him in the past. Ms. Mattleman explained that nothing has changed regarding the coffee problem in Loma Linda. The coffee rust is still afflicting many plants, especially those grown at lower altitudes and is threatening not only the livelihood of many farming families in Loma Linda, but the coffee cooperative as a whole. The issue is compounded because in order to combat the coffee rust, expensive chemicals must be used, so farmers cannot afford to treat the crops. Additionally, the coffee that is grown organically cannot be exposed to such chemicals. Using these chemicals on organic coffee crops would have financial, agricultural, and ethical implications.

Ms. Mattleman also explained that the community is definitely interested in the development of eco-tourism and edu-tourism programs. She continued to describe the economic hardship being faced in Loma Linda and attributed some of it to the migration of young adults to urban areas where there are more abundant work opportunities. It is certain that in order for the economy to recover, it is imperative that there is reintegration of the young adult population in

the community as their participation is essential to the workforce in Loma Linda. However, there must be economic opportunities present as an incentive to return.

We also received a wealth of information about Loma Linda as a tourism hub. Ms. Mattleman explained that residents of Loma Linda like the idea of having students visit the community as long as their stay is carried out in the context of their organized edu-tourism efforts. The residents of Loma Linda can benefit from these trips economically, and as an educational and cultural exchange. Ms. Mattleman stated that winter months in the United States are the best times to visit Loma Linda. While tourists are certainly welcome year-round, the United States' summer aligns with the rainy season in Guatemala, making it unsuitable for volunteer work. When asked about the possibility of volunteers from organizations aside from colleges and universities, Ms. Mattleman stated that Loma Linda has in the past catered to several different types of organizations. According to Ms. Mattleman, Loma Linda is flexible in the size of the tour groups it can accommodate. This is because a hostel has been built that has three rooms with two double beds and one room with one double bed and many families in the community are willing to welcome volunteers into their homes for home stays. From this information, it is clear that Loma Linda is suitable for edu-tourism programs and has the capacity to accommodate various types of visiting groups.

Ms. Mattleman also informed us of projects being worked on by ASODILL. She explained that ASODILL is currently working on eco-tourism and edu-tourism by conducting field work, business development, and building infrastructure such as the hostel and trails, trail guides, and community training. They are also working on projects involving environmental education and recycling programs with the youth of the community. Other projects being worked on by ASODILL include community dialogue, education and youth support, opportunities for

women, handicraft skill development, and fundraising. These are all projects that edu-tourists could actively become a part of during tours. Even if tourists cannot specifically aid main the coffee fungus problem, there is a lot of physical labor and education based work that they can participate in.

## **4.2 Interviews with Arthur Heinricher and Anne Ogilvie**

### **4.2.1 Results from Interview with Arthur Heinricher**

On February 3rd, the team conducted an interview with Arthur Heinricher, Dean of Undergraduate Studies. We discussed with him the proposed idea of J term. J term will run from the beginning of January 1<sup>st</sup> to the start of C term. There has also been some discussion to start a week later in January, so that will be an additional week for J term. Mr. Heinricher is optimistic and believes that J term could start up as soon as next year.

Setting up a project location in Loma Linda would require staff from IGSD to visit the site and certify the housing as adequate and safe. Dean Heinricher stated that project centers have been closed down due to not meeting WPI's and IGSD's standards. Therefore housing is a major concern. According to Mr. Heinricher, "The key to this is there has to be somebody on the ground wherever the students are going as sort of a local contact. None of our project centers can work without that." This however reflects upon the standards for an IQP level project, where students stay in one location for an extended amount of time. Mr. Heinricher believes that if students only stay for ten days or less, it will allow the program to be more feasible and flexible. He explained that this is because longer trips lead to heightened concerns for liabilities and safety.

We then discussed liabilities and how they may differ with certain types of international trips. Although he was not certain as to whether the liabilities may differ, he was confident that

WPI would not send students to a country on the State Department's watch list, which has featured travel alerts and warnings in Guatemala. Similar concerns arose when we interviewed Anne Ogilvie.

#### **4.2.2 Results from Interview with Anne Ogilvie**

On February 4th, the team conducted an interview with Anne Ogilvie, Director of Global Operations. We discussed the possibility of setting up an international trip to Loma Linda, the risk and liabilities associated with travel, and the overall concerns Mrs. Ogilvie and the IGSD office has about the trip.

We asked Mrs. Ogilvie about her main concerns with traveling to Guatemala, in which she said she was most worried about the location and transportation. Pulling out a large binder, Mrs. Ogilvie showed us many of the reference material she uses when discussing travel to Guatemala. It contained information from the websites of the US State Department and the Bureau of Diplomatic Security. To avoid getting information that is biased due to international politics, Mrs. Ogilvie and other members of the IGSD department look at multiple viewpoints, such as advice from the UK Foreign and Commonwealth Office, and similar embassies in Canada and Australia. They consult the Center for Disease Control guidelines, as well as the crime and safety report for each project location.

Another resource the IGSD office often references is the Association for Safe International Road Travel or ASIRT. ASIRT was started by a parent whose son was killed in a car accident while traveling overseas as a college student. ASIRT creates detailed research reports on travel conditions in each country and the IGSD department receives these reports for all the countries that they operate in. Mrs. Ogilvie procured one such report on travel conditions



The majority of the route to Loma Linda has a recent history of banditry. We brought up the fact that the transportation set up by Seven Hills would include an armed escort for extra precaution. Mrs. Ogilvie shared with us one situation where even when travelling in a caravan, a group experienced hijackings. As a result, the IGSD office is not comfortable sending students to travel on a high risk route. We then asked how the Engineers Without Borders club (EWB) was able to gain approval for their work in Guatemala. Referencing the map again, she showed us where EWB's work was located and the route they took from Guatemala City to get there. As can be seen above, when travelling from Guatemala City to San Cristobal Verapaz, there is clearly much less criminal activity on the routes to this location. Mrs. Ogilvie also explained that EWB has been working at this location for quite some time with well-established local partners. Multiple WPI faculty members have also been to this location to vouch for its safety. Referring to travel to Loma Linda Mrs. Ogilvie stated "We are not going to send students off to a project where no WPI staff or faculty has visited before and determined that it is a good place." She stated that WPI takes a much more "organic" approach, meaning one that stems from a WPI faculty member building personal relationships with a community, when establishing project centers and would not be comfortable endorsing a project that SHGO has developed individually.

Aside from high concern for location and travel, Mrs. Ogilvie brought up the fact that Seven Hills does not have formal university partnerships. We mentioned Seven Hills work with Clark University, but she informed us that there is no Clark University faculty member associated with Seven Hills. Although Mrs. Ogilvie believes Seven Hills has done great work she stated "it does not have a history of the kind of university partnerships that we like to see. I don't think we will be the ground floor partner for an organization like this." Perhaps in the future, it

will be possible for WPI professors to travel to Loma Linda to assess the area and to establish interest in a partnership.

After this discussion with Mrs. Ogilvie, it was determined that an official partnership between Seven Hills and WPI that allows WPI students to travel to Loma Linda, Guatemala would not be possible. This is partly due to Seven Hills not having the history that IGSD usually looks for in a partner. Also, having a WPI affiliated professor or faculty member who has been to Loma Linda and has assessed the location is needed for possible future work. Aside from sponsorship, safety is of the highest concern. If the major roadways used to travel to and from Loma Linda have a major decrease in incidents of banditry, then the project location may be reconsidered. Overall, we have concluded that this option is not feasible within the time frame of our IQP.

### **4.3 Survey Results and Analysis**

Our two surveys remained active from March 19, 2015 until April 7, 2015 when we closed them to gather responses and analyze the results.

#### **4.3.1 Student Interest Survey Results**

The WPI Student Interest survey received a total of 236 responses. An important statement from the survey was “I like to see the world from the perspective of cultures other than my own.” We consider students who agree with this statement to be better suited to this type of volunteer tourism trip. The results from the survey can be seen in Figure 4:



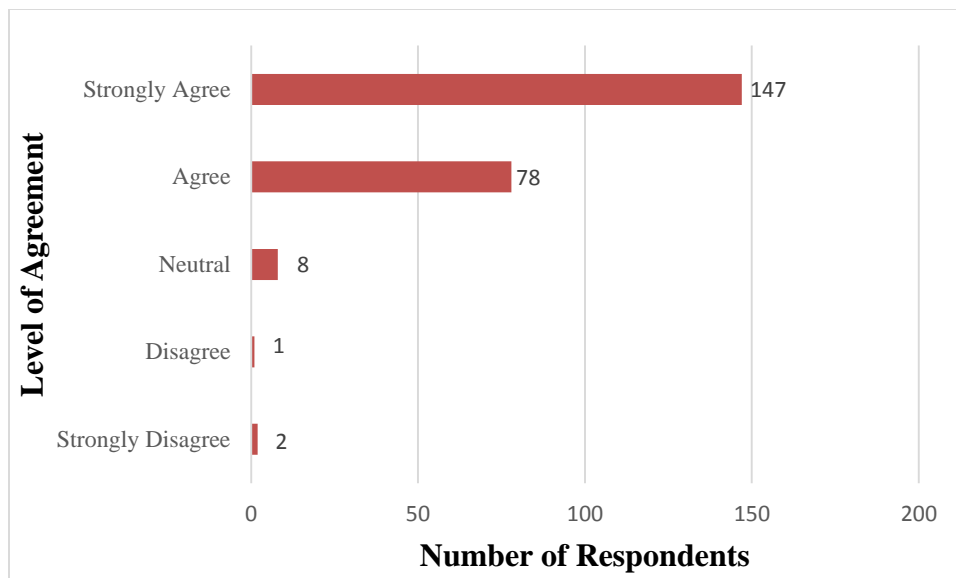


Figure 4: Survey Question 14 Result

Of the 236 respondents, 95% agreed that they “like to see the world from the perspective of cultures other than my own.” This can be seen in Figure 4 shown above. This is important because it means WPI students are open-minded and willing to understand cultural differences and how they may affect the work they do.

WPI students were asked whether or not they agree that they would be interested in a volunteer tourism program over spring break. The results can be seen in Figure 5:

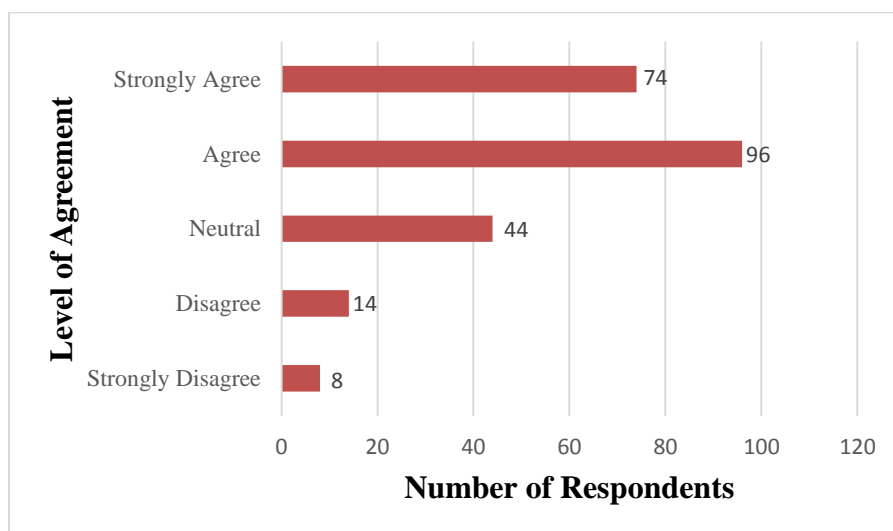


Figure 5: Survey Question 2 Results

When asked about what time of the year students preferred to go on a “volunteer tourism program”, 72% (170 out of 236) were interested in going over spring break, 139 out of 236 were interested in going over summer break, and 149 out of 236 were interested in going over winter break. Seventy-two percent of the respondents were interested in travelling over spring break, while only 58% were interested in travelling over summer break. We believe interest drops during the summer and winter breaks due to the fact that many students return home during this time.

