

The Impact of Income Generating Programs
at Tarangire National Park, Tanzania

by

Dylan McDowell

A PROJECT

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the requirements for the
degree of

Honors Baccalaureate of Science in Fisheries and Wildlife
Education Double Degree
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Presented April 22, 2014
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ABSTRACT

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The newest pilot project at Tarangire National Park (TAR) is Income Generating Programs (IGP) where community groups organize themselves around an activity that earns income. TAR initiated the project by paying for ten members from each of the three existing community groups on the park's northern end and fifteen members each from the two existing community groups in the park's southern end to attend a business class on capacity building from September 24-29, 2012.

This study analyzed the immediate impacts associated with the class on the three groups in the park's northern end. The metrics used to measure impact were group information sharing by class attendants, changes in business practices, changes in opinions of TAR's management, and changes in attitudes towards living next to TAR. These results were procured through qualitative case studies based on interviews and focus groups ($n=51$).

It was hypothesized and supported that class attendants shared the information within their group, initial changes to business practices were made, villager opinions of TAR became more positive, and that attitudes towards living next to TAR improved.

Key words: Tanzania, National Parks, Conservation, Finance, Business, Tarangire

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**Honors Associate of Science in Fisheries and Wildlife Science and the Education
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I understand that my project will become part of the permanent collection of Oregon State University, University Honors College. My signature below authorizes release of my project to any reader upon request.

Dylan McDowell, Author

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The Impact of Income Generating Programs at Tarangire National Park, Tanzania

INTRODUCTION

As conservationists around the world seek new ways to protect natural resources, a popular idea is that of Community Based Conservation (CBC). The goal of CBC is to create sustainable natural resource outcomes while improving the livelihood of the surrounding communities (Roe et al. 2009). Other acronyms commonly grouped into CBC are Community Based Natural Resource Management (CBNRM) and Payment for Ecological Services (PES). While the idea of CBC is positive in nature, the results have been mixed and appear dependent on a multitude of factors. Which entity is in control of property rights correlates with project success. In Malawi and Uganda for example, strong local enforcement of property rights benefited the projects, whereas Mozambique projects suffered due to a lack of clear property rights (Dougill 2012).

Local government has played a significant role as well. Sommerville et al. (2010) found that in Madagascar the actual payments had only a small effect on the decision of individuals to change their behaviors, but it was strongly influential in changing attitudes. This same study found that fear, rather than money, was the primary factor in behavioral change. The lessons from these studies suggest that the support from local governance is essential in successful conservation projects. When it comes to enforcing penalties for illegal activities, many outside organizations are relatively powerless to do so and must rely on local institutions for support and enforcement.

Establishing successful CBC has historically relied heavily on the presence of big game animals. Yet rapid human population growth combined with prevalent poverty can create competition with conservation goals (Hackel 1999). Since land is the primary asset of many people involved with CBC, the issue of cost arises. In order for the rural people to feel that the opportunity cost of land restrictions is worth it, a significant amount of money is necessary for compensation as to prevent the search for economic alternatives. Although many benefits such as sanitation and infrastructure tend to accompany CBC projects, a substantial cost inflicted from participating in conservation is wildlife destroying crops (Bajracharya et al. 2006). In addition to crop damage, in many cases the money for CBC is dependent upon tourism, which has seasonal trends (Naidoo et al. 2011). The potential of diversifying conservation projects holds promise and is being explored currently.

The adoption of CBC has shown strong outcomes in areas such as Namibia, where wildlife management has increased and large mammal populations are increasing (Naidoo et al. 2011). Yet more work is still needed on the anthropological side. A recent idea has emerged for a two-step version of Payments for Ecological Services (PES) that would help improve relations with villagers. The first stage sets up the institutional and social contexts for which PES is to take place within the local community. The second stage follows with direct payments. However it is essential that these payments are seen as supportive and not as dominating or “from above.” The funds should applaud positive behaviors and not simply be a tradeoff for the exclusion of the villagers from their land (Cranford and Mourato 2011). This approach would focus on stability first and payment

second and may serve to assist in the level of community support—an essential asset—which is being targeted in areas where conflict has occurred.

Community Based Conservation in Tanzania

Throughout East Africa land use conflicts are a reoccurring issue that is specifically intense surrounding the borders of national parks. In many villages around national parks, displacement has occurred during either the formation or expansion of a park, and in some cases both (Igoe 2004). As many of these villages previously procured essential portions of their livelihood (wood, food, water, etc) from inside current park boundaries, creation of the park has caused poverty to increase in some areas and also results in villagers illegally entering the park (Naughton-Treves 2012).

In Tanzania's Maasai Steppe, near Tarangire National Park (TAR) in Northern Tanzania, the area farmed in surrounding villages has increased exponentially since the park's creation in 1970. From 2002 to 2004 there was a 45% increase in area farmed per household in Emboreet village alone (Sachedina 2008). As a result, during the last decade wildlife populations in the area have declined substantially due to factors such as illegal hunting and habitat loss (Stoner et al 2007). As these villagers attempt to turn to cultivation as an alternative source of income, it is having negative impacts on the wildlife. A study of land use by mammalian species around TAR found very low animal numbers within cultivated areas and a reduction in species richness (Msuha et al 2012). This suggests that the rapid increase in cultivation could provide dire consequences for animals that naturally move beyond park borders for migrations.

These land-use conflicts around National Parks like TAR have spurred increases in poverty in already struggling areas. A Tanzanian National Parks (TANAPA) survey of villages surrounding TAR found prevalent poverty in the villages and concluded with the statement:

“An intervention is needed to the community to ensure that the hardship in their livelihood does not tempt them to preform activities that will have an adverse effect to the National Park (TANAPA 2007).”

Attempts at poverty alleviation combined with wildlife conservation have been sparse and overall lack a continued record of success. A study by Nelson et al. (2009) looked at the mixed historical record for Payments for Ecological Services (PES) as well as analyzing a new attempt around TAR. The new PES project is taking place in the aforementioned Maasai Steppe in close proximity with TAR. Rapid expansion of land cultivation and numerous scientific studies from the area suggesting mammalian population decline has caused a group of Tour Operators to form a coalition. As a group they annually lease 9,300 hectares of the Maasai Steppe directly from the villagers to be free from hunting, logging, or charcoal burning. In addition, the group has hired local villagers to act as game scouts patrolling the area to ensure enforcement of these terms (Nelson et al. 2009). Between the land and the game scout salaries, this project is injecting U.S. \$8,000 annually into the area. While this method appears effective at this time, it is not feasible to set up PES around all of TAR's villages; both in regard to money and amount of land usable by wildlife.

Another growing form of poverty alleviation in poor communities is through microfinance. Non-government Organizations (NGOs), Microfinance Institutions (MFIs), and in some cases governments or national parks have developed systems of issuing micro-loans. Similar to PES, these have had mixed results.

