

Community Garden & Food Security in Camarones, Ecuador



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Project Overview

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Department: Environment, Philosophy and
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Organization: Third Millennium Alliance
Location: Camarones, Ecuador
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About the McBurney Fellowship Program

Through McGill's Institute for Health and Social Policy, the McBurney Fellowship Program supports students in international service programs related to health and social policy in Latin America. McBurney Fellows serve abroad in organizations working to meet the basic needs of local populations. One key aspect of this fellowship is its mandate to make a significant contribution to improving the health and social conditions of poor and marginalized populations through the delivery of concrete and measurable interventions. Students and their mentors identify issues, make connections with local organizations, and develop a strategy for the fellowship. The views expressed in this document are the opinions of the fellow, and do not necessarily reflect the opinions of the IHSP.

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Fellowship Rationale

Our group of four McBurney co-fellows joined the McGill Nourish team in their partnership with Third Millennium Alliance (TMA), a conservation NGO based in the coastal province of Manabi, Ecuador, just outside the town of Camarones. Camarones is home to approximately 300 residents. Properties are scattered along a winding dirt road, with clusters of more densely populated areas dividing the township into three loosely distinguished *barrios*, or neighborhoods. Besides geographic distinction, each *barrio* is home to a different extended family.

Camarones, Spanish for ‘shrimp’, points to the principal economic activity of the residents here. In previous decades, community members drew their income from the catching and selling of freshwater shrimp from the river that runs through town. In recent years, however, the supply has dried up from over-harvesting and has been rendered economically obsolete by the establishment of several large-scale shrimp breeding and packing operations in the region. Today, the majority of families in Camarones have one member that is employed by a shrimp packing factory several miles outside of town who provides the family with their largest financial income. To subsidize this source of income, most households engage in agricultural activity to some degree. This ranges from small herb and kitchen gardens to well-established coffee, fruit and livestock farms. The presence of the latter household-type throughout Camarones points to the region’s agricultural potential – a potential we aimed to harness through our McBurney fellowship.

TMA, an organization dedicated to the dual (and in some cases dueling) causes of conservation and sustainable development, currently owns a swath of over 400 hectares of jungle and tropical dry forest – the Jama-Coaque Reserve. Their research station and onsite headquarters is located at the end of the road that winds through Camarones. The history of the region is evidenced in the stark physical difference between the verdant woods flanking the research station and the dry expanses predominant just down the road. The area was settled in the 1950s as part of a government incentive program that promised property ownership to anyone who cleared and established themselves on uninhabited land. In Camarones, as in much of coastal Ecuador, this push spurred the complete decimation of forest and resulted in the barren, sun-stroked plots of land which most residents view as completely unproductive today. Seen in this context, TMA’s commitment to the often contended claim that sustainable development is complementary to conservation and reforestation can be understood clearly: degraded and overused land is less productive, and increasing productivity is a foolproof incentive for the rehabilitation of this land. In its ten years here, the organization has been engaged in an array of projects with the Camarones community, all aimed at fostering sustainable development and greater economic security for the residents. These projects are guided by the insight that

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healthy land with an abundance of biodiversity will generate consistent and substantial incomes - a thesis supported by TMA's own agricultural projects, most notably their shade-grown coffee initiative and fruit-forest plots scattered throughout the reserve. Initiatives in Camarones include the construction of a communal nursery space, a community center, and a bio-digesting fuel generator, as well as the organization of various public workshops on sustainable agriculture.

Objective

With the aid of our McBurney fellowship, we joined the McGill Nourish team and TMA to design and implement a two-year community garden initiative in Camarones. Impetus for the garden project was spurred in 2016 when a 7.8 earthquake ravaged coastal Ecuador, leaving the inhabitants of many remote villages without access to their principal sources of food – grocery stores in the region's larger municipalities. For the residents of Camarones, road closures resulting from the earthquake made the 40 minute drive to the nearest grocery store impossible, leaving them reliant on emergency rations brought in by government and NGO operatives for several weeks following the event. In light of this experience and the area's geographic proclivity for earthquakes and other natural disasters such as flooding and tropical storms, the primary objective behind the project is to increase the prevalence of food within Camarones, to preclude the possibility of residents being cut off from food in the event of another natural disaster.