Next, survey participants submitted responses regarding the financial aspects of the potential volunteer tourism trip. The Students were first asked if they would be willing and able to fund their own trips. The results can be seen in Figure 6:

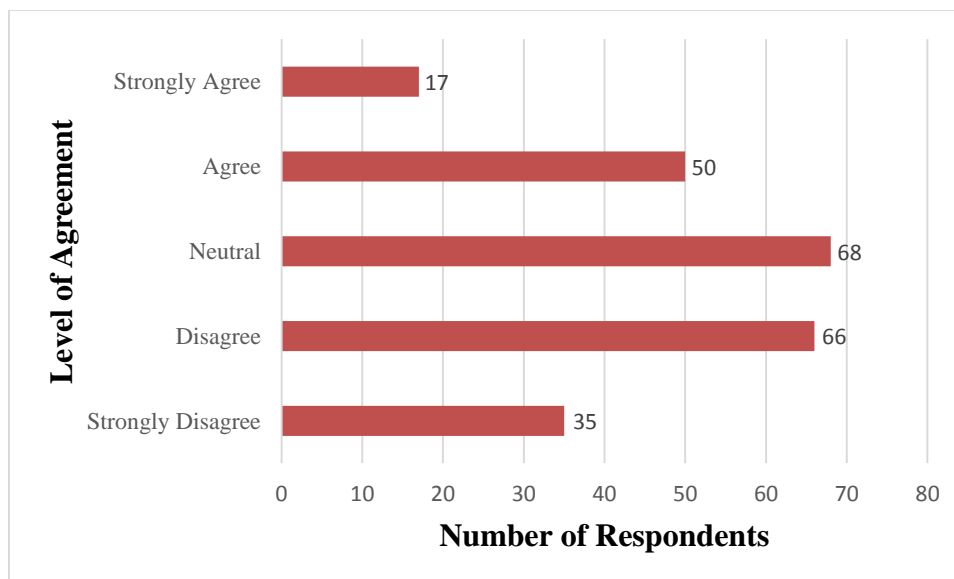


Figure 6: Survey Question 5 Results

The students were then asked if they would be willing to fundraise to finance their trip. The results can be seen in Figures 7:

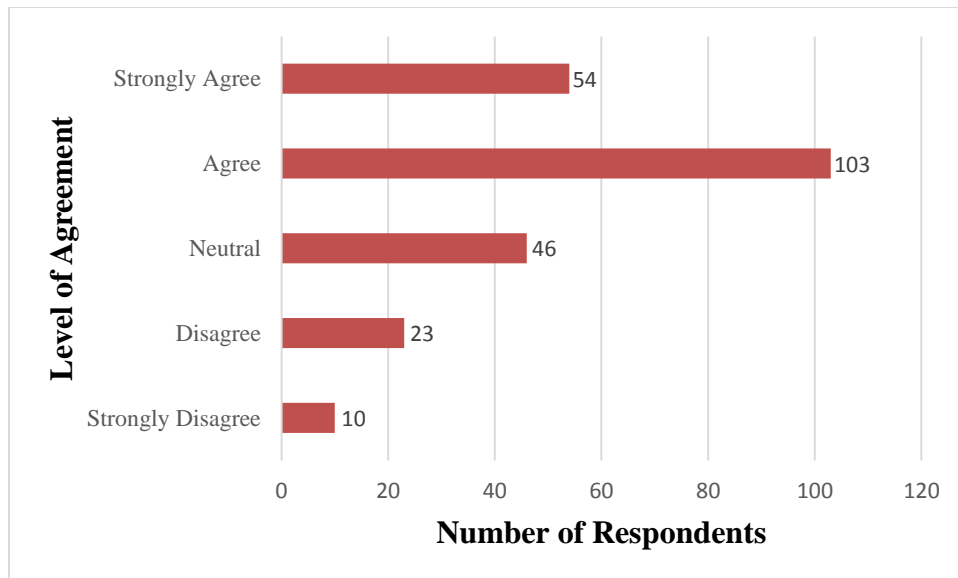


Figure 7: Survey Question 6 Results

Referencing Figure 6, when asked if students would be willing and able to fund their travel to and from an international project site, only 28% agreed, with an additional 28% unsure or neutral. However, when asked if they would be willing to fundraise for their trip, the number of positive responses increased drastically. Figure 7 shows that 157 out of the 236 respondents agreed that they would fundraise for their travel. Only 33 respondents disagreed when asked if they would be willing to fundraise to finance their trip. This shows that finances are a major factor for respondents when determining whether they can participate in a project involving international travel.

The following graphs portray results pertaining to the topics that may be relevant to the work students will be doing on a volunteer tourism trip. Students were asked if they have an interest in sustainable economic development and community growth. These results are shown in Figure 8:

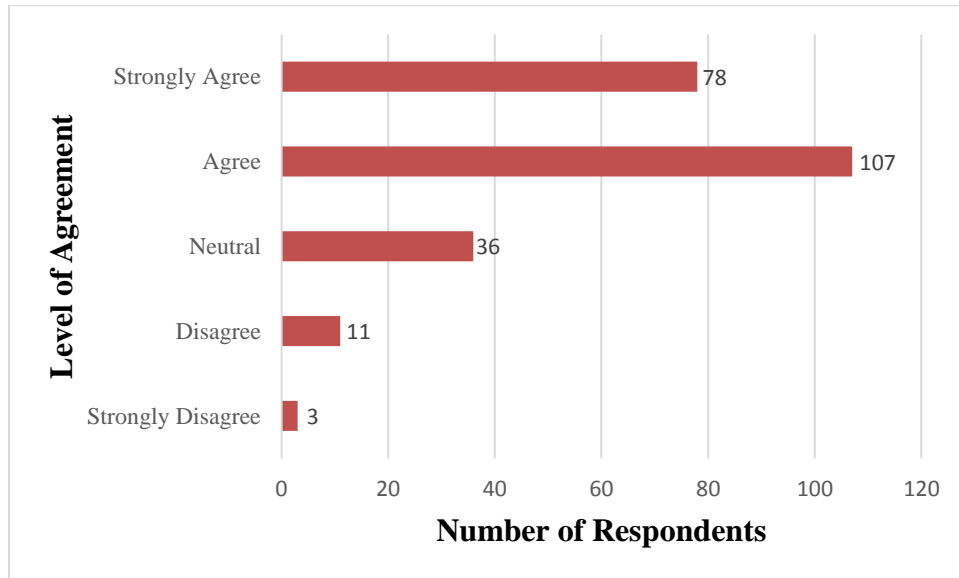


Figure 8: Survey Question 9 Results

As can be seen above in Figure 8, when asked if the student has interest in sustainable economic development and community growth 78% of the respondents agreed. Students were then asked if they would be interested in building new infrastructure in a developing community. These results are shown in Figure 9:

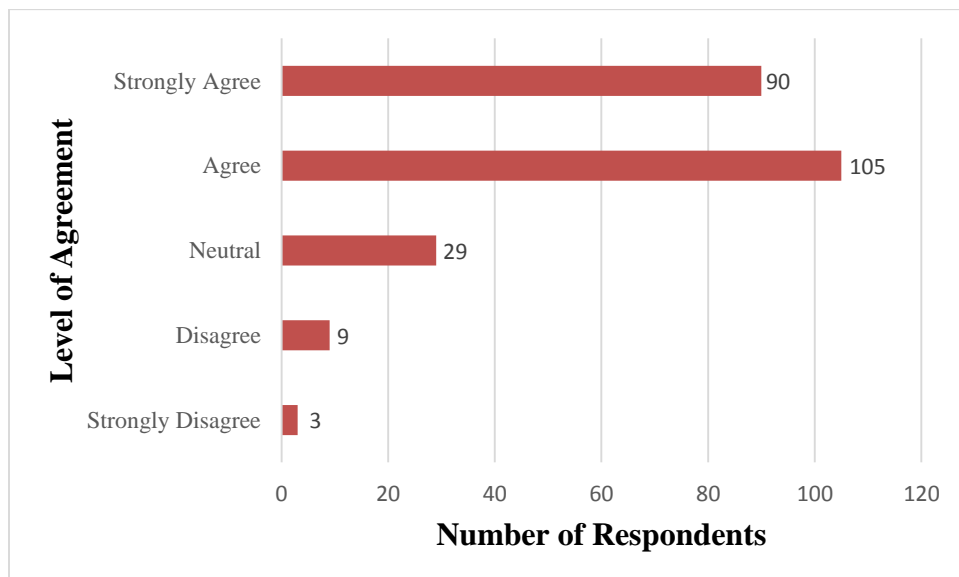


Figure 9: Survey Question 12 Results

When asked if students would be interested in building new infrastructure, 195 out of the 236 respondents, or about 83% agreed. This is shown in Figure 9. The results from both of these charts suggest that students would be interested in helping Loma Linda grow as a community.

Student interest was also gauged in research areas that were considered important for this program. The students were first asked if they agree with the statement “I have an interest in the preservation of the biodiversity of bird and plant species.” These results are shown in Figure 10:

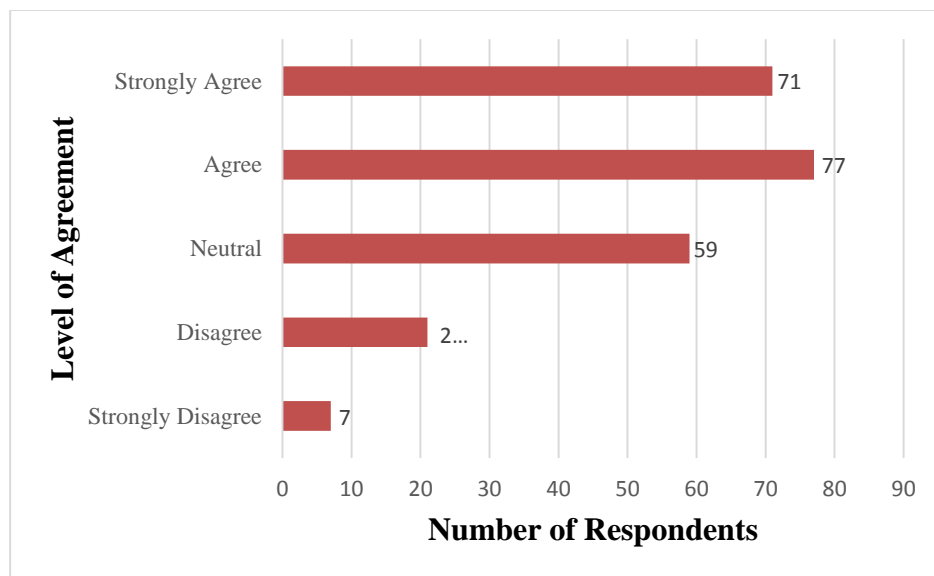


Figure 10: Survey Question 10 Results

The students were then asked if they agree with the statement “I would be interested in investigating a coffee fungus outbreak in Guatemala.” These results are shown in Figure 11:

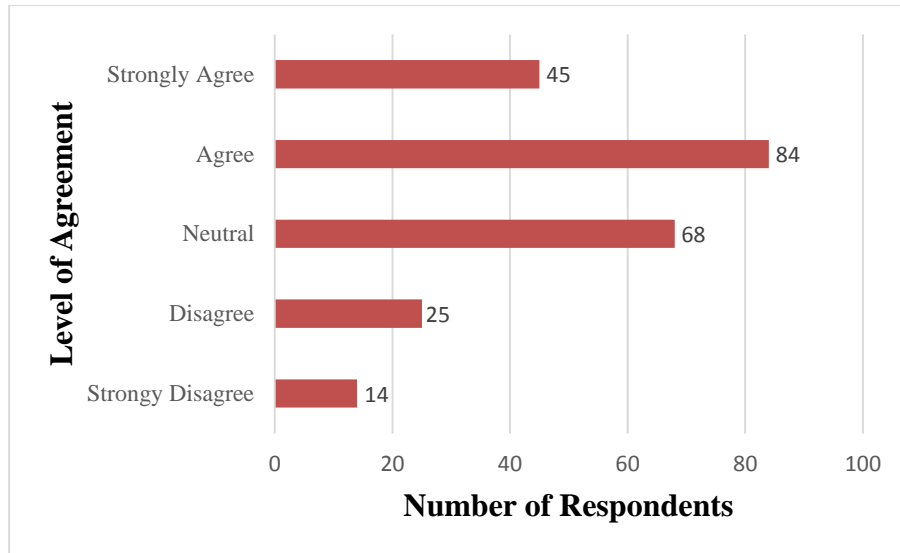


Figure 11: Survey Question 18 Results

As can be seen above in Figure 10, when interest on the preservation of biodiversity was gauged, 148 out of 236 were interested with an additional 59 students being neutral on the topic.

