

Shaping the Maya Economy: Human-Centered Design Approaches to Biocultural Innovation

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Abstract

Maya Leaders Alliance (MLA) is an advocacy organization for Maya people in Southern Belize. In 2015, 39 Maya communities in Toledo achieved a major victory supporting indigenous rights and sovereignty, the Caribbean Court of Justice upheld their claim for land tenure. With ancestral land acquired and protected, MLA and Maya community leadership now concentrates on developing a *Maya Economy* based on culturally appropriate market strategies. This paper will document the efforts of master-level students studying Development Practice (MDP) in helping investigate the role specific biocultural innovations and culturally rooted market strategies play in supporting the formation of a *Maya Economy*. Our work will add to the understanding of indigenous practices of sustainable development specifically in the realm ecotourism initiatives.

Our team will support MLA in the design of a prototype process for implementation of biocultural innovations, facilitated through human-centered design processes. Biocultural innovations are technologies that emerge from biocultural heritage unique to the Maya people connecting goods or services with human capital. Supporting MLA's biocultural innovation design process will require three important elements. First, an understanding of related knowledge. To attain this, we are conducting a literature review to analyze models pertaining to indigenous economies, agroecological systems, and ecotourism. Second, an understanding of context through work with MLA, community representatives, and stakeholders to gain perspectives and gather inputs. To do this we will facilitate co-creation sessions in order to collect data of community perspectives.

Through these strategies we will assist MLA to rebuild linkages between economy, environment, cultural identity, intergenerational exchange of knowledge, and communities members working together. Our paper will share the process and impressions gathered involving the use of biocultural innovations to support endogenous economic development for Maya communities through ecotourism initiatives.

Introduction and Context

Indigenous communities around the world are under increasing pressure to conform to a global market economy in the form of profit-driven development projects (logging, mining, etc.) that degrade ecosystems and destabilize communities. Additionally, neo-colonial and industrialized activities of some multinational and national entities have propagated a negative and outdated stigma surrounding subsistence economic activities and indigenous sovereignty.

There are approximately 6 million Maya People living primarily across the bio-diverse ranges of Mexico, Guatemala, Honduras, El Salvador, and Belize. Maya communities have faced generations of exploitation from Western colonization resulting in forced migration from ancestral land resulting in historical trauma. This historical trauma includes intergenerational knowledge loss, increased poverty, internal conflicts, and an overall loss of cultural identity. However, as a result of impassioned leaders and communities members and with the support from both global and local organization , the Maya People of Southern Belize have been overcoming major challenges in the hope of creating a system of Indigenous Economic Development.

In 2015, the 39 Q'eqchi and Mopan Maya communities of Southern Belize achieved an unprecedented victory, the Caribbean Court of Justice issued its final order in favor of the Maya people of Southern Belize, affirming their rights to the lands they use and occupy. This victory was two decades in the making and represented an important and long-overdue step towards the recognition and protection of Maya people's rights. With this ruling, the Maya people possessed the legal right to guide the direction and the processes by which their lands, natural resources, environment, and communities develop. Local representatives and organizations have been at the forefront of catalyzing land reform and envisioning the next steps in developing a culturally responsive indigenous economic governance system that will be the foundation of the *Maya Economy*. *The Maya Economy* is holistic and sustainable market strategy incorporating Maya culture, traditional knowledge, and the biophysical environment.

One of the most important organizations campaigning for *Maya Economy* is the Maya Leaders Alliance (MLA). The MLA is an advocacy and governing support organization made up of Maya leaders that support the 39 Mopan and Q'eqchi' communities of Southern Belize. The MLA works directly with training and empowering village *Alcaldes* and campaigns for equitable representation from the Belizean government. Moreover, MLA reaches out to communities, understands their wants and needs, and collaborates in order to build an equitable system. They are receptive to community needs and acknowledge gaps in their thinking, doing so, adjusting their actions. MLA is working towards rebuilding linkages between economy, land, identity, intergenerational exchange of knowledge, and community collaboration.