Our design for the project also looks beyond this type of isolated scenario, and includes much broader objectives regarding increased food security. According to the UN World Food Program (UNWFP), "People are considered food secure when they have availability and adequate access at all times to sufficient, safe, nutritious food" (<https://www.wfp.org/node/359289>) . We adopted this definition as a guiding force of our design process, and looked at each clause to help us frame the structural objectives of the project. Promoting the "adequate access [of food] at all times" stands out as a key aim. Beyond the obvious case of natural disaster discussed above, we determined that this criteria is lacking for many residents in their day to day lives. The majority of Camarones inhabitants don't grow a substantial portion of the food they eat, and the two small stores in town stock mostly snack foods. The nearest grocery store is 40 minutes away in the city of Pedernales, and, as most residents don't own their own vehicle, the community relies on for-profit rideshare services provided by a few enterprising members. This expense – in terms of both time and money cost – added to the initial expense of buying groceries, constitutes low accessibility, and highlights an area we targeted in the design of our project: bringing food right into the backyards and community spaces of Camarones. Another essential objective guiding the design is informed by the final clause of UNWFP's definition, "nutritious food". While the majority of residents can, albeit under some economic strain, meet desired daily calorie intake, their lack of proximity to a primary food source, combined with the fact that most homes are not equipped with refrigerators, makes fresh fruit and vegetables cumbersome to transport and preserve. To help close this nutritional gap, we designed the garden project with the goal of increasing the presence of fresh produce in the community.

To these objectives regarding the structural nature of the project, we added an important social objective: generating enthusiasm and confidence among community members in our work there. To this end, we designed our project to include a series of workshops on compost making and permaculture, and to bring these into the local school. We intended to get women, who are largely responsible for cooking in the community, excited about the food they would soon have growing around their homes, especially as some of the crops we intend to introduce are not a traditional part of the Manabi diet. Finally, we felt that the project would not be a success if its implementation consisted of us simply coming in, installing gardens, and leaving. Thus, a major objective in our design is to get Camarones families out in the field alongside us, showing that they value the project enough to put in the work – a key indication that it will not be abandoned in years to come.



Activities

While actually in the field, we focused on earth-work in order to prepare the land for long-term and productive garden spaces. This entailed clearing the land of overgrown vegetation, building fences around the plots, engineering structures to help with water-sinking and erosion prevention, digging out garden beds, and creating compost to supplement infertile soil. Furthermore, we engaged in certain community-space building projects, created a greywater system, and helped restore a space to be used as a communal plant nursery.

Challenges and Successes

The purpose of this project was not to go into the community and make any significant changes to the quantity of food produced in a short two months. Instead, it was to get the community and our host organization to begin to work together as a first step towards a resourceful relationship. Under these terms, we feel it was successful. The ways in which we as team members were utilized was a little different than expected, but in the end, we feel we learned more and accomplished more - on a community and personal level - with the work that we had actually

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completed. For example, we expected to do more outreach work, including talking to students and other local home-bodied persons about getting involved in the project. We were able to introduce various composting workshops, such as making bokashi and supermagro, that the community had not seen prior. However, the majority of our project was working along-side the people of the community clearing space from weed-ridden hillsides to usable, terraced garden beds for future planting. As we were a team of extra hands, we were used as such, to make the groundbreaking work efficient and to spread the energy output across more people.

In terms of what we accomplished, we feel we completed the goals originally set during our relatively-short time in the community. Being there in the dry season prevented us from actually planting, which itself was an unexpected realization. However, with that known, we cleared multiple lots, learned about the initial preparation in design and establishment that comes before planting, and helped bridge the gap between two separate parties, one being TMA and the other being the community. With this project being a long-term investment, our time there was only the beginning, and a future goal is to see this project through, with a successful outcome of a positively-formed relationship.

What had worked during our fellowship was ability to adapt to each days' challenges. If tools were left at our headquarters, an hours hike uphill, we were able to complete a different task. If someone was uncomfortable or unable to perform a certain action, then there was another hand who could, and typically, was more than happy to do so. Little tasks were endless, so what "worked" was the fact that each of us could choose things that we felt passionate about, things that we truly wished to learn how to do in a hands-on experience. It made things smooth and enjoyable and allowed responsibilities on a multitude of fronts to get accomplished.