Additionally, Figure 11 shows that 129 students were interested in directly working on the coffee fungus outbreak and an additional 68 were neutral. These results show that the majority of the respondents in this sample are interested in addressing the problems discussed earlier in the report.

Lastly, the survey asked if the students had proficient Spanish speaking skills. The results are shown in Figure 12:

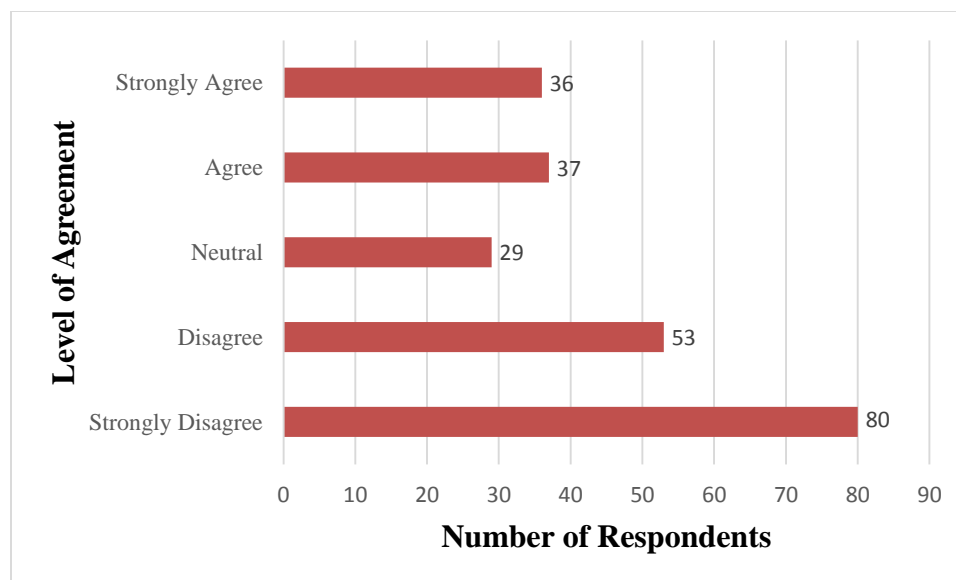


Figure 12: Survey Question 17 Results

Figure 12 above shows that the 69% of the students who responded are not confident in their level of Spanish speaking ability. This raises minimal concern as pre-travel preparation can help students improve their language skills.

#### 4.3.2 Professional Interest Survey Results

Although we only received 13 responses, we closed this survey to prevent damaging the sensitive relationships between SHGO and other NGO's working in Guatemala and in the field of coffee. We were made aware of this issue by Jesse Mattleman. With such a small sample size it is hard to generalize the results for a whole populace. Therefore the following conclusions should not be considered as absolute fact.

This small amount of responses could be due to issues with reaching our intended targets. Since this survey was solely sent through email, it could have easily been disregarded as spam or simply forgotten about. This is understandable as these professionals are busy with their own

work. Of the responses that were received, many were less enthusiastic than the responses of the student survey. The negative response may be accredited to the lack of incentive and time. For a professional, working without pay and missing multiple days at their current job can possibly take a toll financially. It is also possible that this survey did not reach the intended audience. While the survey was sent to various botanical and coffee associations, our results show that we only garnered one response from of these target organizations. The remainder of the responses came from our personal alumni networks. It was asked that respondents write in the name of their organization during the survey. The list of organizations that participated can be seen in Figure 13:

Text Response	
<a href="#">View</a>	Stanley Black and Decker
<a href="#">View</a>	Siemens Healthcare
<a href="#">View</a>	Protonex Technology
<a href="#">View</a>	Botanical Society of America
<a href="#">View</a>	Aavid Thermalloy
<a href="#">View</a>	Usaid

Figure 13: Organizations – Survey Participation

However, through the distribution of this survey, we did receive an email from the World Coffee Research (WCR) organization. David Laughlin of WCR stated that the faculty had little time to devote to volunteer work but that WCR has a number of interns that may be interested in participating in our edu-tourism program. Mr. Laughlin also expressed interest in personally visiting Loma Linda to see their coffee operations. This could evolve into a new partnership for SHGO in the future if the dialogue continues.



#### 4.3.4 Marketing Strategy – Flyer

A flyer was designed in that describes the proposed volunteer tourism trip. The intended use of this flyer is for SHGO to use it as an advertisement for trips they sponsor in the future. Therefore, SHGO can still access this college demographic by reaching out to students at WPI and similar institutions. The flyer that was designed can be seen in Figure 14:

**Alternative School Break!**

**Service Tours**

Offered over Winter, Spring, and Summer College Breaks!

Now recruiting engineering students seeking hands-on, real world problem solving experience. Volunteer and make a difference in Loma Linda, Guatemala

Please contact [aemersongilbert@sevenhills.org](mailto:aemersongilbert@sevenhills.org) to apply or request more info!

**Seven Hills**  
Global Outreach

*Say yes to new adventures*

Figure 14: Flyer – College Target Market

If SHGO distributes flyers like the one shown in Figure 14 on the WPI campus and at other colleges, they can tap into a huge new volunteer base. Even if the schools themselves do not want to be associated with these trips, SHGO still has the opportunity to recruit volunteers.

#### **4.4 Development of Program Itineraries**

We received information pertaining to itinerary design from Jesse Mattleman and Pascual Rafael Escobar. With this information we developed a template itinerary for both students and professionals who might visit the community. The results of this research are exemplified in the student and professional itineraries that we have developed.

##### **4.4.1 Information from Jesse Mattleman**

During our first interview with Ms. Mattleman, she gave a brief description of how one of their Loma Linda trips was scheduled. She described how during a trip the group will spend the first couple of days in Xela and participate in some Spanish immersion exercises. After the interview Ms. Mattleman sent us an email containing multiple resources pertaining to the Loma Linda trips. One of these documents is the itinerary from one of the trips that Clark University students have taken to Loma Linda. Using this document, we modeled both our professional and student itineraries on the itinerary we were provided.

In our second interview with Ms. Mattleman we informed her that we were not approved to go on a trip to Loma Linda and that our project had taken a bit of a different direction. We asked if Seven Hills offered alternative spring and winter break programs. Ms. Mattleman informed us that Seven Hills has trips to a site as often as their partners need them and they occur during the winter and spring breaks of most colleges. Ms. Mattleman communicated that Seven

Hills is open to developing an annually reoccurring college trip as long as there is enough interest and abilities to cover the trips expenses. We expressed to Ms. Mattleman how we were adapting the focus of our project to include trying to market the Loma Linda project site to students and to professionals in the biological sciences and other fields. Ms. Mattleman indicated interest in our idea and stated that Seven Hills has most of the components in place for trips to be possible. They just need the appropriate people to participate in them. We asked Ms. Mattleman if Seven Hills is open to partner with other non-government organizations. She shared that Seven Hills has an interest to build relationships with other organizations as long as it is a beneficial partnership to Seven Hills and its current partners. We asked Ms. Mattleman to pass along a list of questions to Pascual, so that we could get an accurate update about the issues of the community and what solutions to the issues the community would like to see. At the end of the interview we communicated to Ms. Mattleman our interest to create and distribute both a professional and student survey to gauge interest in a service learning project abroad. Ms. Mattleman liked the idea and informed us that she believes it to be a good idea and that she would be willing to help distribute the survey to people associated with Seven Hills.

#### **4.4.2 Further Information from Pascual Rafael Escobar**

We sent Jesse Mattleman an email containing multiple questions for Señor Escobar pertaining to itinerary design. It was expected that Ms. Mattleman would the send these questions to Señor Escobar on our behalf. However, Ms. Mattleman felt confident that she could answer these questions as Señor Escobar would, since she has asked him similar questions in the past and knows how he would typically respond. These questions inquired about the daily lives of the citizens of the community and other information that we can use to glean a travel itinerary

for volunteers to follow. Ms. Mattleman responded by sending us actual itineraries that have been used in the past in trips led by Seven Hills Global Outreach.

#### 4.4.3 Sample Itineraries

Using the information collected above, we created two sample itineraries that can be used for future edu-tourism trips. The itinerary we designed for a trip consisting of student edu-tourists can be seen in Figure 15:

Student Itinerary		
Day 1	Morning	Travel to Guatemala City, drive to Xela
	Afternoon	Have lunch in Xela
	Evening	Dinner in Xela. Group meeting
Day 2	Morning	Breakfast in Xela. Group Spanish work
	Afternoon	Lunch in Xela. Tour of Xela.
	Evening	Dinner in Xela. Group meeting
Day 3	Morning	Breakfast in Xela. Travel to Loma Linda
	Afternoon	Settle into host families homes and or hostel. Introductions; get to know the Community, Meet ASODILL
	Evening	Dinner in Loma Linda. Group meeting
Day 4	Morning	Breakfast with host families
	Afternoon	Work on project
	Evening	Dinner and a group meeting

Day 5	Morning	Breakfast with host families
	Afternoon	Work on project
	Evening	Dinner and a group meeting
Day 6	Morning	Breakfast with host families
	Afternoon	Work on project
	Evening	Final full day in Loma Linda events
Day 7	Morning	Final breakfast with host family. Leave Loma Linda
	Afternoon	Arrival at a secondary location
	Evening	Dinner and group meeting
Day 8	Morning	Trip reflection and breakfast
	Afternoon	Group meeting and lunch
	Evening	Dinner and final group meeting
Day 9	All day	Travel back home

Figure 15: Itinerary for Edu-tourism Trip Consisting of Students

The itinerary we designed for trips consisting of professional edu-tourists is shown in Figure 16:

Professional Itinerary		
	Morning	Travel to Guatemala City, drive to Xela

Day 1	Afternoon	Have lunch in Xela. Meet and greet
	Evening	Dinner in Xela. Group meeting. Project debrief
Day 2	Morning	Breakfast in Xela. Group Spanish work
	Afternoon	Lunch in Xela. Tour of Xela. Time available to go shopping
	Evening	Dinner in Xela. Group meeting
Day 3	Morning	Breakfast in Xela. More Travel to Loma Linda
	Afternoon	Settle into host families homes and or hotel. Introductions, Get to Know the Community, Meet ASODILL
	Evening	Dinner in Loma Linda. Group meeting. Address problem with ASODILL representative
Day 4	Morning	Breakfast with fellow volunteers and ASODILL representative
	Afternoon	Work on project related to coffee fungus
	Evening	Dinner and a group meeting
Day 5	Morning	Breakfast with fellow volunteers and ASODILL representative
	Afternoon	Work on project
	Evening	Dinner and a group meeting
Day 6	Morning	Breakfast with fellow volunteers and ASODILL representative
	Afternoon	Work on project. Compile project data and conclusions
	Evening	Final full day in Loma Linda events
Day 7	Morning	Final breakfast with host family. Leave Loma Linda
	Afternoon	Arrival at a secondary location

	Evening	Dinner and group meeting
Day 8	Morning	Trip reflection and breakfast
	Afternoon	Group meeting and lunch
	Evening	Dinner and final group meeting
Day 9	All day	Travel back home

Figure 16: Itinerary for Edu-tourism Trip Consisting of Professionals

While these itineraries are not perfect, they can be used as guidelines for the implementation of such a program. The student itinerary should be focused on addressing issues such as building infrastructure while professional volunteers should focus on niche tasks such as examining the coffee fungus.

