

**THE BENEFITS AND DETRIMENTS OF NON-PROFIT ORGANIZATION
WORK IN UNDERDEVELOPED COUNTRIES ACROSS AFRICA**

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Research Proposal

This research proposes to investigate the ways in which Non Governmental Organizations (NGOs) can be both beneficial and detrimental to the local population they aim to help. Several case studies of International water aid NGOs working across Africa will be analyzed in order to better understand the similar project failures that can result from a lack of knowledge about the local population. Controversy over the effectiveness of foreign aid has been extensively debated since its origination at the end of World War II. Over time, NGO work has contributed greatly to the development of humanitarian goals in developing countries. For every success, however, there are also many failures. “Aid seems to work, just not nearly as well as it could” (Riddell, 2007: 381).

A current crisis that many underdeveloped countries are currently dealing with is the lack of uncontaminated, safe water for their citizens. Countless water points are constructed each year, yet, the failure rates of these water systems are still high even decades following intervention (Rheingans, 2006). If local populations are not involved in development initiatives, there may be less incentive to invest time and money into the maintenance of these systems. Due to this fact, many water structures break and fall out of use years after construction and implementation. There are many plausible explanations for these hardware failures, however, in many cases it can most likely be attributed to the implementer’s lack of consideration for local conditions and inability to involve the local population (Rheingans, 2006).

In order to better understand the common aspects of NGO work that can cause water project failure, three case studies from Rwanda, Senegal and Malawi will be reviewed and evaluated. The first case study takes place in Rwanda, where an

international NGO, Engineers without Borders, implemented a water project in the rural village of Muramba. After detailed water quality tests and assessments of existing water access, the team implemented disinfection systems to improve water quality while also reducing rates of water-borne illnesses. Upon a return visit to the village a few years later, the sanitation system was no longer in use. In fact, it hadn't been used since the first year it was installed. After much thought as to the reasoning behind this, Engineers Without Borders decided it was their lack of involvement and training of the community during the initial implementation. Since the village was not an active part in the development, they had no resources, skills or drive to keep the water system in operation (Evan, 2010).

Similarly, the case study of the International NGO, World Vision, in Senegal exposes further errors. In this case, World Vision drilled a large number of wells across the geologically diverse Louga region. When overall impact was assessed, it was found that the water originating from wells that were drilled into quaternary sands tasted very bad. Due to this bad-tasting yet clean water, the villagers in this region returned to their old, contaminated water source that tasted better. As a result of the unforeseen geologic differences in the area, World Vision's project turned out to be unsustainable (Smout, 1999). Finally, in Malawi, a different lesson was learned. The Save the Children Fund drilled boreholes to increase clean water accessibility but long-term sustainability was questioned due to the communities' lack of training and knowledge on the importance of hygiene and sanitation practices (Smout, 1990).

Through these three case studies, both the benefits and the drawbacks of NGO involvement can be detected. In the Malawi and Rwanda case study, quality of life was

improved for a short period of time while the water points were still functioning. Not only did the populations have increased access to clean water, water born disease rates may have been reduced. In the Senegal case study, the communities in the Louga region all acquired invaluable knowledge about the importance of drinking clean water and hygiene and sanitation practices.

As for the detriments, all projects suffered from the international NGOs lack of consideration for local conditions, cultures and the inability to involve the local population in development. In order to improve on this model, local sustainability needs to be ensured. This can be done through, ensuring the local context is understood before starting work or through international NGO partnerships with local development agencies. Through gradual progress and improvement of development initiatives, lasting locally-led sustainable development can result.

Annotated Bibliography

Barber, M., & Bowie, C. (2008). How International NGOs Could Do Less Harm And More Good. . *Development in Practice*, 18(6), 748-754.

Despite the many good intentions of International Non Profit Organizations, harmful impacts on the target culture may result even without the Non Profit's knowledge. This paper aims to provide ways in which such harms can be reduced or avoided all together. Growing pressure is being places on international NGOs to increase their effectiveness and improve their outcomes. This paper uses examples from Southeast Asia and Sub Saharan Africa to critique NGO impact in the growing demands of today. This source is beneficial as it provides a wealth of useful information regarding some of the benefits and drawbacks of NGO interference in today's context.

Ellerman, D. P. (2006). *Helping people help themselves from the World Bank to an alternative philosophy of development assistance*. Ann Arbor: University of Michigan Press.

From Ellerman's book, one specific chapter will be analyzed in particular. This chapter is Chapter 3, The Indirect Approach, where Ellerman's main theory on proper community involvement is introduced. Ellerman states that the best method to rural development is one in which one the community is empowered and enabled through their own efforts. Rather than the imposing developmental organization controlling the development project, the community is in charge. This model creates a sustainable system that not only results in true development, but the empowerment of the population as well. This source provides needed information on the particulars of the sustainable model of development.