In relation to our successes, we felt that we were able to accomplish more in the upper barrio within the community. As their terrains required more intensive work, we spent the majority of our time there; we ended up spending 4 of the 6 weeks in the upper barrio and the remaining time in the lower barrio. The results in the upper barrio were very tangible and have the most potential for future expansion and outcomes directly related to food security; in the garden spaces we created there, we will hopefully be able to see diverse food production in the years to come.

We felt that we may have been able to put more energy in the lower barrio, or tried to find more projects to do there. With our time constraints, we did not manage to complete every task we set out to do in the lower barrio, whereas the 5 homes that we worked on in the upper barrio received a pretty well-established garden infrastructure. The lower barrio, however, needed less work as their garden systems were more dialed-in. There were also people in the lower barrio that were less receptive to our project and how we operated -- they simply wanted us to provide the tools necessary for them to their own projects. Therefore, there were projects - like building off-the-ground garden beds - that we were unsuccessful at implementing, partly due to a disconnect between our program values with the interests of certain community members in the lower barrio and partly because of simply not having enough time.

Where we did feel we were more successful in the lower barrio was in building shared community spaces. By the end of our time there, we had many people from the community, including several kids who were done with their school day, helping us with tasks related to building up central and shared areas in the lower barrio, including a space that will become a public nursery community members will be able to use. We wanted to get the members of the lower barrio interested and involved in the work we were doing with TMA and in those terms we feel we were fairly successful.

Due to extenuating circumstances, two of our mentors were not able to be as present for the last half of our project. This not only put a lot of pressure on our remaining mentor, but also caused some disorganization in our group which negatively affected our work. This was an aspect of the fellowship that did not work as well but it was an unforeseen complication that had no simple fix and was due to conditions outside of the original program design.

That said, there were some questions raised during our project that included:

How worthy was it to have unskilled workers (us) working in the community? Was it the most effective or conducive to the community?



Are the people in the community going to keep up these gardens and implement these new workshops that we introduced them to, such as the composting?

How useful was the greywater system that we implemented? Why change what was working well for them, to replace it with something that might not be as effective?

Training and Mentoring

The training we received was more than we could have asked for. We had learned a variety of skills that can be translated not only to gardens but to other real-world practices as well. We learned how to properly handle many different tools, such as hoes, machetes, and shovels and in which circumstances each should be utilized. In addition, we learned how to see a landscape as usable space and how to develop our ideas into actuality, especially during the Permaculture Design Course that we took before the project started. We shaped the earth using these tools and planning design, making sure not to remain within “analysis paralysis”, as one of our mentors used to say. Our mentors were all experienced agriculturalists, gardeners, stone masons, bioengineers,

and landscape designers. They have education backgrounds and work experience in many different environments and learning these in Ecuador's coastal environment made things relatively smooth and consistent, with weather and temperature. With early projects, we did the grunt work: the weeding and digging, for example, as they taught us how to visualize the earth to form an area that could be used for production. With time, they handed the design process to the team, allowing us to collaborate with ideas and plan where certain things would go: garden beds here, a trellis there, but all for multiple reasons. Those reasons, in the end, we could justify, and the putting it to action itself could be done too. Leaving the project that was something we were all proud of: learning to manage and design an actual plot of land and leave it in a changed but beneficial state.

What did you learn?

During our fellowship, beyond gardening expertise we also learned a great deal about the specifics of the organization we worked with and the context of the community. Much of that can now be



applied to a broader scale whether it be with other organizations or community-based projects. The collaboration with TMA and the community members taught us what that relationship can and should look like and gave us the means to replicate it in different areas. Of course, every community and organization is unique in many ways but the tools we gathered for communicating in these positions will help us with future participation in similar projects.

On a more personal level, we all learned valuable lessons on working together in a group setting. There were times when projects worked smoothly and there were times when design elements were more contested and had to be discussed. Probably our most contentious project, the design

and building of a greywater system, was also one where we learned the most about what to do when a project has to be reworked. There were frustrating moments with this project; it took longer than expected and there were side-outcomes we were not expecting that required us to redo many aspects. By the end though, we agreed it was a valuable learning experience that taught us how to handle a project with an originally unsuccessful result by working together in a constructive manner until achieving a more positive outcome.