## Conclusions and Recommendations

Although we were not successful in establishing a partnership that would allow students to travel to Loma Linda, Guatemala with SHGO on WPI sanctioned trips, we were successful in identifying other routes for sourcing volunteers from WPI and similar institutions. Through our unfulfilled efforts to gain approval for a legacy project that would enable WPI student travel, we were able to highlight the critical areas of concern for WPI's Interdisciplinary and Global Studies Division. Because safety is the top priority when sending students abroad, the recent roadside incidents documented in Guatemala rendered Loma Linda a high risk location. A lack of hands-on experience by a WPI faculty member with this location also proposed an issue, as most project centers are established in this manner.

### **Recommendation 1: Seek Approval through WPI's IGSD again in the Future**

We recommend that Seven Hills bring this case to WPI and the IGSD office for consideration again in the future. The main concerns listed by the IGSD revolved around the roadside incidents occurring on the stretch of road between Xela and Loma Linda. However, if after some time it can be proven that this area has shown improvement, the IGSD might reconsider their decision. Also, if a WPI faculty member is able to travel to the Loma Linda and establish relations with the community and become familiar with the area, the IGSD will be much less hesitant to approve travel there. The IGSD has built a robust global project system at WPI and they prefer to create projects in an organic way that starts with interest from a faculty member. If in the future, it can be shown that roadside incidents on the roads leading to Loma Linda have diminished and a WPI faculty member visits the community and establishes a



relationship between WPI and Loma Linda, Seven Hills will be able to make a strong case for WPI student travel.

### **Recommendation 2: Advertise Edu-tourism Programs to College Students Directly**

Based on the results of our Student Interest survey, we recommend that Seven Hills advertise edu-tourism trips to students at WPI and similar institutions. This advertising can be done through fliers posted on campus as well as on social media. Although our survey was only dispersed to WPI student, the results can be generalized for a greater population. Our student interest survey shows that students in science, technology, engineering, and math fields are great candidates for this type of program. Respondents showed great interest in travel, preserving biodiversity, studying the coffee rust fungus, as well as helping Loma Linda grow as a community. We suggest that SHGO targets the students directly rather than forming a partnership with the schools as the universities' concerns about liabilities and safety may prevent travel from occurring. We also recommend that SHGO schedules travel during spring vacation to increase the number of participants, as well as provide background knowledge on Guatemalan culture and Spanish language lessons pre-travel.

### **Recommendation 3: Continue Dialogue with World Coffee Research and Reach out to other Botanical Associations**

Finally, we recommend that Seven Hills continues the dialogue that was started with World Coffee Research. We were able to get in establish a connection with David Laughlin, a coffee fungus specialist from World Coffee Research. Seven Hills should continue to correspond with Mr. Laughlin and World Coffee Research as a partnership may be possible. Mr. Laughlin stated in an email that there are interns at World Coffee Research that may be interested in edu-

tourism. He also expressed interest in visiting Loma Linda's coffee operations personally. There is tremendous potential for Seven Hills in this type of relationship since Seven Hills has expertise in leading tours in Loma Linda, and World Coffee Research has knowledge of the coffee fungus and may be able to make further recommendations for treating crops.

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## Appendices

### Appendix A: Interviews

#### Interview 1 with Jesse Mattleman:

**Doug:** Can you describe the community of Loma Linda and give a little background on the problems faced there?

**Jesse:** It's way out in the mountains even though it's pretty close to Xela. The experience is very rural and it feels completely removed from the city. Loma Linda is a pretty small community and it's been around for just about a generation, so in terms of Guatemala's history, it's a fairly new community. Because it's so small, there's a real sense of people knowing each other, and because it's a cooperative, there's a definite need to work as a team when they're doing agricultural activities, primarily. This translates into other aspects of their life too, though. Because they are so removed, they are reliant on each other in many ways to fulfill their basic needs. There's an education center and school right in the center of the community. There's a church. They grow a lot of their own food. They have chickens and ducks, and they're very self-sufficient in many ways. There is some mobility to the city. There's a bus that comes twice a day, so you will see people commuting back and forth. A lot of families are in a position where one family member—usually the father, but sometimes an aunt, uncle, or grandparent is actually living in the United States and sending money income back to Guatemala. That happens across the country and is no different in Loma Linda. Typically it's a period of 2-10 years where someone will go overseas and send money. The goal is to eventually send the rest of the family to the United States or to hopefully return to Guatemala. Their eco-tourism program is run by the community group ASODIL. It's really fledgling at this point. Initially it was brought to life to

support greater conservation and environmentalism and respect for the land and the work being done on the land, because they are so reliant on the land and so respectful of the land. It's this really beautiful relationship that is both spiritual and economic. As time has gone on, and there's been some limited but consistent tourism interest in going to Loma Linda, it has begun to transition from being a purely environmental initiative to an initiative that has a tourism component. When we talk about edu-tourism, we really think about students and other people that would be going to Loma Linda as eco-tourists but also as students. That could include traditional students who are going through a school like WPI through the IQP/MQP program or it could be people who are out of school who work for Seven Hills or want to learn Spanish and are putting themselves in an informal role of being a student because that community has so much to teach and to offer.

**Doug:** If our project was focused on creating an IQP or MQP project in Loma Linda, do you think that would be a viable plan?

**Jesse:** Are you thinking about institutionalizing that at WPI or just drafting a program proposal that you could then pass over to ASODIL to take on the administration of?

**Hannah:** We would like to do whatever would be most beneficial because whatever we do, we want it to have an actual effect. We are unsure about what would be the best option. We've considered creating a website for ASODIL that is centered around educational tourism that could attract tourists or would it be better for us to make a program at a school like WPI that would send students there to work on a problem.

**Jesse:** When it comes to ASODIL, they are having tons of issues with internet connection. I talk to Pascual several times a week, but I've had a lot of trouble getting through to him. For us that's



not a problem because I can have breaks in communication but I know I will be able to reach him next week or next month. We have a long history of corresponding back and forth with each other. You guys are on a much more abbreviated time frame. I would hate for you to get down the road doing something that relies on internet and a lot of communication with Pascual and then get stuck and not be able to get a hold of him. He may not have access to review a website. Because internet connectivity is something that they go in and out with they love the website work we have done with them in the past, like the Facebook work, but they aren't always able to maintain it. These are my concerns about a website. If you feel comfortable doing this in a very independent way and could move forward without a lot of feedback from him and make it accessible to either Ashley and I, or Pascual, it is something we could always go back to later. That may or may not be possible in the time frame you guys have for your project. In terms of just creating linkages and getting interest in the program, I think now is a really great time from everything I am seeing from WPI to institutionalize this. There's a lot happening with safety and transportation and inventing the program. It's a really comprehensive process. It's looking like it will go through. It would be wonderful if there were people to fill your shoes year after year and they wouldn't necessarily have to be IQP/MQP students. They could be people who want to do an alternative spring break or people who want to do a summer internship or people who want to learn Spanish. It could be institutionalized at WPI or it could be a club. It could also be a legacy project where every year students go during either winter break or spring break and students pass that off from one student leader to the next. Creating some infrastructure around that might be really interesting. You could take what you know about the campus context and shape it around what you are learning about Guatemala. It could be a collaboration with a group that's already on campus or it could be the creation of a new club or maybe some of the support services that you

need to be able to make these trips a reality. Students love the idea of travel until they realize they have to pay for it. Payment and fundraising is usually the barrier unfortunately, so maybe you could take a look at fundraising or creating some sort of structure where the club could receive some budget from WPI or maybe you could just look at service learning in general and edu-tourism in general and whether that fits within WPI. Guatemala is a great potential destination. In order to make comprehensive project within your time frame it may make sense to choose to start a club, develop fundraising efforts, or creating a curriculum so that students are ready to hit the ground running in Guatemala. Or creating a curriculum in Guatemala that addresses what the student may want and expect. It may sound small but when you get into the particulars, there is always a lot more to deal with that you think.

**Doug:** We have a question regarding travel to Loma Linda. We are currently trying to get travel approval and the biggest obstacle seems to be that WPI considers it to be a high risk area. That would be another problem if we were to set up an alternative spring break or any form of sending students there. Do you consider the area to be high risk?

**Jesse:** I'm sure even when you moved to Worcester, there was a perception that it is a dangerous place and a rough city where you don't want to be out at night. It's a similar phenomenon which is... It's not a country that's at war, it's not a country that's even really post conflict in recent years, but because there is poverty, there is crime. Because there is poor infrastructure, there's not the same level of safety on the roads, so you can look at it from a risk perspective and say oh my goodness, there might not be a guard rail on this road or there may not be this or that comfort that we're used to or you can look at it from the perspective that they are not in conflict and it's a peaceful and beautiful nation. Every part of Guatemala is different. If you are in a rough area of Guatemala City, I would consider that to be really high risk and I wouldn't take you there or

send you there if I was planning your trip but if you are in a community like Loma Linda, I mean, I leave my laptop and my passport in the room in Loma Linda and I don't even lock the door when I go to Loma Linda. Everyone knows each other. You're a visitor so everyone knows who you are. There's really such great accountability that f god forbid, anything were to happen, people would settle it very peacefully right there. It's a real stigma and institutions like WPI or Clark need to have a high level of accountability which I completely understand and respect. They can't send students just anywhere and hope for the best. From their perspective, they need to be looking at risk but from your perspective, I really would never advise that students go anywhere where there was even a remote chance that anything would happen to you. Freak things happen anywhere. I also lived in Guatemala for several years and I never experienced anything that would make me feel that I couldn't send people there or wouldn't want to go back myself. But we would do a lot of prep with you to make sure that you know general safety. You need minimal knowledge of the language, just to get by and not get into sticky situations due to language barriers.

**Doug:** If we were to do a program like an alternative spring break, would the main focus be on coffee and the coffee rust problem?

**Jesse:** That is up to you. One avenue that you could try to look at is tailored trips, creating a program itinerary that looks at coffee and the issues around coffee. Maybe you have a group like engineers without borders that would be a little more interested in water systems or efficient cook stoves and things like that. It's almost like you're a student social enterprise travel agency, where you could create this menu of different places to go and things to do that is partially academic partly experiential, and partially fun. It's cultural and it's adventurous. Hiking on a

gorgeous mountain is not the same as being in a classroom. There's a lot more going on there and there's so much value.

**Doug:** Has anything changed regarding the coffee problem? Has it improved at all or is it still a big problem?

**Jesse:** It's a really sad situation. Not much has changed in the last year. It has affected them at the same level, more or less. Unfortunately, Guatemala doesn't send more official monitors out to Loma Linda specifically to be able to give an exact number or measurement of how things are moving, but just anecdotally, that's what I hear and what the community has observed.

Everything that I have read about it just points to disaster ahead. I am thankful that it hasn't worsened but I can foresee that it will get worse before it gets better and that's a concern as well. Not only are we thinking about how we can leverage the coffee for edu-tourism, but also how do we keep the coffee there so that they can sustain themselves on the coffee which is always going to be primary for them. If this social enterprise really takes off, they are going to need the coffee for the tourism aspect as well. Are you guys interested in looking more in depth into the coffee rust issue or are you headed more towards the travel edu-tourism model? There's so many ways to go.