Among the current initiatives to structure the *Maya Economy*, a central focus involves the designing of a prototype framework for the development of biocultural innovations. Biocultural innovations are technologies that center on the Maya's biocultural heritage, in other words, their novel and practical land management applications which emerge from within their traditions, knowledge, and biocultural diversity. These biocultural innovations combine natural and human capital in order to maintain livelihoods while supporting traditional practices.

A central part of this project was understanding and documenting the interplay of ecotourism as it applies to biocultural innovation. Biocultural innovation is comprised of natural and human capital rooted specifically in heritage. For the Maya people the cultivation and innovative processes of specific biocultural resources provide market opportunity for communities, often in the form of ecotourism outlets.

Scope of Work

Our team was comprised of three Master of Development Practice (MDP) students from the University of Minnesota. Our work was centered around concepts of biocultural design and innovation. We assisted MLA in the design of a prototype framework for incorporating biocultural innovations to support the development of a *Maya Economy*. More specifically, the role of ecotourism initiatives in this development process.

We received a request to initiate an ecotourism revitalization project in a village that is supported by MLA. The members of the ecotourism initiative have almost three decades of hospitality experience serving guests. Additionally, as an indigenous community, the guest house members operate in accordance with their own biocultural heritage. Biocultural heritage encompasses the interplay between traditional knowledge, biophysical diversity, and culture. The processes and activities of the guest house can be understood as biocultural innovation and our work was centered in identifying key characteristics of the initiative aiming to understand the potential role that it can have for the Maya Economy.

In order to achieve this goal, we conducted field research gathering community input through human-centered design processes to deliver a product that is aligned with Maya community traditions and is embedded in indigenous knowledge. Considering the importance of local and traditional knowledge and our position as outsiders working in the Maya context, our best role was to help facilitate discussions and apply our technical skills by supporting the documentation of the current governance and management.

Methodology

Utilizing a human-centered design approach allowed us, as outsiders of a community to best, to better understand community needs and wants. This approach was the most practical because it places the community in the center of discussion and innovation. Our approach in working with the ecotourism initiative was rooted in participatory methods, specifically the design process following the stages of Empathize, Define, Ideate, Prototype, and Test as supported by The Field Guide to Human-Centered Design by IDEO.org.

The iterative design continuum of empathize, define, ideate, prototype, and test is as follows:

1. Empathize - The first stage of the design process is to gain empathetic understanding of the problem by shifting perspective. Empathy allows individuals to set aside their own assumptions about the world to gain insight into users and their needs.
 - a. The empathizing stage is vital in understanding the unique context indigenous communities operate in regard to their traditional practices and biocultural heritage. During this stage we engaged in group-directed empathy mapping to further understand the needs, wants, and aspirations of all those involved in the Laguna Guest House.
 - b. For the youth session we engaged in a role-playing exercise where the participants shifted between guests and managers of the guest house. Lastly, for the women's session we participated in a card-sharing activity to further understand the various activities women lead and organize in the ecotourism initiative.
2. Define - The second stage of the design process involves defining the problem(s). Information gained during the Empathy stage and insights gathered from secondary research will be mapped and analyzed.
 - a. Synthesizing information gathered from the introductory session helped identify needs in both governance and management of the Laguna guest house.
3. Ideate - The third stage of the design process incorporates co-creation and rapid generation of ideas. Alternative ways of viewing the problem are stressed.
 - a. The last working session was a group co-creation session. Here insights learned were shared with all members of the guest house. Discussion was stimulated in supporting which deliverables and recommendations would be most useful for the Laguna guest house.
4. Prototype - The fourth stage of the design process involves the production of scaled down versions of the final plan. Specific features are highlighted to further investigated solutions garnered in the previous stage. Prototype are either accepted, improved and reexamined, or rejected on the basis of the user's experience.
5. Test - The fifth stage of the design process involves a cumulation of the various prototypes into a working model. It is important to understand that the human-centered design process is iterative and non-linear. Revisions will be made as new insights, ideas, and understanding is continuously adapted.