Community Implications and Further Work

In terms of our contribution to the health and wellbeing of the community, we assisted in the short term connection between community members and our host organization. Though they already have a relationship to some extent, with some members hired as farmhands and drivers, this project allowed TMA to reach out to more people, ones that would not normally receive some of the resources the reserve has to offer. In the short-term, our team helped bring those resources to the community members. With our physical presence and additional number of workers, along with the initial investment that our greater Nourish Team provided, we were able to help get the first-step, infrastructural work accomplished to make the rainy, planting season an efficient one. This directly transitions to the long-term goals: new fencing leads to less disturbed grounds from farm animals, double-digging garden beds and fertilizing them naturally with forested organic

material for healthy soil, and an overall successful future harvest of food for years to come. With the exception of certain individuals, an abundant harvest is something the community had not seen for some time, and it is our hope that our work and our investment will encourage a long-term change.

Community members would care about our work because it is not just *our* work. We were alongside the community members, digging up their property and converting their weed-covered lots into beautiful grounds for gardens. Our work allowed them to see the potential in their property and the valuable goods that they could produce. Gardens are not a one time project; they reoccur year after year and constantly need attention. If the people in the community did not show interest in our project, nor continued to care for the progress we had made, then the work we did would fall apart. It is only as permanent as they wish it to be, but fortunately, they showed great enthusiasm for the project and we do believe that it will be a time investment they are all willing to give. Outsiders who have visited the community before versus visitors who pass through now will have entirely different perspectives on the community members. Before, it could have been assumed that there was little attention to the land and whatever was grown for harvest was sparse and spread out. However, visitors now, once the wet season comes around of course, will see a system of design filled with intention and lush with green in an organized fashion. The potential of our work is limitless, and we are all very excited to receive updates on the growth of the gardens in years to come.

Program Evaluation

This fellowship not only taught us all a great deal about the task of designing and implementing a productive garden under the principles of permaculture but also gave us relevant and valuable experience for future academic and career-oriented endeavors. Taking part in this project illustrated the magnitude of beneficial outcomes that can ensue from community projects like this one. The work that we partook in - related to both the technical aspects of gardening and the collaboration with the community - served as an important learning experience that can now be built on with a more specific focus in an academic setting. Furthermore, it was a very applicable example to related areas of study and therefore acts as a case study to better understand topics related to health and social conditions in similar areas, food security, and sustainable agriculture. With the training we received, we could now apply these experiences to future work with community involvement or sustainability-oriented agricultural projects.

While all aspects of the fellowship were educational in some way, a significant part was the experience we all gained and the ability to employ it in a tangible way. Being able to actually apply what we had learned by designing the garden spaces ourselves and then transforming previously infertile land into plots with the potential for high-productivity was invaluable. We would advise future fellows to take full advantage of all the resources available, whether it be the mentors, community members, or other interns, in order to get the most out of the experience.

Working with the other fellows and interns was vital to this project. We learned how to work and engage with all parties involved in order to be the most productive but also realized the importance of communication within the group. When designing a new garden space or trying to decide important factors of implementation we were having a constant dialogue with the other participants. Decisions were made in a group format, allowing new and different information or opinions to be raised until we came to what we felt was the best course of action. Interacting and working together not only made the work easier but the resultant quality better and was an extremely useful part of the project.

This project was part of an ongoing two-year program that will involve another group of interns traveling to the community to continue our work in the following year. Our presence was also a method of establishing a continuous and hopefully fruitful relationship between the organization TMA and the people of Camarones. We hope that therefore the next steps will not just be taken through more fellows but also by TMA and the community members we worked with by continuing the work they participated in and utilizing the garden spaces we all created. In terms of improvements to the program, we would advise better communication with the mentors prior to arriving in the community and better planning related to certain projects while in the community. However, many improvements that we would suggest will most likely be realized without intervention simply by having a better understanding of the project now. Everybody involved will be better equipped in the future based on much of the simple troubleshooting we did while navigating the beginnings of this long-term endeavor. We would definitely recommend working with TMA and in Camarones to other students or interested parties. Our experience there was a very positive one that generated a relationship with and between the community and organization we hope to maintain and develop.