**Hannah:** It just seems like such a big issue. It would be a shame not to address it in some way, so if we could set up a program to send people over there to study it or research it or help, at least we could indirectly address the issue.

**Jesse:** I think that makes a lot of sense and I think that's where this idea of social enterprise comes in. I mean this is really a business the community would have to own so they're going to

need that sort of engine, both money and expertise and awareness to be able to fix any number of these problems that could become really catastrophic down the line.

**Hannah:** Is all of their coffee shade grown?

**Jesse:** The majority of it is. I think it's safe, for your purposes, to say sure.

**Doug:** Does Loma Linda keep any records pertaining to the area's biodiversity such as a list of bird species present?

**Jesse:** I know that they have some information about that. Their biggest claim to fame is that they have spotted quetzals. Even though the quetzal is the national bird of Guatemala, they are on every coin, tee-shirt, everything you could imagine, they are super rare globally, let alone in Guatemala. They're beautiful so that is a really big draw. I had no idea how intense bird watchers are but they will go anywhere in the world because it's really that special of a species. That's pretty unique and could definitely be an avenue that they could do edu-tourism about. Let me ask Pascual a little bit more about that but in the event that I can't get to him because of internet difficulties, I would feel comfortable with you all just researching some of the more exotic birds that live in Guatemala's highlands. It's safe to assume they would be present in the greater Loma Linda area as well.

**Mike:** How can we get in contact with Pascual?

**Jesse:** Since communication can be difficult, it would be best to put together a master list of questions to prevent a million small emails going back and forth. I would advise you to spend a little time after this call putting together that list. Send it to me and I will take a first crack at the questions. Then I will connect you all with him via email.

**Mike:** Should we write our questions in Spanish or in English?

**Jesse:** Both. Guatemala is close to home in terms of international travel. It's a good first step out and you have the comforts of the city when you first arrive and then you sort of slowly leave the bubble and get into more rural and more rustic areas. If you've ever done hiking or camping, it's not too dissimilar. When were you guys planning to potentially travel?

**Hannah:** With the pace that getting approval is going, it would have to be between C and D term which is from March 7<sup>th</sup> to the 15<sup>th</sup>.

**Jesse:** I am leading a trip that I left really flexible so please, when you email Ashley, just loop me into that. It's semi likely that I might be there. I travel on my own so keep me posted because it would be great for our trips to overlap.

**Jesse:** Assuming you choose to go down the edu-tourism route, you may want to look into methodologies around service learning trips if you choose to take an approach from the United States side. Or you may choose methodologies around the community's social enterprise in a rural context, if you decide to take it from the Guatemala side. It's really up to you, what you choose to do, and what sort of creative add-ons you decide to pop into it. I think that's a good first step from where you stand, having the resources of a university being able to do some research.

**Doug:** What is the general attitude in Loma Linda towards tourism?

**Jesse:** What you will experience when you go there is that they are super welcoming. The Guatemalan culture in general is very interested in hospitality and being cultural ambassadors. They're really proud of being Guatemalan. They want to show you the food that they eat and

teach you Spanish. It's very parental in that sense. As young people, older people in Loma Linda will want to take you into their homes and give you food and hear about your family. The kids are just going to be curious about who you are, where you come from, why you have all these bags. They will just be jumping all over you wanting to play games and sing songs. It's a really welcoming feeling and often times when we work with students, especially students that don't have a lot of advanced Spanish language skills, the kids lend a hand because it's a universal language of sports and games and songs. It's really wonderful. I think when you get beneath the initial welcome which is genuine and real, there's politics underneath that as there is in any community so I don't want to be one dimensional and tell you that it's all wonderful. Even though much of it is wonderful, there can be a real tension between this really isolated community that has a lot of things happening self-sufficiently, and then the introduction of these people from a whole different world and culture. You can read into that in a number of different ways. We've never, ever been unwelcome but you can imagine just from a distance perspective how people might feel. There are issues around power, class, race, and gender. Guatemala isn't a country where you see woman walk around in shorts and tee-shirts. It just isn't the norm and then in come these tourists who are hikers and it's hot. How does that feel? We've had some really interesting and open conversations about that, nothing negative, but there are differences and we don't want to white-wash that. Culture is such a beast because there are so many aspects to it and just like any community, no matter how idealistic they look on the outside, there's always politics.

**Doug:** We just wanted to make sure that before we start anything, we know that they want it. We want to make sure that they feel comfortable receiving help from us.

**Jesse:** It's important when looking at anything involving international development, to notice the complexities. When it comes to you guys and travel, you would absolutely be welcomed with open arms. You would be so well fed and taken care of and I wouldn't facilitate this connection with the community if I didn't feel like you guys would be absolutely adored there.

**Mike:** Are there available facilities for volunteers besides the hostel? Do families offer up their houses if there are more than ten people visiting at once?

**Jesse:** We would plan accordingly for a time when the hostel could accommodate you. There are a couple different rooms so you would be fine. What some students do is do home stays even where there is room in the hostel. You would let us know in advance what your dietary needs are, what your preferences may be for home stays if you have allergies or things like that we take care of all of that. A lot of times students love doing home stays because it gets you right in with a family. If you feel more comfortable doing homestay with a pair, two of you can stay together. If you feel more comfortable doing it on your own, whether you speak Spanish or not, that's something that we really encourage if you're comfortable with it. With home stays, you are with a family so there is not as much privacy as there is in the hostel but we do ensure that you have your own room and your own bed so you would have at least a place to retreat to at the end of the day where you have privacy but the homes are pretty simple. The hostel is pretty simple too to be honest. The hostel is not as removed if you are feeling out of your element. It's totally up to you. Some groups do both because they want both experiences. They want to have a home stay but they don't think they could last a whole week in a home stay so they do half and half. There are a lot of options there depending on what you need, your diets, your habits, all of that stuff.



**Doug:** So the infrastructure necessary for tourism is already there? It's just a matter of making the program?

**Jesse:** Exactly. We've traveled with a number of groups and I can share the itineraries that we've done. Usually we'll spend some time in Shela and do some Spanish immersion and introduction to Guatemalan culture since it takes some time to get out to Loma Linda. Then we'll go to Loma Linda for a couple of days. Groups have focused on agriculture, sustainability, soccer and sports, and youth development. There's a lot to be done there, but it's usually only two or three groups a year maximum. There are a lot of opportunities for groups to be coming. Whether they are small groups like just a pair, or a trio of travelers, or bigger groups doing more organized community-wide projects. The possibilities are really unlimited because there is no reason to have the hostel if no one is using it. Host families love hosting students and it helps them to generate some income too so there is a capacity there that is nowhere close to being reached.

### **Interview with Arthur Heinricher:**

**Hannah:** Basically we wanted to take a trip during the C and D term break for our IQP. But it did not end up working out for different concerns. Our advisor told us about the idea of J term and we thought that would be another great option because of affordability and everything.

**Arthur:** so tell me more about how it will actually be connected to the IQP?

**Doug:** Our IQP is about global sustainable development, so we are focusing on an area in Guatemala. They are having a lot of issues with their economy. What we were thinking since we were not approved to travel we are working on getting approval to travel and we think that J term would be a really good opportunity for other students to travel. We have changed the focus of our IQP from us going there to enabling others to travel there in the future. We were wondering

when J term was going to put into effect and how long will it last? And what is the mission of J term?

**Arthur:** to provide a space for experiments and creativity for faculty, staff, and students. I have been working with a group of students and they call themselves the WPI test kitchen. They want to encourage students to do small experiments and part of the impetus for this is there is a WPI alum that works at Bows in Framingham. His job is to be a project manager. He helps teams navigate complex projects and so he does training for project teams. He does short training sessions that last a couple of days. His idea was maybe WPI project teams would like to go through the same sort of training connected to their project work. The idea is to set up this kind of program for students over winter break. My vision is that J term will run from the beginning of January 1<sup>st</sup> to the start of C term. There has been some discussion to start a week later in January, so that will be an additional week for J term. What used to happen is faculty and students would propose an idea and they would advertise for others to sign up. You can connect it to students who want to do their project on campus, but would like some small component of it that is global.

**Hannah:** Yeah, that is what ours was supposed to be like.

**Arthur:** So what is your project on campus? Describe to me a little bit more about your project.

**Hannah:** There is this town in Loma Linda that has some agricultural issues with coffee rust and needs another source of income. We ourselves can't really do much on campus to address those issues. We figured if we could set up an annual project team that could go there like a project center every year.

**Doug:** The trip is based on edu-tourism or service learning and we have noticed there are not many service learning opportunities at WPI. A lot of other schools advertise alternative spring breaks.

**Arthur:** We have an office upstairs that handles community service. The flip side of what you said is WPI reports to the city and the state the community service served by students and we can count IQP work done in Worcester community project centers at 70,000 hours a year. WPI students in terms of service learning by a factor of ten do more than any other university. But here it gets labeled as IQP. There is an academic aspect of service learning and the WPI IQP goes above and beyond this requirement. What you are talking about with a J term or maybe you can do this in August also. There could be two places during the year where WPI students could participate in a program that is off campus. Fundamentally you can break down what students are doing on campus and off campus.

**Mike:** One of the big goals with this project is to work with ASODILL, which is an association that was established and is run by community members in Loma Linda. Some of the projects they have already done is they have built a four room hotel and they have established walking trails in the area. Part of the project will be working with ASODILL. Helping them with whatever specified projects they have an issue with. As far as housing goes the community members offer their homes to volunteers. There is a culturally integrated part of the experience, living with a family.

**Arthur:** One of the things IGSD is very careful about is security in the housing of students. We have closed down project centers because of housing available in the area was not up to the standards of WPI. Part of what you would require is staff from IGSD visiting the site to certify the housing is adequate and safe. The key to this is there has to be somebody on the ground

wherever the students are going as sort of a local contact. None of our project centers can work without that. Maybe one of the advantages of what you are talking about is finding a project center where somebody can live for seven weeks and you have a project that is at the level of an IQP is sometimes pretty hard. On the other hand if the only need to stay for ten days it will be much more affordable to the students and it will actually be more feasible and flexible.

**Hannah:** Would the liabilities be different to a certain extent?

**Arthur:** Possibly, I can guarantee that WPI will not send students to country on the State Departments watch list. There will be policy constraints put in place.

**Doug:** Engineers without borders sends students to Guatemala to do projects, but we were rejected to travel to Guatemala. One of their concerns was that ours would be for a grade because it is a part of our IQP. Whereas Engineers without borders there is no grades associated with it. In J term will there be credits associated with those projects?

**Arthur:** That is not determined yet. What I'm thinking about when you say there is a grade associated with it, part of the issue might really be students have to be registered for academic credit. As soon as you are then you are covered by all of WPI's umbrella insurance policies. And if you are not registered for credit then you are not. So it is not the grade that matters as much as the legal insurance aspects I would guess and that is a guess. What you could be running into is we do not have a model yet that can handle the situation you are talking about does not mean it is impossible, it just means there is no model for the situation. Part of the results of your work could be here are some models. IGSD is the first place to talk about the risk management side. When you do something for academic credit you trigger a lot of legal requirements and supports from WPI. Engineers without borders, WPI supports them. WPI helps pay for expenses. But it is not handled through IGSD, so none of the liability and risk management stuff is involved.

**Hannah:** At this stage the idea of J term it is not clear enough whether it would be academic based or just more for experience.

**Art:** That is an advantage for you, you get to define it. I am on one of the strategic planning teams and one of the things we have been talking about is affectively a co-curricular transcript that would say “ to get your degree you have to satisfy the distribution requirements, you have to get your IQP, inquiry seminar, and ect. So all of that stuff defines your academic degree. But we should also be able to recognize things like you did a lot of special work in research development, ect. You do not need to take a course in everything. In fact I would argue courses are probably a bad way to learn about another country rather than visit the country.