Using the human-centered design approach, we gained contextual information, as well as captured emotional responses further gauging desires and aspirations for the Laguna guest house.

Results

The vision of the ecotourism revitalization project was to document the governance and management structure, identify needs of the guest house members, and provide business management tools. Co-creation sessions were facilitated with guest house members using the five stages of human-centered design. These sessions allowed for understanding of biological resources implemented in the ecotourism initiative and how villagers manage their relationships with these resources. Furthermore, the co-creation sessions allowed us as outsiders to understand the everyday workings of the initiative including women and youth role in ecotourism activities.

Indigenous women play a key role in maintaining everyday livelihoods, are essential in food production and security, and hold a great capacity for community economic development¹. Women are the prominent actors in guest house activities from on-the-ground management decisions to hosting craft fairs. To gather their perspectives we designed a workshop during the *Define and Ideate* stage of design process. During these workshop sessions we learned that women have a clear understanding of how the guest house operates and rely on the guest house as a way to generate income directly for themselves and to provide for their families. One clear component which rose to prominence was the importance the craft fair played into the community's relationship with the ecotourism initiative. A quote shared a participant of the workshop summed up Maya women's role and their ability to express themselves.

"One of the things is that we live in a culture where women are passive. You have a voice. Everyone has a voice and opinion and it is important. You [the MDP students] are just here on a project. We [the women of the guest house] are the ones that have to come up with the answers for ourselves."

Women's involvement in the ecotourism initiative and their ownership of the craft fair is crucial to foster deeper discussions about gender disparities. The crafts fair is one of the most important guest house activities as the income generated goes directly to the women, which provides for their children and families. It also serves as a space for women to express their creativity and share their talents with the guests. Activities owned and operated by the women instills a strong sense of pride and a feeling of unity between the community and women.

As recognized during our first session, youth represent the future of the ecotourism initiative, their involvement is imperative not just to sustain the enterprise but to prevent intergenerational knowledge loss. Indigenous communities around the world face intergenerational knowledge loss due to diminishing youth involvement in their communities. The engagement of youth in community enterprises has been recognized as one of the most important factors or sustainable

¹ Davis, Megan. "Woman, Rural and Indigenous – Breaking Triple Layers of Discrimination United Nations For Indigenous Peoples For Indigenous Peoples." United Nations. October 15, 2015. Accessed August 12, 2018.

success². The goals with the youth co-creation sessions were to gauge their level of knowledge about the guest house activities and discover involvement in the initiative. Following completion of the youth session, it was clear the commitment and interest youth held in operations of the guest house. The children, grandchildren, and extended family all helped support operation, whether it be assisting with tours, chaperoning, cooking, or simply engaging with the guests. The youth proved to be very knowledgeable around guest house activities, pricing, and logistics. When asked if they received any instructions or formal training, much of the youth responded stating they learned everything by listening and watching. Almost all of the youth in the session expressed interest in taking on a leadership role in one of the guest house activities.

A strength of the ecotourism initiative, the guest house members demonstrated strong resilience and commitment to the initiative. The members pleasantly shared their life with the guests and talked with pride about the village's practices, traditions, and biological resources. For the guest house members, it is more than just a business to generate additional income, it is an opportunity to share the way of living of the Maya people. Moreover, the infrastructure was well maintained, and the division of labor was equitable. The decisions were made in the group and there was an eminent sense of unity.

Among the priority needs of the guest house, formal documentation was the most urgent. The initiative lacked basic bookkeeping tools and an invoice system, as well as activity protocols, charts to specify prices for the guests, or a rotational meal plan. Moreover, the guest house did not have a website running or marketing mechanisms in place to attract more guests. Throughout our working sessions, the members also manifested their desire to create a new name for the ecotourism initiative, along with a mission statement that reflects their identity and commitment to offering the best possible service.