Studies have attempted to isolate significant variables for successful microfinance, and business skills and household income are the strongest correlates, while education is non-significant (Tundui 2012). Attempts at understanding significant variables play into a growing argument that capitalism is beginning to infiltrate microfinance, and there is a paradigm shift from social welfare to sustainability. As seen in the study by Sigalla and Carney (2012) claims are made that “empowerment” is a key component of microfinance but results show that the only real factors are economic growth and poverty reduction. In other words, “empowerment” continues to serve as a strong buzzword but it is not a focal point for microfinance.

This poses potential problems as providing loans to the poor is extremely costly due to transaction and administration costs, and institutions that provide loans to women are less efficient than others (Hermes et al. 2011). Instead the focus is on repayment rates and the amount of loans provided. Yet in Sub-Saharan Africa, 92% of women participating in business besides agriculture are entrepreneurs (Becker 2004).

Around Tarangire National Park, the majority of participants in small business groups are women. Even within groups that do allow men, the ratio was still found to be roughly 75% female (TANAPA 2007). TANAPA’s report suggests that this polarization of the female gender is actually intentional. The idea being that women’s groups that do

allow men actually restrict the number of men as to maintain power within the group and not allow men to take over.

Currently two loan providing agencies exist in the area, Savings and Credit Societies (SACCOS) and Village Community Banks (VICOBA). However, many villagers interviewed seem fearful of the former and neither one is widely used at the present time.

Support from the Park through SCIP and IGP

TAR occupies an area of 2850 km² in Northern Tanzania, making it the 5th largest park in the country. The plethora of baobab trees, proximity to Lake Manyara, and enormous concentration of elephants make it the 3rd largest grossing park in Tanzania. The park's creation in 1970 displaced many villages, and TAR has previously attempted to establish outreach to these villages in the form of initiatives such as Support for Community Initiated Projects (SCIP). SCIP projects were established in 1992 and fund approximately 70% of an approved community project while the village is responsible for raising the remaining 30% (TANAPA 2007). However this process is commonly bogged down by bureaucratic requirements wherein communities have to seek approval from several entities including District Authorities, TANAPA HQ, Park Authorities, and more. While there are cases of success, a major issue is where the funds end up. A TANAPA official named Mr. Ibrahim phrases the problem as families with no children care less about the funding of a school. In addition he presented the idea that:

“By putting money directly into people’s pockets instead of funding projects TANAPA hopes people will begin to see the park as more tangibly benefitting them (Yourish 2011; as stated by Mr. Ibrahim from TANAPA).”

In May of 2006, TAR was selected as the site for a new TANAPA pilot project called Income Generating Programs (IGPs). The goal of IGPs is to shift funding away from solely community based establishments (school, medical dispensaries, etc.) and instead send funding towards individuals and groups to directly support their livelihoods. Community groups organize themselves around an activity to earn income, and TAR hosts an expenses-paid week-long business class for a select number from each group. The class discusses topics such as entrepreneurship, gaining business recognition, and problems faced by a small business owner (see Appendix B for a complete list of topics taught). In theory, the villagers will spread the business information to the rest of their group and create more sustainable business practices. The goal is to “foster ownership” of natural resources since Park funds are derived from tourist dollars, which are dependent upon natural resource conservation. The villagers will become stakeholders of conservation as tourists may purchase products from IGP groups as well.

This approach to alleviating village poverty was inspired by a “Problem Tree” from TANAPA (see Figure 1). In developing IGPs, TAR predominantly followed the left path of the tree. “Inaccess to Training Institutions” and “Lack of Funds” are both prevalent issues in the area, and the IGP proposal from TANAPA (2007) cited the major goals of “training” (to increase repayment rates of future loans) and “capital to groups.” According to the Problem Tree these goals would uproot some of the major issues leading to “Abject Poverty” at the crown.

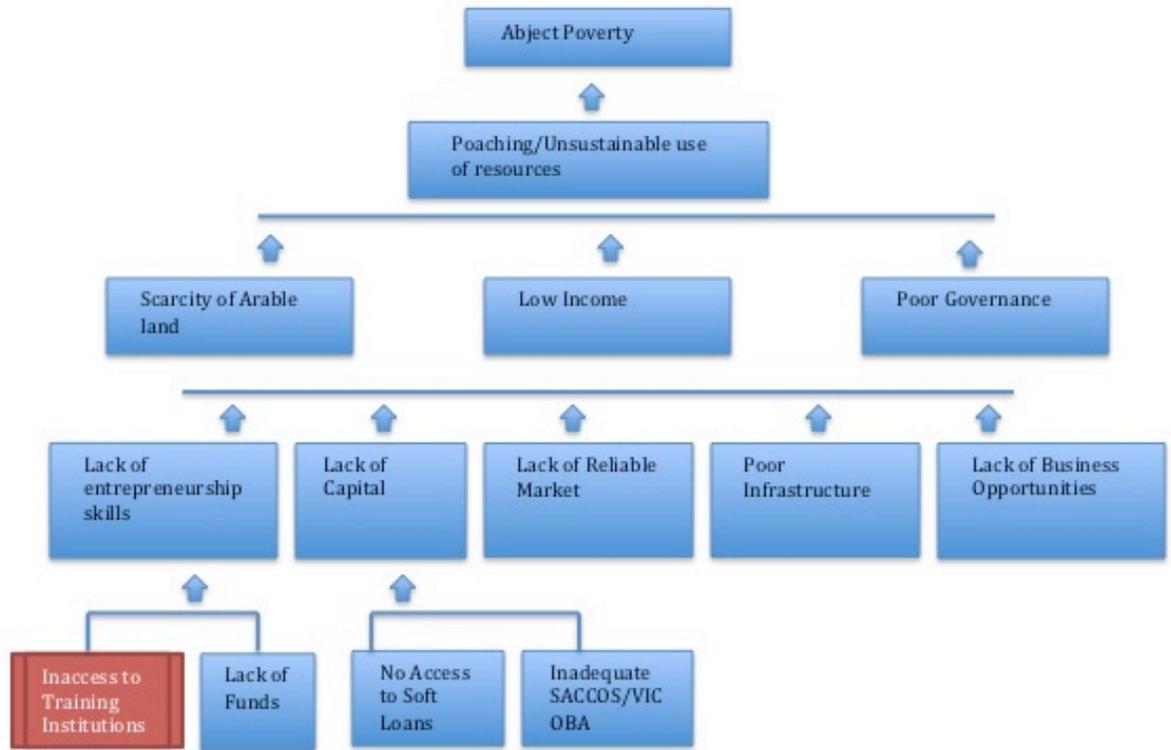


Figure 1: A Problem Tree drawn up by TANAPA to demonstrate issues leading to poverty in villages surrounding national parks. The box in red, “Inaccess to Training Institutions,” served as the rationale for the business class that this study evaluated.

The long-term goal is to help nurture community businesses to a sustainable level decided upon by TAR in which the park can establish a system of loans available to the IGP groups. Although still in the development stages, current predictions are for short-term loans to last 1-6 months while long-term loans will stretch from 7-12 months. Both types will have a small grace period of 3-4 weeks with the intent of quick repayment. Current predictions also place interest rates around 5% per annum (TANAPA 2007).