**Hannah:** Exactly, I personally think it is more beneficial actually to be there and experience firsthand.

**Doug:** We focus on the experiential learning aspect.

**Arthur:** The challenge of than is tying it to the project. An example of this is Lincoln labs. The students perform experiments for Lincoln labs and then continue their doing the same work as their project work at WPI. There are no rules in place against what you are talking about it is just we do not have any rules in favor of it yet. One of the main contributions I think you can make is to give us an examples of how you think it would work. The value to the students, ect. As to credit for J term, we have not actually gotten that far.

**Mike:** One of our goals that we want to do is to send out a survey to students and faculty. As a part of that survey do you think it would be a good idea to include the option of J term? Or wait until it is a more established thing?

**Arthur:** I think if you wait for it to be an established thing you will all have children. You are going to define J term for people. Some projects will start off as pilot projects in the next year or

two. Everything you guys are talking about might actually be a good idea for one of the first projects.

**Doug:** Ideally when do you think J term will be put into effect?

**Arthur:** Officially, I think there is some chance and interest to run projects next January. Think about it in terms of you want to start a pilot project, what would you need to do? Think about it as how the experiment will be run and what prep goes into it.

### **Interview with Anne Ogilvie:**

**Doug:** We have some questions about establishing project centers abroad and what the requirements are. What are the main concerns when looking at a new project center?

**Anne:** Historically WPI has looked to faculty to develop the sights in a pretty organic manner. So there has been no larger vision that we are going to be “here, here, and here” it has been more you have a faculty with a well-developed interest and knowledge of a certain place. Experience, what we really want to see that our faculty who are working with different centers have a deep experience and knowledge of that region and location. Then we look at the portfolio as a whole and we have to be somewhat thoughtful about having a range of opportunities for every student. So we need some low or no cost options. (exempt 1:16-1:36). It really goes up from there. We want a mix of urban areas, less urban areas, developed countries, developing countries. There is not a step by step process. It is a bit more organic than that. For all the sights we look at we have to find reasonable housing options in places that we consider safe. We cannot guarantee safety anywhere in the world. But we can do an awful lot to vet the locations understand the challenges at the locations and try to make wise decisions of where they should be housed and how they will be transported. We can make sure we are following specific advice about that, which is listed in many resources available to use online. What we do is we look at the US state department and

what they have to say about the sight any alerts and warnings any specific information they offer (Excerpt 2:48-3:06). We also check out the UK foreign and common wealth office similar to the US state department, but a little bit of a different take. A lot of the stuff is colored by international politics. It is interesting to get multiple opinions on a location so that we are not just looking through the American lens. To that end we look at Canada and Australia (3:31-3:55). Our information varies from embassy to embassy (3:58-5:10). We also consult the CDC guidelines for every site. We want to be able to understand what the recommendations are for travelers to different sites (5:21-5:38). We check three other sources; one is the bureau of diplomatic security, which is a branch of the State department; crime and safety report we check for every country, and then we have a subscription service to the Association for Safe International Road Travel or ASIRT. ASIRT was started by a parent who lost their son who was traveling overseas when he was a college student and he was killed in a car accident. The parent did not know how unsafe the road travel can be. Road travel is my biggest concern on any of our programs. Whether it is here in the states or overseas. More people are killed on the roads than doing anything else. That is how most American travelers who die overseas, that is how they died. So we pay a lot of attention to road safety. ASIRT they do detailed research reports on travel conditions in each country and so we have a subscription to receive these reports for all the countries that we operate in. Then we publish these reports for our students in a student travel handbooks. Everybody who is going off campus to a certain sight in the back will be the travel report. It tells you what the hazards are like, what side of the road people drive on, what you need to be worried about, and then it actually lists the routes you need to know (7:36-7:44). Guatemala there are some specific roads that are listed and over land travel in Guatemala. The reason you are not going to Loma Linda is for a number of reasons. One is it is a site that has not

been vetted by any faculty from this side. We are not going to send students off to a project where no WPI staff or faculty has visited before and determined that it is a good place.

Particularly if that place has escalated risks. I mean if it was Chicago, this is a place where a lot of people travel on a regular basis we probably might do a project in Chicago without sending a specific staff member to vet the facility. This is what we were looking at for Guatemala ( shows a map). I believe this is your Loma Linda sight. This is the Engineers Without Borders site. All this red are routes that are cited by the State Department literature or in the ASIRT travel report as having had recent incidents of road side banditry. They will actually shoot down your mini bus and then rob you and then perhaps rob and assault you. There are a couple well documented cases online. The lightning bolts ( referring to the map) those are very recent. The red are routes that are called out in various reports. This is Guatemala City it is not a great place to go. Most precincts of Guatemala City are rated as places you should not go. Even Peace Corps volunteers that are in the country are pretty limited as to the amount of time that can be spent in Guatemala City. This is a road up to San Cristobal which is a place where we have worked for almost five years EWB has been going. Are any of you in EWB?

**All:** no

**Anne:** They have been doing a water quality improvement project. They are putting in cisterns and rain collection systems in that village. So they have been going there for a really long time we have really well established local partners. I think three or four WPI faculty have been through there and you will notice there is no red along this route. So this is to be considered relatively safe. There are no noted incidents along this route. So what happened this year with your project is I have been doing an awful lot of research calling other organizations that work in this area. Speaking even to an organization that had a hijacking occur very recently and



understand their safety practices. They were driving at night; we would not do that even if we were operating in the country. There is too much dangerous activity for us to really consider this to be a place where we wanted to send students.

**Hannah:** It is mostly from Guatemala City to this area. One idea we were throwing around was staying in Xela instead of Loma Linda.

**Anne:** What is interesting is that even though the whole route is cited in multiple sources. This part of the route is where they have typically have hired an armed security escort. Jeff had some information on that, directly from the driver. So it is just where they thought they needed it before.

**Doug:** We actually spoke about that with Jeff recently and he said that the driver is not so much a necessity, but more a safety cushion. He thought that it would impress you, not make you feel that there is a huge risk in the area.

**Anne:** They use that escort for all of the other groups that they have brought there. So that was long before I ever got involved. This is Seven Hills and the driver they selected. Maybe they were trying to impress the other groups. I have no idea. That is not a good security practice. There is really no reason to pay an armed escort unless you actually need one. Have you read the State Department advice for Guatemala?

**All:** Not yet.

**Anne:** I would suggest that you read that. When you read it you are going to see that what they suggest is they suggest security escorts for all tourist groups and groups like ours. They actually have a whole office where you can call and request a security escort. They do not respond to all inquiries. What they say is no group that has had an escort has ever had a high jacking problem. So that is good. But since they do not always respond you kind of have to assume they believe

that you do not need a security escort. Which from a managing liability stand point makes sense. We kind of read the information we have done our due diligence, we have requested a security escort from the state group government agency that provides these and they have said no. So we would assume that means they do not foresee that this is an area with large risks that they could provide us an escort for. Maybe that is true or maybe they are really busy and did not have enough time to get back to us. I do not know if Seven Hills determined that only this portion of the route that required that escort or if the guy they use for transport decided. I do not know. I think that should be something to follow up with Jeff and Ashley. Have you met Ashley yet?

**All:** Yes

**Anne:** You should ask them what is the reason for the escort on this segment of the road and was it recommended by Proitor. This group that actually hires or provides the escorts.

**Doug:** It is seen as slightly negative that there has to be the security escort?

**Anne:** We do not operate anywhere else in the world where we have to hire security escorts to get people from place to place exempt (14:59-15:29). Some schools are willing to work like that. Some schools are going to let faculty and graduate level, but maybe not at the undergraduate level. WPI has a history of a conservative approach to our risk management. We typically don't send students to countries where there is an active travel warning (15:55-16:20). If the travel warning for a country is not a blanket travel warning, it says reconsider your need to travel to "x" country at this time (16:38-16:51). The language is not always so clear (16:53-17:07). Whenever you take an action that is contrary to the published advice you take a risk. We are a high touch university, you get a lot of personal service here and your parents get a lot of personal service here. I think we feel really obligated to do our very best in terms of duty of care and research the sights as best we can. To make decisions that we can stand up and own, it is really hard to make

these calls. It is not that we are saying that people cannot safely go to Guatemala it is that for a program carrying academic credit probably needs to happen. We need to know some things we do not know. It is that no one from the school has actually visited the site and participated in a program at that sight. Seven Hills while they have experience bringing in students to places. They don't have formal university partnerships as of yet.

**Doug:** They do, they work with Clark students.

**Anne:** They do, but they do not have a formal partnership there. There is no faculty member of Clark that is associated with Seven Hills (18:45-19:08). In this case we had a number of unknowns we have a sight that we had not actually been to, a partner that has great materials and I think it is very interesting program that I think has a great future but it does seem to be a new growing program. So it does not have a history of the kind of university partnerships that we like to see. I don't think we will be the ground floor partner for an organization like this. We have a program that is over forty years old that everyone is working very hard to build. Our approach tends to be a little bit more conservative.

**Hannah:** Earlier you said for an academic trip, so for would things be different for a not an academic related trip? Would liabilities or anything like that be considered different?

**Anne:** So you have a student lead trip where it's not. The problem with academic trips is the argument, if you don't go how can you get the credit that you need. There is an additional pressure upon the student to go and participate in an experience. Where as a student lead trip, I can tell you I am involved in all the decisions for student lead trips. I would not recommend a student lead academic trip to this area for all the same reasons. We look at sites. I am trying to come up with a more benign example. Let's take a country where there are not this many routes

that are known to be problematic. Where there is not such strong wording about the risks of overland road travel. Maybe there are no published risks about the overland road travel. A place like that, which is well traveled where a student group is going to go to do some work would perhaps be a place of less concern. It is not that not non-academic travel should not happen to this sight. It is more that other sites where we have not been where we are working with a new partner might not be off limits just simply because of those reasons. There are other factors that come into play.

**Doug:** So if the Engineers Without Borders were located here (pointing to Loma Linda) it would have been denied?

**Anne:** Yes, they would not be going. The reason this EWB happened is because we have been going there for five years, we have very strong relationships, we have traveled these routes we know them well. We know this village very well and we know the very houses where students stay and the families that they stay with very well (22:07-22:27). During this trip we did not encounter more worry some risks.

**Hannah:** When you gauge risk and housing for a new project sight. You prefer to have had a WPI faculty to be there first?

**Anne:** What usually happens is a faculty member has been there and they know it (23:10-24:54). Typically the seeds are sown through relationships that previously exist on the ground. This is unusual because you have this relationship exists here and it is really strong here. Seven Hills has done multiple projects with WPI, we think an awful lot of them and the work that they are doing. But a lot of the work takes them to places in the world that are not compatible with WPI's appetite for risk in our global program (25:23-25:46). My suggestion to Geoff was to look into a site that has less inherent risk than Guatemala and consider an initial partnership. First consider going to visit that sight to be there with Seven Hills to see their program in action and then

consider a partnership that might do an independently sponsored residential project at a site like that. You just don't want to do everything new at the same time. You like to know some things before you jump in with both feet. I think there are ways to do that, but it did not involve you all going in the middle of these two terms (26:36-26:47). We want to make sure if we are going to sanction a trip we have a fairly good reason to believe that we can get you from here to here as safely as possible. Everything that we were reading was not indicating that. So we have to have that reasonable confidence based on the conditions at the time and we can always reevaluate this. There is a lot of reading and watching and consideration goes into developing a project site (27:13- 27:47).

**Mike:** When you evaluate risk for a country you put together these binders, are there any other documents and sources that you use as guidelines when developing a new sight?