As a result of assisting guest house initiatives, our team provided formal documentation of the current governance and management structure, suggestions of control and payment books, charts with offered activities and pricing and suggestions of flyers and marketing statements . Furthermore, based on the members' insights, we provided a list of possible mission statements designed to prompt a dialogue among the participants on the future of the initiative. Acknowledging our role as outsiders and wanting the community to make the decisions the recommendations and the templates were designed based on the data gathered during the working sessions and our personal experience as guests. The templates were handed off to the community and can be adapted as needed. We recommended three potential name templates and mission statements while the community adapted them as they saw fit. Lastly, we provided a list of recommendations ranging from legal costs to marketing. To respect the privacy and sovereignty of the Maya community, these materials will not be provided in this paper. To request access to these materials please contact the authors directly.

² Maguirre, M. Portales, L. Bellido, I. "Indigenous Social Enterprises as Drivers of Sustainable Development Insights From Mexico and Peru." *Critical Sociology* 44, no. 2 (2018): 323-340.

Discussion

Co-creation sessions with members of the ecotourism initiative supported the generation of ideas and next steps for the new community-centered refocus of the initiative. The human-centered design process provided a less extractive methodological approach to support the community in putting their ideas into action outside of strict Western top-down business planning. The ecotourism initiative is favored by the community members as a way to generate income which compliments traditional knowledge and Maya biocultural heritage. Throughout the different working sessions, it was clear that both men, women, and youth felt an investment in the project as a means to not only generate additional income, but to share their history and culturally connected activities.

Numerous papers and case studies have examined the effects and various approaches of ecotourism strategies involving indigenous communities. In contrast to more industrialized mass tourism models, ecotourism enables tourists to seek educational self-fulfilment in the form of travel and a transformation where the tourism activity somehow provides a societal good, specifically to support environmental preservation, rural development, and/or cultural resilience.³ In the context of this ecotourism initiative, tourists are invited into the homes of the community members to share in experiences which are routine for the citizens, yet unique to the guests. Ecotourism has been shown to serve as a boon for rural indigenous communities in some cases; however, the strain, and in some cases exploitation, of cultural and natural resources can have negative consequences to the community. Ecotourism can often be viewed as a model for other initiatives in indigenous economies.

Indigenous economies are defined as traditional and local economic systems of indigenous people that include a variety of land-based small-scale economic activities and practices as well as sustainable resource management.⁴ Many development researchers, such as David Newhouse, claim that market economies, and therefore global capitalism, cannot balance subsistence methods. However, Rauna Kuokkanen states that the “The key principles of indigenous economies—sustainability and reciprocity—reflect land-based worldviews founded on active recognition of kinship relations that extend beyond the human domain.”⁴ Our work with community ecotourism in the Maya context supports the balance between sustainability and pursuing market economies. Piecing together this balance is the concept of biocultural innovation.

³ Schaller, David T. “Indigenous Ecotourism and Sustainable Development: The Case of Rio Blanco, Ecuador (1996).

⁴ Kuokkanen, Rauna. “Indigenous Economies, Theories of Subsistence, and Women: Exploring the Social Economy Model for Indigenous Governance.” *American Indian Quarterly* 35, no. 2 (2011): 215-240.

Biocultural innovations are technologies that emerge from biocultural heritage and combine human and natural capitals. Biocultural innovation broaden the concept of “innovation” to exist outside of Western stigma. Traditional knowledge over millenia provide insights into diverse fields such as agriculture and architecture. Ecotourism initiatives, if developed in a culturally competent and participatory design, have the potential to highlight and destigmatize biocultural innovations as being extremely novel, relevant, and ingenious outside of local contexts.