From September 24th-29th, 2012, TAR hosted the first business classes. One class was held in Babati Town on the park’s northern end where 30 members from three different groups in the area (10 from each group) were nominated and attended the class.

On the park's southern end a class was also hosted with 30 members, but only from two different groups (15 from each group). The Park spent 10,290,000 Tanzanian Shillings (approximately U.S. \$6,860) on the classes and contracted out EARD Community Initiatives and ABCD Consultants from Arusha as instructors (TANAPA 2007). While the classes were said to be successful, two months later no evaluation has been conducted to analyze the impact of the classes and any changes in business practices.

This study analyzed the impact of IGP groups and the associated business class in the three participating villages on the northern border of Tarangire National Park. Impact was measured through the following variables:

- Group information sharing by class attendants
- Changes in business practices
- Changes in opinions of TAR's management
- Changes in attitudes towards living next to TAR

Based on historical conflicts and conditions, my hypothesis was that the IGPs had an overall positive impact on the villages seen through an increase in group collaboration, more profitable business management, positive views of TAR, and a renewed appreciation for living in close proximity to the national park.

STUDY SITE

Tarangire National Park (TAR) is located in northern Tanzania and is the country's 5th largest park. 42 villages surround it, stretching throughout five districts: Monduli, Babati, Kiteto, Simanjiro, and Kondoa. Tourism is primarily contained to the park's northern tip, creating different livelihood opportunities for the villages on the northern compared with the southern ends of the park. When the park was created in 1970 it closed off vital water sources and pastures essential to herding communities (Igoe 2004). This was followed by the arrival of commercial farms in the 1980s, which further deteriorated villager opinions of the park. The last 10 years have seen a dramatic rise in tourism, a tarmac road increasing access to the park entrance, and many new lodges for foreign tourists as well (PEC 2012). This history—combined with attempts of extending park boundaries—has created animosity between these villages surrounding the park and the actual protected area itself.

To the east are the Simanjiro Plains which are utilized during the wet season, and to the north is the Kwakuchinja Corridor which connects it to the rest of the Tarangire-Manyara Ecosystem. This ecosystem is semi-arid and receives between 450-600 mm of rainfall annually (Prat et al. 1966). The rains come in two seasons, with the longer season from March to April and the short season in November and part of December. In other parts of the year the area is very dry and vulnerable to drought (Sechambo 2001). Since the park's creation in 1970 the wildlife in the Simanjiro Plains has been threatened by increasing cultivation from locals (IRA 2001).

This study had three primary study sites: Kakoi, Vilima Vitatu, and Qash. The first IGP group is based in Kakoi. The group is called Mgungani and is composed of 46 members, all of which are Maasai women. Their shop is based less than a kilometer from the entrance gate to TAR and they sell beaded goods such as bracelets and necklaces. In addition, they have recently expanded to include other products such as woven baskets. Their products are kept in a small shed built by TAR and next to the main road to the park. There are no fences in TAR, however, and the dividing line between the village and the park is a single road. Due to their proximity to the park boundary, these women have experienced many conflicts between agriculture and wildlife.



Figure 2: A map locating Tarangire National Park in Tanzania. Provided by Moran Tourism and Travel.

The second group is based in the sub village of Mdori, which is part of Vilima Vitatu (meaning “three hills” in Swahili). Mdori is along the tarmac road between Arusha and Babati and has frequent traffic of both busses and cars. The group is composed of 30 members, all of which are women. They sell woven mats and baskets along the road, but

currently have no shelter to display their goods. They are farther from the park than Kakoi, and have less frequent interactions with wildlife.

The third group is based in a village called Qash roughly 15 km from the Park's borders, but out of the way for tourism or constant traffic. This group is called Kisasi and is composed of 10 members, six of which are men while only four are women. This group participates in a variety of activities such as beekeeping, tree planting, and agriculture. Their goods are sold locally, as well as to vendors who then take them to sell in distant markets. In the recent past, a small village of Ededash has developed between the Park border and Qash, causing intense deforestation and conflict between the villages.

METHODOLOGY

The following section lays out the methodology used in implementing this study. Qualitative methods were used due to their ability to better understand the social and historical components of natural resource management (Sayre 2004). With a focus on context, this methodology provides greater flexibility, which in turn provides a deeper understanding of the study subject. With the business class being so recent, there was not ample time for quantifiable changes to be measured accurately to determine impact. Instead, qualitative research places the emphasis on the people and settings that comprise the research project (Berg 2004). By focusing on the people, the research was able to investigate impact in a contextual form and provide more information than would have been available through simple quantities.

Within qualitative research, I utilized a case study approach. Case studies afforded the opportunity to investigate each village individually and understand any changes to the groups within their social and political contexts (Hartley 2005). Yin (1994) describes this approach as a detective sifting through evidence to build inferences. The fact that not all of the preliminary evidence ends up being relevant correlates with the flexibility allowed during interviews with a case study format.

Case studies tend to utilize more than one form of data collection to help offset potential research bias (Hartley 2004). Data was collected through a mixture of semi-structured individual interviews and focus groups. The interview questions (see Appendix A) were developed following a preliminary visit to the Mgungani group as well as a key informant interview with TAR's Outreach Warden, Mr. Meikasi. Focus group questions

were formed following the individual interviews and offered members to comment on trends that emerged. The interview process took place in three stages; first with Mgunani, second with Mary Nagu and third with Kisaki.

The sampling frame for the study was everyone involved in Income Generating Projects, while the sample populations was only the three villages that attended the class on the park's northern end. Within those villages, there was a subpopulation that attended the business class and a subpopulation that did not attend the business class.

Interviews

This study utilized semi-structured interviews in addition to focus groups. Semi-structured interviews are best suited for smaller research designs and case studies due to their flexible nature and the degree of freedom on the part of the interviewer (Drever 1995). This method begins with an initial framework of questions but allows for divergence in order to collect a more complete answer (Berg 2004). This study also utilized focus groups to address a larger set of group members. Berg (2004) notes that this method allows respondents to speak freely with their group. These focus groups were led with short question-and-answer discussions. Due to the moderate amount of participants ($n=50$) in a short amount of time, this method was the most efficient way of collecting data. A structured interview—in which the researcher only takes the initial response—would not necessarily have afforded me the opportunity to ensure the intended message was getting through my translator. The interviews were conducted in Swahili and consisted of mostly open-ended questions for qualitative data (see Appendix A for a

full list of questions). The focal groups provided an opportunity to ask "why" they think the information appeared the way that it did, as well as discuss any discrepancies between Mr. Meikasi's perspective and their own answers.

Sampling

Purposive sampling was used because I knew that a subset of each group had attended the class, while the rest had not. Berg (2004) describes purposive sampling as selecting participants based on their relevance to what is being studied. In this instance, the phenomenon was the impact of the business class and the participants were divided by attendance. Through separating participants by attendance I was able to ensure representation from both parties. I alerted the business class participants ahead of time and gathered them for a focus group prior to individual interviews. For those who did not attend the business class, selection was based simply upon who was working at the business on the day(s) that I interviewed there. While I strove to interview roughly half of the members of each group to ensure complete representation, I tended to reach a point of saturation much more quickly than that. Saturation is the phenomenon where answers become increasingly repetitive and no new information is deduced (Glaser & Strauss 1967). This occurrence is easily explainable by the tightly knit nature of the groups and the fact that their opinions are likely shared after working together for so long.