### **Interview 2 with Jesse Mattleman:**

**Doug:** We went to pitch our idea to the Global studies department of WPI. They told us that students from WPI will have a very low likelihood of traveling to Loma Linda because they consider it to be a high risk area. We came to the conclusion a partnership between Seven Hills and WPI will not be possible. After we realized this we started brainstorming ideas to get around WPI's issues. We were wondering if Seven Hills currently offers any alternative spring break programs.

**Jesse:** Yes, that is a great question. We do a lot of trips and we typically invite students on them and we usually do one over the winter break and then spring break. The trips are pretty regular, but that said we have to cater to our partners. So it is not an annually reoccurring spring break college focused trip. It is based more around the needs of our partners and if people are interested in coming along. That is how they have been most helpful in the past. With that said, it is

something that we have done a little bit of talking with Clark University about a couple of years ago. As long as there is enough interest and abilities to cover the trips expenses it is something that Seven Hills would love to do and would love to help organize.

**Doug:** We were thinking of shifting gears towards marketing towards students. We made a little poster advertisement. We were also thinking about marketing trips towards professionals during these times. Maybe push professionals in the biology field or professionals in construction that could help them build better infrastructure in Loma Linda. We want to cater the visitors to the community and to the community's needs.

**Jesse:** I think that is very interesting. It is something that we have dabbled in because there have been little bursts of interest, but it is not something that we have really fleshed out and build a portfolio around. We defiantly have the travel piece of it, the orientation, the packing, and all of the safety considerations. All of that is really quantified and when people are on board we really have all of those systems in place. We do not do a lot of recruiting for these types of trips.

**Doug:** Do you think it would be a good idea to change the focus of our project to more of a marketing stand point to sourcing volunteers for trips?

**Jesse:** Yeah, I think that would be really interesting. My question for you is are you looking for an entrepreneurial venture where you fill out the skeleton for what could be more business processing around these trips or would it be more practical in terms of WPI through students who have the urge to travel and to do volunteer work to sort of come together and form a trip over a future spring break.

**Doug:** We thought of both. The idea came about to offer to students the ability to travel to Guatemala, not a part of a WPI program. Then we started thinking that we could try to market to specific people that might be able to have a higher impact on the community.

**Jesse:** I think that is a very good concept. Just think about whether that might be helpful to the partners. There is a lot that can be done around projecting that and gathering materials for that.

**Doug:** We were thinking about the profitability of it and the benefit to the community. Because we were thinking one or two trips a year was not going to make a huge monetary impact. We thought that if we could get people studying biology could actually take a stab at the coffee rust issue. That might be better than trying to make a profitable tourism industry.

**Jesse:** I think that is a really good point. Something that I have just read about that is really fascinating is the whole debate around voluntourism. The idea is that it is so much more beneficial to the tourists then to the communities that are hosting them. The flip side being it is an opportunity for education, community exchange, you can raise funds, you can send very highly skilled professionals, and you can send people that are not highly skilled but find the passion for teaching English or something else. That is a really interesting sort of research context that you could position all of this in.

**Doug:** Another thing we wanted to ask you about is if Seven Hills is open to partner with other NGOs such as the Global Volunteer network?

**Jesse:** I do not have a perfect answer for that to be honest. Are we open to it? Absolutely. Would it make a lot of sense? I would have to sort of dig into the organization to make sure that they have high quality volunteers or are they just people who did a random Google search. If we put a lot of time becoming a member of an organization, does it actually work in terms of people coming to us in a high enough volume for it to be worth the time. Certainly if it will be beneficial to our partners and would not be detrimental to us then we are pretty much open.

**Doug:** That is something that we will look into.

**Jesse:** There are a lot of NGOs are starting to adapt that have a travel component which is if they are sending non skilled volunteers they will require a certain amount of fundraising to travel.

Instead of taking one particular model and fleshing it out completely. What could be very useful for us on a practical level is if you look at the key components of successful volunteer programs and do a little research and sort of projection and modeling around what if we joined the Global Volunteer network. What if we required that travelers raise “x” amount of funds in order to participate in the trips. Laying out a menu of what that looks like, what they consist of, what are best practices in those specific areas to be really useful? What do you guys need from me for this process?

**Doug:** I think the next thing we need from you is to help us contact Pascual because we would like to get an update on the status of the community and the status of the coffee issue.

**Jesse:** Can you email me a list of questions for him and a brief description of how your project is going so far? And then I can make that connection to Pascual for you.

**Doug:** We really just wanted to let you know our new idea and make sure that Seven Hills was okay with our new direction.

**Jesse:** Yes, I think it is great. All of the research and the background is useful. A lot of times what we do when students put together these types of things is have a staff meeting and pick apart what all of this means for us. Often times it is very literally applicable and then other times it is applicable from a research perspective.

**Mike:** We have one more question. One of our ideas to gauge interest for this project is to send out a survey to students. Is there a way we could get a hold of Seven Hill’s partners or people



that are affiliated or have done a project through Seven Hills to gauge their interest in this project?

**Jesse:** Yeah, that is definitely possible. I know we have a lot of alumni from these different trips. If you are to make the survey I would be happy to send it to our alumni or other people that have traveled with us or have expressed interest in traveling with us.

### **Jesse's Response to our inquiry to Pascual Rafael Escobar**

**Team:** What is the coffee problem like right now?

**Jesse:** The issue with the coffee rust blight affecting the coffee crop currently is the same issue experienced last year. In Loma Linda, the coffee rust is affecting many plants, especially those grown in lower altitudes, and threatening the livelihood of many farming families as well as the coffee cooperative as a whole. The issue is compounded by the fact that the ways to combat coffee rust are either very expensive and/or involve using chemical treatments. The people of Loma Linda who practice modern farming methods cannot easily access and or afford chemical treatments. Also for farmers using organic methods of farming using chemicals would force a shift to conventional coffee growing practices. This would have financial, agricultural, and ethical implications for the farmers and buyers, and distributors.

**Team:** Are there other areas of Loma Linda's economy that you would like help with?

**Jesse:** Yes, the community is interested in child sponsorship for educational/English language-learning programs and developing ecotourism and/or edu-tourism programs.

**Team:** Are there any other problems the community?

**Jesse:** Yes, the community is complex and political like any global community. A major issue related to economic development that they are facing at the moment is the migration of teenagers and young adults to urban areas and/or the US in search of furthering their education and work opportunities. You will see many adults or elders as well as children in the community but few teens and young adults because most of them have moved away. To move the community forward and carry on through the next generation, the participation and reintegration of the teen/young adult population in the community and the availability of local economic opportunities will be essential.

**Team:** How does the community feel about students visiting for short periods to do projects?

**Jesse:** This is a major goal for Loma Linda. They would like students to visit the community so long as this is carried out in the context of their organized eco/edu-tourism efforts and local families can benefit from hosting these students both economically as well as through educational/cultural exchange.

**Team:** When are the best times to visit the community?

**Jesse:** Winter months in the United States is the best time to visit Loma Linda. Travelers are welcome anytime, but the United States summer months are the rainy season in Guatemala so this is a less desirable time for many tourists to visit. So long as the community has a heads up and approved travel dates travelers are welcome.

**Team:** How are the ASODILL trails doing?

**Jesse:** During the rainy season the trails are not in good condition because of the debris and mud that occur because of the rain. In the dry season the trails are maintained and provide a beautiful

nature experience for visitors and students. Many of the more well-traveled trails also have lookout points with small covered gazebos, certain plants lining the trail that have been strategically placed to attract birds for bird-watching, trailhead signs, benches, etc.

**Team:** What actions have been made to bring internet and other services to Loma Linda?

**Jesse:** There is Internet in Loma Linda via Pascual's personal home and a very small public internet café. Signal is unreliable, however, due to weather. If and when there are difficulties with internet in Loma Linda, residents oftentimes travel to Reu or Xela to local internet cafes.

**Team:** How do you feel about organizations other than schools sending trips to the community?

**Jesse:** I imagine that tourist groups would be self-selecting in choosing to visit Loma Linda. An environmental studies volunteer group would naturally gravitate towards a community like Loma Linda, whereas a formal professional association hosting a conference would not. However, there are a range of 'lenses' through which to structure the Loma Linda experience to make it applicable to groups with diverse interests and backgrounds. The community has catered to these groups with personalized itineraries to focus on youth development, sports, environmental awareness and education, language learning, agriculture, etc.

**Team:** Are there any groups in particular that you would like to visit Loma Linda?

**Jesse:** The major focus here are student groups, whether in a formal capacity through a college course for research or via structured spring or summer break programs. Another focus group would be backpackers and tourists visiting nearby areas in Guatemala, mainly Xela, in hopes that they would arrange an excursion for a weekend or several days to Loma Linda - either independently, through a Spanish School, or through a local tourism or transportation company.

**Team:** How many tourists at one time can Loma Linda comfortably accommodate?

**Jesse:** This depends on the personal needs and level of support required of the tourists from the residents of Loma Linda. The hostel has 4 rooms (3 rooms with 2 double beds, 1 room with 1 double bed) and 2 shared restrooms with showers. If tourists are comfortable staying with host families, the community can accommodate much larger teams by matching them with host families. . Additionally, if the group has a very rigorous schedule, this takes up more community capacity to host on the part of Loma Linda residents. However, if the group has some need for structured activities run by the community, but also has its own internal agenda then the community has greater capacity to assist others. As you can see, this is flexible and can be developed in the travel planning phase with the team leader based on the visit goals and/or room and board preferences of the group.

**Team:** Are there certain times of the year that would be better for people to visit than others?

**Jesse:** The country of Guatemala has many holidays in which transportation, restaurants, etc. tend to be closed. This is not a problem in Loma Linda, but may impact getting to the community. Also, many of these celebrations are religious - which visitors are welcome to take part in regardless of their spiritual beliefs, but may want to be aware of in advance to gauge their comfort level.

**Team:** Besides people visiting the community what other ways could the community use help?

**Jesse:** It is always wonderful for volunteers/students to spend time with youth in Loma Linda - playing soccer, teaching English, doing arts and crafts, etc. However, visitors must understand that their role, primarily, is to learn, make connections, and engage in cultural exchange. While there may be tangible elements of 'helping' as a part of the experience, the most impact a visitor

can make is by putting effort and intention into building relationships between themselves and members of the community that indicate mutual respect, global citizenship, a willingness to learn, etc.

**Team:** Are there any current projects being worked on by ASODILL?

**Jesse:**

- a. Eco-/edu-tourism - field-based work, business development, infrastructure (hostel, trails, etc), community training (for host families, trail guides, etc.)
- b. Environmental education, recycling programs, etc. with youth
- c. Community dialogue and education
- d. Special events (Earth Day & other community celebrations)
- e. Education & Youth Support
- f. Opportunities for women (skills training, etc.)
- g. Handicrafts for Skills development and (pyrography, basket weaving, jewelery-making, etc.)
- h. Outreach / Community Dialogue
- i. Fundraising/Grant writing

**Team:** How often do you make the drive between Xela and Loma Linda? Do you find this drive to be safe?

**Jesse:** The drive takes about two hours in good weather when coming from Xela. It must be done during daylight hours for safety reasons. Most people come from Xela and hire a van through a travel company. This is a common practice and there are many in Xela that do not have to be arranged in advance from the United States. Safety is always a concern in developing countries. The rules of the road are not enforced there as we are used to in the United States and there are inherent risks because of this. However, all the travel companies in Xela have registered, up-to-code vans with seatbelts and do not pick up travelers other than those who booked the tours. They also are reliably on time, do not travel to Loma Linda in the dark, etc. Therefore, all precautions are taken and risk is minimized wherever possible.

**Team:** How do the community members feel about volunteers sharing their meals with them?

**Jesse:** This is one of the most meaningful and fun parts of the tourism experiences, both for travelers and local families! The families also enjoy giving informal cooking lessons to travelers to teach about Guatemalan staple foods and how to cook them.