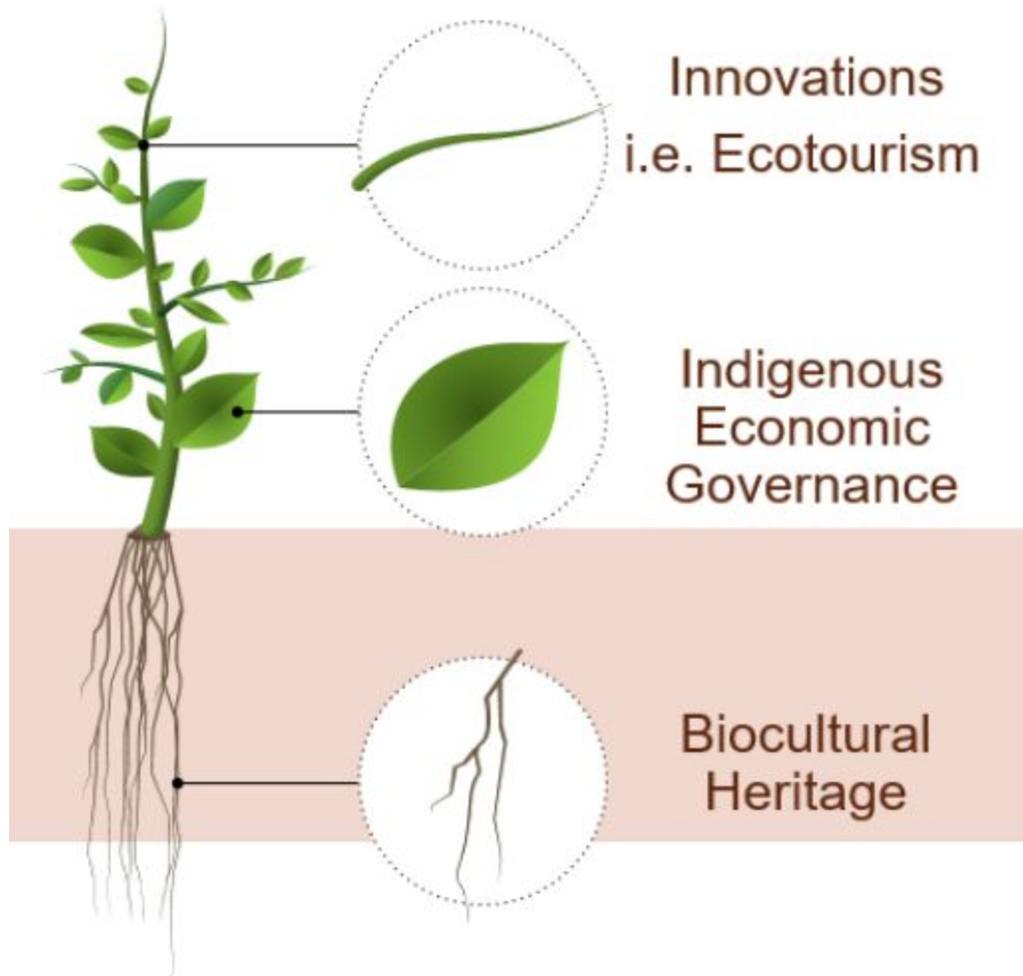


Figure 1. Linkages from Biocultural Heritage, Indigenous Economic Governance, and Innovations.

A relationship exists between biocultural heritage, indigenous economic governance, and ecotourism. Each of these terms shown in Figure 1 help connect an appreciation for culture and tradition as being relevant to market outcomes. Acknowledging culturally appropriate ecotourism as central to the Maya Economy is crucial in providing economic benefits to local communities. The innovations of biocultural resources in these communities are bountiful. Ecotourism initiatives provide an outlet for contemporary Maya people to share their ancestral ecological heritage and culture with the outside world. This outlet provides them with an opportunity for

increased income in their community, face gender disparities, and address intergenerational knowledge loss.

Drawing from our experience working with this particular Maya ecotourism initiative, there is recognition that the market should not dictate the activities and functionality of ecotourism venture. Instead, it is vital that all activities are rooted in biocultural heritage first and foremost. The Maya people have a strong connection with their land and cultural heritage. This connection can be channeled in a culturally competent manner through ecotourism. Ecotourism is a venue in which the people have an economic outlet while still having the ability to preserve and practice their ancestral traditional ecological knowledge.