Data Collection

Data collection began with a trip to the TANAPA headquarters in Arusha, Tanzania, where I secured permission to work around the national park and interview the Outreach Warden. From there, I traveled to a small village called Olasiti located seven kilometers from the park entrance and hired a translator from the Minjingu Cultural Tourism program. My translator was Stiger Mishima and he has obtained a university education from Kenya. Initially, I conducted a key informant with the TAR Outreach Warden and collected a list of business class participants as well as context for the IGP program. A key informant interview was also briefly conducted with a leader of each IGP group upon arrival in order to better understand the group dynamics as well as to identify any variation between current group conditions and TANAPA records.

For IGP group members who attended the class, I interviewed at least six out of ten members who attended for each group in a focus group format. For the rest of the groups, I strove to individually interview a safely representative portion of roughly half the group. The Mgungani group had 46 members total, and I interviewed eight of the 10 (80%) that attended the class and 20 of the 36 (55.6%) that did not attend; the Mary Nagu group had 30 members and I interviewed nine of the 10 (90%) that attended the class and eight of the 20 (40%) members that did not attend; and the Kisaki group only consisted of 10 members due to a recent death, so I interviewed six of the 10 (60%) that attended, but no further interviews were conducted in this category (*Total n=50*). The Kisaki group consists of six males and four females, and my interview group of six was composed of three females and three males for representation. After individually interviewing

members who did not attend, I hosted focal groups with five people to discuss answers in more detail and obtain more qualitative data regarding apparent trends from the individual comments (two focal groups for Mgungani, and one for Mary Nagu).

After completing the interviews, I returned to the Outreach Warden to conduct an exit interview that addressed immediate discrepancies between TAR's information about the groups and what was realized through the interview process.

Data Analysis

Following the completion of the interviews, I went through each interview to code responses based on repetitive phrases or themes. For each question, I would create a tally for the number of times a word or phrase was mentioned as well as the context if applicable. If a respondent mentioned more than one topic within a response, each topic was recorded and added to the overall count. For example, one respondent stated that living next to the park was a "disaster" due to animals eating her crops, but she also said that her relationship with the park is "improving." For this scenario I made note of both responses and addressed the variation in the results and discussion section.

Once I had a complete list of responses cataloged, I looked for similar trends within phrases to join them under an umbrella category. For example, answers that discussed increased motivation in the group, more effective ways of addressing issues, and a more unified form of listening to opinions were all categorized under "group dynamics" in order to simplify the wide variety of responses procured in this study. The prominence of these categories was then counted up to identify trends on a broader scale

and also used to create the figures seen in the results and discussion section.

Limitations

A potential bias during interviews may have been a perception that I was working for TAR rather than an outside observer, thus restricting respondent's ability to speak freely. However the combination of my verbal consent statement (see Appendix A) and Stiger having no affiliation with the park, but rather the village, reduced this possible bias. Another limitation was that I lacked any means of recording the interviews, and therefore must assume that I captured the salient points in the interviews. Without a verbal recording, I may have missed tone and inflection cues that could add additional meaning to statements.

RESULTS & DISCUSSION

This study looked at the impact of the business classes hosted by Tarangire National Park (TAR) measured through four components of the study: 1) Group information sharing, 2) Changes in business practices, 3) Changes in opinions of TAR's management and 4) Changes in attitudes towards living next to TAR. The following analysis assesses all of these components individually through each group's answers to the questions. Distance from the park correlated strongly with what people wanted from the park as well as prior relations, but it had no apparent impact on changes after the business class. Groups that were closer to the park had more interactions with animals as well as more prior support from the Outreach Department.

Group information sharing by class attendants

This study revealed incredibly positive reviews of the business class hosted by TAR as well as changes in villager perceptions of the park. Every respondent stated that the business class was helpful and each was able to name benefits gained from attending or having group members attend ($n=50$). A comment from the Mary Nagu focal group with business class attendants provides examples of the benefits:

“Yes it was beneficial. We learned how to be creative and innovative, how to keep money records of business, how to find clients, display properties in a place where clients can see, how to use more polite business language.”

Those who didn't directly attend the class still found it beneficial. An Mgungani member said that, "after the class we were motivated by someone helping us. We were due to give up but now coming more than before." This benefit was the result of the attending members sharing the new information. The Mgungani focal group said that they "...came back and had a class to present to the rest of the group. We brought leaflets and information to share as well." The Mary Nagu group used a similar method but also had a hands-on component where members helped activate the new bank account: "After the class we taught the entire group through small groups. We took other ones to activate the account." Everyone from the Kisaki group attended and therefore group sharing was not a relevant parameter.

For those who did not attend the class, I used the notion of "production cost" as a proxy for group information sharing. Production cost was one of the concepts taught during the class (for a full list see Appendix B) and was one of the testable skills. All but three people interviewed were able to demonstrate a working understanding of production cost. This included specifics on cost of materials, transport, and time spent making the product. Many respondents continued on to discuss the idea of profit as well and what prices are needed to make a profit above production cost. A Mary Nagu member said for the production cost for their signature mats, "We have to purchase the grass and paints and then there is our time." In regard to expanding upon the idea of production cost to think about profit, an Mgungani member summed up the group statements by saying: "We learned the amount of shillings it takes to make a product and to compare that to how much we get back." These results may appear trivial, but are significant as the groups stated that they were unable to do these calculations before. The

Kisaki focus group said that they only began keeping records following the business class: “We now keep records to see profits and losses.”

For the people who failed to adequately describe production cost, one was elderly and hard of hearing. She appeared to misinterpret the question repeatedly and continued to answer with unrelated topics. This does not necessarily mean she does not understand production cost, but rather age was a bias. Another person began to describe the production cost, but failed to adequately provide a thorough description or explain why one item costs more than another to create. The third person that was unable to answer struggled with Swahili, which perhaps meant she was unable to find the words to describe the process but does understand it. The atmosphere of these groups is one of conversation while creating their products, meaning many ideas are uniform throughout the groups. This was revealed with the answers I received on park issues as well. In this light, it is reasonable to suggest that the information has been transferred to these three individuals like the rest of the group, but external factors prohibited a proper answer.

Changes in business practices

In regard to changes in business practice after the class, many of the same topics were mentioned both by the attendees and the rest of the group. For Mgungani the most common topics mentioned were group dynamics, how to approach clients, understanding price, and profit usage. Answers categorized under group dynamics discussed changes like increased motivation in the group, more effective ways of addressing issues, and a more unified form of listening to opinions. Examples include:

- “We are currently more organized than before and we can set meeting times.”
- “We know how to motivate people to work and have rules now. People have become punctual now.”
- “We learned how to remove misunderstandings between group if one member does not attend.”