**Team:** What times during the day do people in the community usually work?

**Jesse:** Their day begins very early in Loma Linda. Farmers begin as soon as the sun comes up, and sometimes earlier. While traveler schedules are flexible given the agenda developed for that team, this community tends to be very busy during the morning and afternoon hours, and go to bed earlier in the evenings after dinner.

**Team:** Are there times during the week that everybody gets together for a weekly event?

**Jesse:**

- a. Church (weekly mass) & Religious holidays (see link provided earlier)

- b. Cooperative meetings (closed door)
- c. Meetings of various local groups (women's cooperative, organic farmers group, ASODILL, etc.)
- d. Educational events at the school

Team: Is there space in the community for large group discussions?

**Jesse:** Yes.

**Team:** What are the capabilities for volunteers to work into the evening?

**Jesse:** If volunteers are doing home stays, the evenings are reserved for family time. Most host families have young children, and volunteers especially love connecting with the kids, learning Spanish, teaching English, playing, etc. If volunteers are staying at the hostel, evenings are the perfect time to decompress, write in journals, sit on the patio, etc. Most times, regardless of where teams are staying, groups like to use the evenings for group meetings, classes, and reflection sessions. It is important to note that most volunteers comment that visits to Loma Linda can be physically taxing, given the hikes, soccer, rustic terrain, etc. This, in combination with the fact that the community goes to bed fairly early, means that travelers usually end up needing more sleep than usual on their visits.

### **Interview 3 with Jesse Mattleman**

**Jesse:** About the surveys, I'm sorry for the miscommunication about the content and some of the issues I pointed out, and your distribution being misaligned with the time when I was going to be distributing. Would you guys be willing to give me a little more background on who the survey went out to and whether Seven Hills Global Outreach was mentioned.

**Doug:** The student survey has only been sent out to WPI students. We have sent a separate survey to some professional and botanical associations, but we haven't gotten many responses. Only one contact emailed us back with interest, which we forwarded to you, but even they didn't fill out the survey.

**Jesse:** With regard to the professional associations, how did you reach out to them?

**Doug:** We sent an email with a little blurb explaining what the goal of our project and research was. Seven Hills was mentioned in this blurb. Seven Hills was not mentioned at all in the distribution of the student survey.

**Hannah:** The purpose of the student survey was purely to gauge interest in an alternative spring break type program while the professional survey was more focused on connecting organizations to gauge interest in inter-organizational collaboration.

**Jesse:** Can you send me the template you used to send emails to professional organizations. I'm all for forging these types of relationships and I'm really interested in the organization that you sent along to me but I am a little bit concerned about you all reaching out to organizations and speaking about Seven Hills. I am especially concerned when these are organizations that work in the coffee field and already work in Guatemala. This is totally on me because I should have been more explicit with you about the expectations around this, but all of our work is extremely collaborative and because we are so small, usually Ashley and I are the ones who broker these types of relationships. We give as much autonomy to students as we can, so it's not bad that you reached out and bridged that connection, but we really do need to be in the loop about what these connections are. We really do need to strategize about it since these relationships are the biggest asset that Seven Hills has as a small nonprofit that works entirely thorough partnerships. Also,



Guatemala is a really small community, even though that sounds kind of crazy from a distance, it is a very small community of NGO's that was a lot of politics and a lot of previous relationships, so it's possible that you are reaching out to organizations that we already have partnerships or previous relationships with. There are a number of NGO's that we work with or people that we don't work with for some specific reason, or people that are already working in Loma Linda, or people who may be competing with Loma Linda. Those are all things to keep in mind. I know your contact was just exploratory and I'm sure that there won't be any ramifications but before you send any further emails, I would really like to take a look at what you are saying about Seven Hills Global Outreach and be in the loop on all of those emails even if it's just a simple logistical email. I would like to at least be CC'ed so that there is a sustainable presence of a Seven Hills Staff member in that partnership communication because there are always really neat partnership possibilities when we meet new organizations and I want to make sure we're capturing that. That is of huge value in the process that you guys are facilitating.

**Doug:** I'll definitely send you everything we have sent out as part of our survey distribution and CC you in any emails we send in the future.

**Jesse:** Ok great. Also, any responses you have gotten from organizations. By the way, it's very different if you are reaching out and saying "Hi, we are students from WPI doing a project and we are just trying to do some background research to gather information." If Seven Hills isn't part of that, then absolutely, this is your research and your project so you can ask any questions that you need the answer to. But if you mention Seven Hills Global Outreach or even this specific community in Guatemala, even though a quick google search of Seven Hills would reveal that we are working in Loma Linda, Guatemala, I require that we talk about that beforehand. I need to be a part of that communication just so that we can be aligned on that and

so that we can fully benefit from that communication. This type of communication can be really cool and some of these organizations do really great work so I don't want to miss out on that opportunity.

**Doug:** How do you think we should proceed with the email that I forwarded to you?

**Jesse:** What I would love to do is whoever has been the contact person from that organization, if you could reply and CC Ashley and I, and then provide a short message basically saying that I think we got a little bit ahead of ourselves. We want to rewind and let you know that Jesse and Ashley are now included in this email and we will take it from there. But I would love to see your previous communication with them too if you wouldn't mind forwarding that just so I'm aware of what has been shared and what the back and forth has been like so far.

**Doug:** Sure, and that will include everything we have sent to any of the organizations we have contacted. We sent the same exact email, just with different company names and addresses.

**Jesse:** Great. I would also love to see a list of the organizations that you have reached out to and if you have a contact person or a general email address that you've been sending your communications so, that would be awesome as well.

**Doug:** Sure Do you have a Gmail account? We could send you the actual Google Doc that we have been using to keep track of organizations and contact information.

**Jesse:** So moving forward, are you guys on board with strategizing more before reaching out to any more professional organizations, when it's not just from a student's vantage point?

**Doug:** Yes, definitely.

**Jesse:** Ok, and just to give you a frame of awareness, I work with student groups all the time, and I usually am in weekly communication with them and you guys have been so independent and so awesome, taking it and completely running with it, soaking up all of the information that I've emailed over to you so I've been a lot more hands off. That's fantastic and that's a sign of how competent you are how this project is really skyrocketing. Please don't be wary of sending me your quick questions or forwarding along a communication because I think at this point when we're bringing in outside organizations and trying to share the conversation with so many different people, is when things can actually get a lot more complicated so it makes sense to be in a little closer touch in this stage of the project.

**Doug:** We definitely agree. When we got the response, we realized that we had gotten a little ahead of ourselves and weren't sure how to proceed.

**Jesse:** Yeah, again I think the most important thing, and I'm not trying to put you in your place at all, but I do think it's an important professional learning experience. You are really a support to Seven Hills and a potential entrepreneur and innovator within our framework but you're not representing the organization in this process so we need to be really clear to partners and potential partners about that because our partners are our biggest asset that we have available to us so we need to hold that a little closer to our chest, which you can be a part of for sure, but not be directing.

**Doug:** Okay.

**Jesse:** So I also wanted to talk about the best way that I can distribute the surveys on your behalf. I can send it to Seven Hills' staff but I think that that might really skew your results because Seven Hills' staff is really aware of the work in process already. So I wanted to ask about

reaching out to a broader pool of people in general. I have access to a many young professionals including my friends and colleagues from Seven Hills and other organizations.

**Doug:** Yeah, that would be awesome.

**Jesse:** So we probably won't get as big as a yield of responses as we would if we sent it out to the entire Seven Hills so what I recommend for you guys to do is reach out to your friends and family and parents and brothers and sisters and anyone you know who are in the working world. This way, you can get a grassroots thing going where they can forward and respond. I recommend you do this because it sounds like you have a lot of student responses. We are more just looking for professional responses at this point.

**Doug:** That sounds good.

**Jesse:** Then, in terms of the survey and sending it out, is there an updated version of the survey or an updated email message that goes with it?

**Doug:** Yeah I will send you those materials The link will be the same for the survey which I sent to you in an email.

**Jesse:** Okay, if you wouldn't mind, please resend it so we can have a few versions of it going. That will be really helpful and then I can get that out and hopefully answers will come back from that. Are there any other questions or thoughts about how to move forward, trying to rewind on some of your efforts and track back a little bit? I just want to make sure that everything I'm saying makes sense and that you feel confident moving forward about your role and everything.

**Mike:** Have you had any communication with Pascual in regard to the questions that we sent you to ask him?

**Jesse:** I sent you my responses to the questions. Those are all questions that I have asked him in many different ways before and also on behalf of other student groups so in my responses, I was speaking on behalf of Seven Hills but also paraphrasing the answers that I have received from Pascual. I'm a little wary of sending him that many questions just because it is a pretty significant amount of work to go through and answer them when they were questions that I felt comfortable answering on his behalf. But if there are additional questions that you would like me to direct to him specifically, and there is a manageable, then I would be happy to take a look at those. But if you are just trying to factor Pascual's voice in somewhere, then please be assured that although I was the one typing them, those are his typical responses to those types of questions.

**Doug:** Just going forward with contacting professional organizations, should we not mention Seven Hills at all and just go for the survey results or should we mention Seven Hills and CC you?

**Jesse:** I think if you are reaching out to them as a student group asking some general questions for research, and there's not a mention of Loma Linda or Seven Hills, then absolutely feel free to gather whatever data you need from those organizations. It's more just a request for research support, but if you are reaching out to them and Loma Linda is mentioned or Seven Hills is mentioned, before you even get to the point of CC'ing me, I would like to just have a brief conversation with you, whether it is just a quick email you send me or a call just to say we are reaching out to this particular group, and then I can let you know if we work with them already or if I have a contact from that organization already so you don't need to bother going through their general email, or things like that that have to do with the gatekeeping aspect of it. Then we can decide together whether to move forward or not.

**Doug:** Thank you, that sounds good.

**Jesse:** Okay than you guys. I know it seems a little bit nitpicky and it is to be honest, but it's just trying to safeguard some of these relationships in this unbelievably small world of NGO's. As crazy as it sounds, when it comes to NGO's that are doing work in the areas of coffee and in Guatemala, it is likely that we have already crossed paths with a lot of these organizations at one point or another so we want to be respectful of that.

## Appendix B: Surveys

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
I would be interested in participating in a volunteer program that involves international travel. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have previously engaged in international volunteer work. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be willing and able to fund my travel to and from an international project site. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be willing to fundraise in order to fund my trip. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I could live and work in a developing country for 1-2 weeks. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be comfortable living in the home of a foreign family during my service. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have an interest in sustainable economic development and community growth. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



I have an interest in the preservation of the biodiversity of bird and plant species. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be interested in building new infrastructure in a developing community. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to come up with solutions to complex community-wide problems. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to see the world from the perspective of cultures other than my own. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like hands-on experience. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am comfortable performing physical labor tasks for several hours each day. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have proficient Spanish speaking skills. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have expertise in plant biology. (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am familiar with the coffee fungus <i>Hemileia vastatrix</i> (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I would be interested in investigating a coffee fungus outbreak in Guatemala. (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Professional Survey

	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
I would be interested in participating in a volunteer tourism program over winter break. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be interested in participating in a volunteer tourism program over spring break. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be interested in participating in a volunteer tourism program over summer break. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be more interested in a program that involves international travel. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be willing and able to fund my travel to and from an international project site. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be willing to fundraise in order to fund my trip. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that I could live and work in a developing country for 1-2 weeks. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I would be comfortable living in the home of a foreign family during my service. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have an interest in sustainable economic development and community growth. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have an interest in the preservation of the biodiversity of bird and plant species. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a solid background in biological sciences. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be interested in building new infrastructure in a developing community. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to come up with solutions to complex community-wide problems. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like to see the world from the perspective of cultures other than my own. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like hands-on experience. (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I am comfortable performing physical labor tasks for several hours each day. (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have proficient Spanish speaking skills. (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I would be interested in investigating a coffee fungus outbreak in Guatemala. (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

WPI Student Survey