Approaching clients was a reoccurring theme that many people seemed excited about, and included ways to greet clients, barter politely, and so forth. Reoccurring answers were along the lines of this response: “Before some members didn’t know how to confront clients or sell products but now they can.”

Understanding price suggests a comprehension of topics like production cost and profit. Answers grouped into this category discussed having a better idea of how much a product is worth and how to effectively barter with a client over the price but in a way that you will not lose the sale altogether. “We understand proper pricing, which has increased profit,” one member stated, while another added, “We purchase products and sell at a price to make profit. If there are not many clients, small profit.”

Finally, profit usage had to do with new ways of investing the money made and how the money should be distributed amongst the group members. Expanding products is an important topic, although only mentioned in four interviews. Following the class the group now makes woven baskets and mats whereas before it was strictly beaded jewelry. This change is to appeal to more clients, diversify skills, and hopefully expand their market. “We now discuss the expansion of business markets, which we could not do before.” Another added that they have “diversified products due to a lack of clients.” Profit distribution is different now because “after selling we first buy more materials before distribution [of money] to ensure there is money for [materials] first.”

The Mary Nagu group had approaching clients, displaying products, and group dynamics as the top three changes discussed. Finding new markets was also mentioned, but usually in conjunction with approaching clients in that they approach clients with their mats to take to new markets. Under approaching clients, the focus group stated that they now know “how to use polite business language” with clients. An individual respondent also stated that she “learned not to compete for clients.”

Displaying products was a significant change, as before the class their products were not displayed visibly. Now the mats and baskets are hung up near the main road between Arusha and Babati, which is frequented by many buses, daladalas, and personal vehicles throughout the day. “We now hang our mats outside so people can see them,” one individual said. A focus group member followed up with, “We learned how to find clients, displaying products in places where clients can see them.” An individual later stated that they “now hang mats outside” opposed to them previously being stored indoor.

Group dynamics showed up in this group as well for many of the same reasons as with Mgungani including resolving issues, letting voices be heard, and meeting together. The group held formalized meetings in which individuals would share their ideas on the business, and there would be a vote to implement new actions. One member supported this by saying that they “were taught the importance of staying in a group and working together.” Group contribution has recently increased as well, with one member saying, “Everyone has ideas for expanding our business and products.”

Members of Kisaki listed expanding their business products as a key change along with approaching clients, learning to look at income from different crops, and keeping

records. The group expanded to honey, tree planting, some fish farming, and agriculture. A member of the focus group said that they have a “diversity in production because it is hard to products sold if all are the same.” Since the class, they have improved their honey business by moving the hives closer to one another for harvesting efficiency and have begun packaging the honey for ease of selling. “We have collected all bee hives and put them in one area to consolidate and increase security,” a Kisaki member told me. As with the Mary Nagu group, approaching clients is closely tied to finding new markets. The Kisaki group sells to vendors who take products to larger markets, and currently only sell the honey locally around their village. The class taught them new ways of approaching these vendors and ways of using “polite language” with clients. An increased awareness of time management has caused them to “look at which crops bring in the most money” and then focus their efforts on these crops.

A new trend of “keeping records to see profits and losses” has assisted them in their business and allows them to find errors or find areas that need adjustment. The latter benefit is important if microloans become available in the future from TAR.

Reinvestment versus profit

The Mary Nagu group’s primary source of income is through the woven mats and baskets they produce. However they also work with agriculture as a secondary source of income, and during the prime harvesting seasons they reinvest a portion of their profit from the mats and baskets into their agriculture business. The Kisaki group also reinvests a portion of their profit into business for products such as pesticides and more seeds.

While this idea seems efficient, studies have shown a definite downside. Tundui (2012) found that using only profit as capital has a negative impact on the business. In the case of the Mary Nagu group, they are currently not distributing any income to group members in favor of agricultural investment. Correlating with this trend, the Mary Nagu group listed needing more capital as their primary concern for the group. Currently their group has not attempted any loans, but following the business class they did reinstate their bank account that had been shut down previously.

The future of business classes

All three groups expressed interest in more classes to be hosted by TAR. News topics for the classes were also mentioned. Representatives from each group asked for classes on agriculture and understanding better methods of farming as all three groups have members who supplement their income with this practice. More business classes were a priority among all three groups, and the Mgungani group requested specifically to learn basic English skills as well, “We wish the park would teach us basic English for welcoming visitors and bargaining.” As their clientele is solely tourist based, it seems reasonable that assistance in another language besides the Maasai language and Swahili would support their business. The specific skills mentioned were numbers for counting and basic English greetings. More classes in the future would serve incredibly beneficial but due to limited funding a priority should be given to other groups first. With the two classes hosted by the park costing a combined 10,290,000 Tanzanian Shillings, funding may be the largest inhibitor of more classes (TANAPA 2012).

Overall, the possession of business skills has a positive impact on business performance level, while education level is non-significant (Tundui 2012). However, education level can be a significant predictor of the relationship between a protected area and its surrounding communities, with more education potentially leading to increased resistance to conservation strategies in some cases (Kideghesho et al. 2007). The recent class has shown strong potential for improvement in business performance, although change is measured through business structure and marketing at this time and not measured through direct profit level. Of the 51 people interviewed, 14 have no formal schooling (27.5%) and all were from the Mgungani group; eight have attended some primary school but did not complete (15.7%); 28 have attended primary school (54.9%); and only one has attended secondary school and was one of the three males interviewed (~2%) (see Figure 2). These results suggest a mix of education among the groups, but over all low levels of education, which creates potential for the park to educate these communities.

The results of this study did not suggest negative views of the park correlating with higher education level as previous studies have suggested. Instead, the one individual who had completed secondary education was perhaps one of the most passionate about conservation. In addition, it could be argued that the business class itself was a form of education, and the participants all left with increasingly positive views regarding TAR's management after the class. These viewpoints are discussed in the next section.

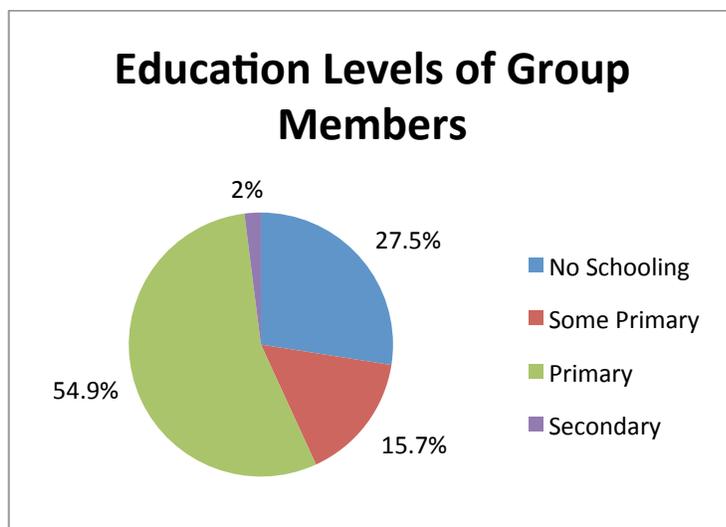


Figure 3: Graph for percentage of education levels among the three IGP groups sampled. Note: This data was collected using non-random sampling of three villages near Tarangire National Park between Nov. 9th and Dec. 4th with $n=51$ total ($n= 28, 18,$ and 6 respectively for each village).

Changes in opinions of TAR's management

All three groups possess a strong sense of ownership for their projects. Every respondent mentioned that their views are taken into consideration and many talked about presenting ideas that were either discussed or implemented. “I feel like I own it because we are the ones who sit, write proposals, and then things are implemented,” one respondent told me.

In follow-up interviews with focal groups, the women from Mgungani and Mary Nagu said that participating in this group improved their ability to contribute at home, support their children at school, and fill in income gaps from the husband. An Mgungani member told me that “the men do not help much so I pay for the child mostly.” None

mentioned any negative feedback from having their own income as has been seen in previous studies (Haile et al. 2012; Sigalla and Carney 2012).

In regard to TAR’s Outreach department and views on the park, responses were all positive, yet included many suggestions for improvement. As expected, suggestions varied per group based on distance from the park and prior relationships with TAR. The Mgungani group is based at the entrance to the park and a few years ago TAR built a shed to protect their goods against the seasonal elements of sun and rain. This advantage was not spread to the other two villages interviewed, which created different results in the things desired from the park. For the Mgungani group the four main issues were: another tap for water access in the village, increased crop protection from animals leaving the park, more business classes, and a flush toilet for clients. A reoccurring issue discussed was that of clients rushing to the park for the flush toilets and not being willing to wait or use the drop-pit latrine at the business site.

Focal Group #1	Focal Group #2
1. More Business Classes	1. Increased Water Supply
2. Increased Water Supply	2. Flush Toilet
3. Increased Crop Protection	3. More Business Classes
4. Flush Toilet	4. Increased Crop Protection

Table 1: Ranked issues from the two Mgungani focal groups. Top issues were derived from individual interviews and presented to focal group at end of study. Note: This data was collected using non-random sampling of three villages near Tarangire National Park between Nov. 9th and Dec. 4th with $n=51$ total ($n=28, 18,$ and 6 respectively for each village).

In focal groups following the interviews, I had the women rank these issues but received very different rankings between the groups (see Table 1). The first group ranked business classes as number one with the rationale that “without being able to sell, a new

washroom doesn't matter.” The second group placed business classes third stating that currently they are “losing clients by not having a flush toilet” and they need more clients for the business class skills to be effective. Both groups ranked increased water supply in the top two and this is derived from an inadequate amount of water currently available to the group and to their village.

The top requests for improvement from TAR from Mary Nagu were for loans and capital, a shed to display their products, more classes, and assistance in finding new markets to sell their goods. The Kisaki group requested assistance solving the conflict with the nearby forest that is cutting down trees, as well as more classes. Currently they are unable to place their beehives in a community area near the park, but are seeking support from TAR to move their business there.

Requests from TAR		
Mgungani	Mary Nagu	Kisaki
More Business Class	Capital/Loans	Conflict with Ededash
Flush Toilet	Shed for Products	More Business Class
Another Water Tap	More Business Class	
More Crop Protection	Help Finding Markets	

Table 2: Top requests for Tarangire National Park Outreach from the three IGP groups sampled. There are not equal answers due to an unequal amount of respondents. Note: This data was collected using non-random sampling of three villages near Tarangire National Park between Nov. 9th and Dec. 4th with $n=51$ total ($n= 28, 18,$ and 6 respectively for each village).

Funding IGP vs. SCIP

The IGP pilot project is intended to serve as a potential replacement for SCIP projects and to offer a new way for TANAPA to reach community members in villages surrounding national parks. This study looked at villager perceptions to that change. In the focal groups with the group that attended the business class, the unanimous answer was preferred group funding. However this was the result of brief discussion and in the case of Mary Nagu the initial response was funding a dispensary (SCIP funds) first but was later revised by the group. For individuals that did not attend the class, the majority preferred group funding through IGP to SCIP (see Figure 3).

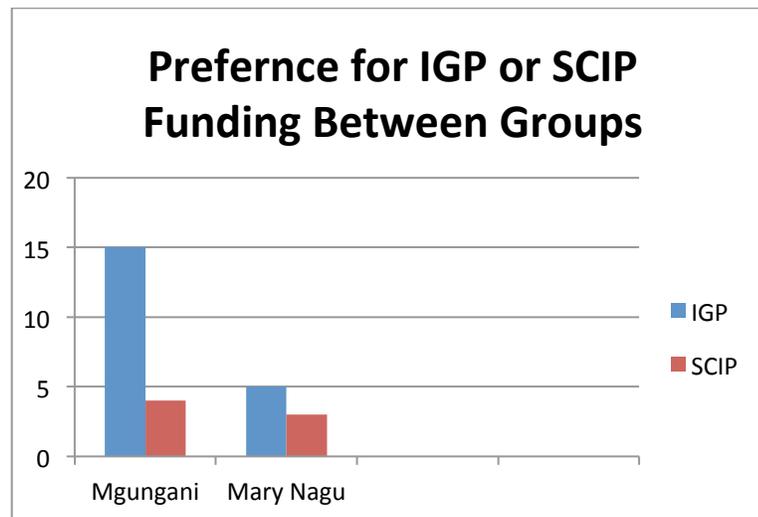


Figure 4: Number of respondents for the Mgungani and Mary Nagu group in favor of IGP or SCIP funding. One member of Mgungani gave no preference and was excluded. Note: This data was collected using non-random sampling of three villages near Tarangire National Park between Nov. 9th and Dec. 4th with $n=51$ total ($n= 28, 18,$ and 6 respectively for each village).

These results were more split than expected, but appear to be influenced by specific events in each village. The majority of people preferred funding to groups opposed to SCIP funding like hospitals and schools. It should be noted, however, that the

Mgungani group said that “we already have a school and hospital and it would be better to help individuals.” Meanwhile the Mary Nagu group claimed having to walk 15-20 km to reach the nearest hospital. Three members from Mary Nagu preferred a school and/or hospital with reasoning that contradicted previous arguments for IGP. One woman said that, “small group funding would only benefit about 30 families, but a hospital would help the entire village.” This isn’t always the case however, as seen in the town of Mto wa Mbu where respondents didn’t necessarily feel like the money was reaching them (Yourish 2012). Despite these few variations, most of the respondents said they would prefer group funding. The reasoning varied but a reoccurring theme was that of self-motivation. Respondents discussed the need to pay school fees and buy uniforms and such. It was stated by one individual that, “...a school won’t do any good if we can’t pay the school fees.” Some other statements made in individual interviews in favor of IGP funding:

- “We need more money here for school fees and food during the dry season.”
- “With more money here, there is more development here, and then it goes back to the community.”
- “Group funding because this will affect the community. We can pay for social services ourselves if the need arises.”

In the focal groups following individual interviews, I investigated what ideas the groups had if more money was in fact available to their groups (see Table 3). The Mgungani group has plans to expand their products even more by supplying Maasai robes, or *shukas*, to their store. In addition, they discussed the desire to travel to similar stores around Tanzania to find products that sell well and adding them to their own merchandise. Beyond product expansion, the Mgungani group said that they would build

“a better washroom for clients” and “another house to protect our merchandise.” These last two are both requests the group has of TAR, but is willing to do on their own with appropriate funding.

Ideas for Change if Group Funding was Established		
Mgungani	Mary Nagu	Kisaki
Product expansion	Increase product production	Diversifying Agriculture
Build Better Washroom	Invest in Agriculture	Planting Trees
Build 2 nd Shed for Products	Travel to Agriculture Show	Fish Farming

Table 3: Most common responses from each group when asked about future changes if more funding was given to their group Note: This data was collected using non-random sampling of three villages near Tarangire National Park between Nov. 9th and Dec. 4th with $n=51$ total ($n= 28$, 18, and 6 respectively for each village).

In the focal groups following individual interviews, I investigated what ideas the groups had if more money was in fact available to their groups (see Table 3). The Mgungani group has plans to expand their products even more by supplying Maasai robes, or *shukas*, to their store. In addition, they discussed the desire to travel to similar stores around Tanzania to find products that sell well and adding them to their own merchandise. Beyond product expansion, the Mgungani group said that they would build “a better washroom for clients” and “another house to protect our merchandise.” These last two are both requests the group has of TAR, but is willing to do on their own with appropriate funding.

The women of Mary Nagu all listed “more capital” as their primary request for support. When asked their intent with more capital, they discussed increasing production of their mats and baskets, as well as expanding their agriculture business. The latter is due to the current inconsistency of profit reported for the mat and basket business, and

would provide supplementary income. Research has shown that many women commonly employ the survival strategy of creating multiple enterprises rather than focusing all of their effort on one. However this strategy has proven effective as it offers alternative sources of income, and overall has a positive effect on business (ILO 2004). Another desire from the group was finding new markets to promote their products. They spoke of promoting their products through media such as television and newspapers, in addition to seeking “sponsorship to attend the Agricultural Show” held in Dodoma.

The Kisasi group planned on continuing their current path of expansion, which includes diversifying their agricultural products and planting trees to support their business as well as the surrounding environment. The group reported previously participating in fish farming, but that it is currently “failing because agriculture is taking the water source.” With more money they seemed interested in investigating ways to solve this dilemma, but no specific mechanisms were listed.

Changes in attitudes living next to TAR

When asked about living near the park, all three groups responded with an understanding and concern about conservation without being prompted. When asked about living next to the park and their relationship with it, responses indicated a deeper understanding of how conservation money can assist them. “We don’t want to see the park lions die since they attract tourists,” an Mgunani member told me. This concern is well placed, as their business is tourist-dependent. It also helps demonstrate a connection with the nation of Tanzania as a whole, where tourism is a major source of revenue.

Another member showed an understanding about animals venturing onto the lands, and holds no blame for the park: “Because we are by the park we have water from TANAPA. Animals are disturbing farms, but I understand that Tarangire is not sending them and there is no one to blame,” she said. Similar to that comment, another individual offered gratitude towards the park: “These are wild animals and they don’t belong to anyone, but the park helps with removal.”

The Mgungani women see benefits from the park such as access to the park dispensary, the ability to hire a vehicle to take them to the weekly market 7 kilometers away, having water taps built in their village, and, most importantly for the group, access to clients through the tourism industry. Negative answers all revolved around the wildlife that venture into their crops. One woman called being by the park a “disaster,” and that said that the “animals profit from the crops and I wish there was more protection or else we will be killing the animals.” Even with this hostile statement, this woman said that the relationship with the park is improving. In addition, the majority of respondents said that park rangers quickly come with cars and chase the animals off. Only three women from the Mgungani group reported inconveniences from living by the park. Many respondents also praised the park for crop compensation. However, Mr. Meikasi says that this compensation comes from the Tanzanian Wildlife Division rather than TANAPA, and that TANAPA’s form of compensation is through SCIP and IGP money.

Since the Mary Nagu and Kisaki group are located farther from park boundaries, there was only one comment regarding wildlife conflict in the Mary Nagu group and most said the park is assisting them. One woman told me that, “My view improved greatly. Before we were just a neighbor but now we have recognition.” The Kisaki group

is even farther from the park but still experiences some animal interactions. During the dry season elephants make their way to the village, and during the wet season they see zebra and warthogs. The benefits listed by the group have to do with the class but beyond that it appears that the park has had only limited interactions with Kisaki group members. The Kisaki group requested game rangers to be stationed on the border of the park near them to assist with protecting crops and also to help prevent issues of deforestation taking place on the boundary.

Conflict between villages

Naughton-Treves et al. (2011) found that National Parks in Uganda are not a poverty trap, but instead help alleviate poverty. Also, the study did suggest that rising deforestation was a concern in villages around parks. This data correlates with the information from Qash village about their conflict with the neighboring village of Ededash and the claims of rampant deforestation taking place. Although exact numbers were unavailable, respondents said that roughly “half of the local forest has been cut down.” Similar to the previous study, the recent benefits of TAR appear to substantially help the community and in return the villagers of Qash are looking for ways to help mitigate this deforestation by planting trees of their own and trying to stop Ededash villagers from cutting down the forest.

One recommendation the Kisaki group made was for weapons—such as guns—to be given to their village to help prevent deforestation. The respondents stated that the majority of the deforestation takes place at night and they are unsure what form of

protection is being used. Members of Kisasi want to arm community members to take action in protection the forest. The donation of weapons, however, could prove dangerous both for the villagers and the park's standing with the community. Research has found that the use of force can dramatically reduce the popularity of conservation as well as reduce park credibility (Kideghesho et al. 2007). While methods for prevention are debatable, it is evident that forest is a crucial resource for members of the group.

Despite this strong desire to defend the forest by the Kisasi group, the park's Outreach Warden, Mr. Meikasi, appeared to have no knowledge of this conflict. Due to the connectivity between the Kisasi livelihood and the longevity of the forest, this conflict should be investigated further to determine the actual extent of the devastation. Research has shown that tradeoffs play a significant role in park relationships. In Ruaha National Park in Tanzania, for example, displaced villagers have a negative view of the park due to what they lost (Zia et al. 2011). Since the three IGP groups interviewed have not experienced substantial tradeoffs aside from wildlife conflict with crops, the views continue to appear positive at this time. The perceived loss of the forest near Qash could serve as a tradeoff that has the potential to negatively impact the recent favor gained through hosting the business class.

Safari for villagers

Focal groups of both the Mary Nagu and Kisasi group unanimously expressed a strong desire to “see the animals we are supposed to be protecting,” as a women in Mary Nagu stated. While the Mgungani group resides on the park boundary and comes in

frequent contact with wildlife that leaves the park, the other two groups are far enough from the border that they rarely see wildlife. One member of Mary Nagu asked if "...the park can take us to see the animals we are trying to protect? Some of us have not seen elephants." This is interesting because elephants were the primary concern for raiding crops in the Mgungani group. The two groups said that they would like to be taken inside the park to see the animals like tourists do. One respondent said: "Since the park visits us, we want to visit the park."

Currently the park has a program set up for villagers to go on safari, but due to limited funding only a certain amount of people can attend each time. Following this expressed interest, Mr. Meikasi stated that he will include Mary Nagu and Kisaki members on the list for an excursion into the park soon.

Revealing poachers by name

A surprising revelation was that members of all three groups made statements that they are now willing to turn in poachers by name. The Kisaki focal group provided an explanation for the change:

““Before TAR was only working for the government and indifferent to people. Now we realize the park sees we are people. Now we are willing to reveal poachers and want to help protect the park because we see it as our world too.”

These feelings go along with the fact that almost every respondent declared the relationship with the park as improved since the business class—the ones that said otherwise said that it continued to be good and had no change.

Communicating back to the Park

These results have the potential to be influential to the park's outreach warden, Mr. Meikasi. In addition to being an evaluation of the classes, this study offered a voice to villagers in three separate villages. Moreover, the majority of villagers in this study were women, which highlights a frequently underrepresented population in many parts of the developing world.

In addition to sending this research report back to the park itself, there is the potential to create a "Solution Tree" that builds upon the issues that the park has identified in its Problem Tree (see Figure 1). This tree would include interests listed by the villagers during interviews such as crop protection or access to water as remedies for previously identified problems.

LIMITATIONS & RECOMMENDATIONS

This study serves as a baseline survey of the impacts of the business class hosted by Tarangire National Park (TAR). The fact that it has only been two months since the class may have limited the results due to lack of time for change. It is recommended that this study be replicated at a later time, perhaps a year, to see if business changes continue to follow the same positive trend or if more negative opinions arise through time. This could be completed through more interviews, as well as recording those interviews for greater accuracy.

With group sizes and the way wealth is distributed (or not if reinvested) it is difficult to measure the overall wealth of people in the community to analyze changes. A potential future study could measure the profits from the groups now compared to a later time. Also, looking at loan accessibility and/or studying SACCOS and VICOBA's would be helpful to establish a baseline that TAR will be contributing to.

My study was limited to the northern end of the park, which may have very different results from villages on the park's southern end. Due to the distance of travel, these villages are not visited as frequently and lack the revenue from tourism. It would be worthwhile to analyze the impact of the other business class in Mnenia where two IGP groups reside.

Another bias has to do with language. Although Swahili is the official language of Tanzania, many older villagers never attended school and are only fully fluent in their tribal tongues. The women in the Mgungani group are all Maasai, and this caused me to

have to select interviewees based on their ability to speak Swahili as well as the Maasai language. However, as the group discusses issues together it is reasonable that the trends I discovered apply to the larger group as well. It is possible that I missed nonverbal cues in the interviews, and specific detail to these may add new weight to a future study.

Finally, being male may have limited my responses from women due to cultural reasons. Future studies could attempt to find a female translator, however that was not possible for my study.

CONCLUSIONS

This study looked at the short term impacts of a specific business class hosted by Tarangire National Park (TAR) in three villages located on the park's northern end. The groups stated that while the business class was helpful, they would have liked more people to attend and would like to see similar classes in the future. However, even in the largest group of 46 people, Mgungani, 10 people proved sufficient as the information was actively spread to the rest of the group and changes were initiated. Developing a strong networking system between groups could reduce reliance upon TAR's single Outreach Warden and help promote self-sustaining businesses within the surrounding communities.

In addition, the results of the study show an increased understanding of conservation following the classes, which could prove beneficial to TAR as well as any park this program is implemented at. With the villages now being willing to call out poachers by name to the park—something they would not do before—the risk to poacher's increases and the park gains more allies without having the expense of more rangers.

Since the park is substantially longer than it is wide, there are many villages that require extensive travel time for the park's single Outreach Warden. Increasing the number of Wardens and perhaps establishing a warden at the southern end of the park would allow for greater connection with potentially isolated villages.

IGP serves as an effective new method of park funding that is directed toward improving business skills and providing some level of understanding of costs and returns, and improving relations between the park and the surrounding villages. After only two

months, the groups all made several changes to their practices and now are prepared for the second step of the IGP process: loans. The loan initiative should begin soon with a survey of current profits from each group to compare against any changes after a set period of time having been given access to loans.

Prior research has shown communication with the villages and participation in community programs will increase relationships, and TAR has done just that with IGP (Stern 2010). Implementing IGP at other national parks has the potential of altering negative perceptions and reducing poverty, meanwhile assisting in natural resource conservation.

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Appendices

APPENDIX A Verbal Consent Statement and Interview Questions

“My name is Dylan McDowell and I am a student from America studying in Tanzania for the semester. Currently I conducting a project looking at villager views on Income Generating Projects facilitated by Tarangire National Park. The results will go to Mr. Meikasi, the Outreach Warden, with the goal of analyzing the IGP process and making suggestions. I would like to ask you a few questions regarding these projects and your involvement with them. You may refuse to participate and may refuse to answer specific questions. Each person will receive 1,000 Tanzanian Shillings for participating, and any person is free to withdraw at any time and still receive their payment. No personal information will be collected and your name will not be attached to these data. Thank you. Do you accept?”

[Translated into Kiswahili for the interviews.]

1) Business Component

i. For those who attended the business class

- Was the information beneficial to your project? Provide 3 examples
- Did you spread the information to the rest of the group? How?
- Since the class, what changes have you made to your business?
- How are the goods sold, and how is revenue shared within your group?

ii. For those who *did not* attend the business class

- Do you feel that you received the benefits from the business class? How and name a few?
- Since your colleagues took the class, what changes have you seen?
- Please tell me what you know about “production cost?”

2. Partnership Component

i. Do you feel ownership of your project? How and/or why?

ii. What is your relationship with Tarangire? List some positive aspects and some aspects that could be improved.

ii. Tarangire is proposing a shift from community funding (SCIP Projects) to individual and group funding (IGPs). Will this make it easier to sustain your business? What issues, if any, do you see with this change?

3. Conservation Component

- i. What is your view on living near Tarangire National Park? What is good and what can be improved?
- ii. Have Income Generating Projects affected your view of the park? How?
- iii. In what ways can Tarangire National Park improve community outreach in your village? Provide 3 examples.

APPENDIX B Topics taught in Business Class hosted by Tarangire National Park and taught by EARD Community Initiatives and ABCD Consultants from Arusha, Tanzania, between September 24-29, 2012.

- Definition of a group and its characteristics
- Problems facing groups and how to solve them
- Leadership in capacity building groups
- Preparation of group constitution
- Entrepreneurial Training
- Seven principals of good entrepreneurship
- How to drive a business
- Market accessibility
- Evaluating production cost
- Keeping business records
- Business planning issues
- Loan accessibility
- Customer care services
- Process of establishing small business
- Problems facing small business owners