Huang, J., & Reynolds, K. (2013). A framework for collaborative social, economic and environmental development: Building a digital ecosystem for societal empowerment. *Digital Ecosystems and Technologies*, 7(7), 166-171.

In Huang's article, a new aspect is introduced to the current social, economic and environmental development theory. Huang incorporates technology into the empowerment process of developing populations. Through technology, the framework aims to support self-enablement and self-sufficiency. It is hoped that technology will increase the population's access to information and promote greater education. Equipped with knowledge, developments initiatives are hoped to be created and sustained by the population. This paper is beneficial in that it provides a new twist to the current development theory.

Jones, S., & Greene, N. (2013). Crossfire: Can 'admitting failure' help the WASH sector learn and improve its work?. *Waterlines*, 32(2), 100-105.

Two water, sanitation and hygiene researches, Stephen Jones and Nicola Greene, discuss whether admitting to failure in WASH projects is beneficial or detrimental to the improvement of development work in the field. Ever since Engineers Without Borders came out with a "failure Report" that reported all their past development failures, the topic has been greatly debated. In order to admit one's failure, an acknowledgment of failure has to happen. This acknowledgement leads to thinking about who was collectively responsible and what needs to change in order to not fail in the future. This new stream of thought may lead to a larger movement where development agencies can

admit to failure, and have a communal sharing of mistakes to ensure the same mistakes are not repeated. Concerns have been voiced as to whether this new movement is a new and refreshing way to inspire change, or just another way for an organization to receive good publicity without really achieving systematic change. This debate has extreme importance for exposing the flaws of the development sector. Therefore, the information found in this source is of great necessity to my paper.

Narayan, D. (1995). The contribution of people's participation. Evidence from 121 rural water supply projects. *Environmental Sustainability Development Occasional Paper Series*, 1, 1-122.

This paper examines the results of 121 rural water projects conducted in countries throughout the developing world. It was found that out of all of the case studies, beneficiary participation in the implementation of the project produced the most sustainable development initiatives. It was also found that even the most marginalized and impoverished individuals in the society must be included to create lasting effects. The responsibility of change is not on the developing communities alone. The development organizations also share the responsibility of listening and learning to the population as the project is implemented. This article proves to be beneficial due to its extensive case study documentation and its use of participatory development.

Nikoi, S. (2009). Information Needs of NGOs: A Case Study of NGO Development workers in the Northern Region of Ghana. *Information Development*, 24(44), 44-52.

This rather technical article analyzes the results of a study that was conducted among NGOs working in the Northern Region of Ghana. This study aimed to determine what kind of information about a population is most useful in the formation of a development initiative. The study found that sociological, cognitive and ecological information about the local population was among the most important pieces of information one could have in creating a sustainable development plan. This study may prove to be helpful in a paper that attempts to observe what aspects of culture aid or deter the work of specific NGOs.

Riddell, R. (2007). *Does foreign aid really work?*. Oxford: Oxford University Press.

In his book, Roger Riddell analyzes the effectiveness of foreign aid and its potential for success. The drawbacks and failures of the current foreign aid system are clearly outlined and possible solutions to the issues are proposed. Riddell attributes aid's fundamental problem to the donor-recipient structure. This structure results in a system that pleases donors but does not satisfy the needs of the recipients. This source will serve as a great resource in providing further research about the problems inherent in the foreign aid structure. Not only will this source provide needed factual bases, it will help in detecting problems in NGO work that have resulted from this structure.

Smout, I. K., & Water, E. (1999). *Lessons learned from NGO experiences in the water and sanitation sector*. Loughborough: WEDC.

This source contains several case studies based on field evaluations of water supply systems implemented by NGOs in various countries around the world. Each case study contains a review of the work done by the NGO, the successes experienced and the constraints that were confronted. The final and perhaps most important section in each

case study is a “lessons learned” summary. This section describes the failures the NGO ran into during the course of the project and gives an analysis of why the outcome was not what was anticipated. In the composition of a paper aimed at exposing the common mistakes international NGOs make in development work, this source provides important, useful information. This report will be used to provide two case studies for the strengthening of the arguments contained in my paper.

Evan, T., & Amadei, B. (2010). Accounting for human behavior, local conditions and organizational constraints in humanitarian development model. *Environment, Development and Sustainability*, 12(3), 313-327.

In this paper, current development ideologies are discussed in relation to the influence these have in developing communities. The failure of many development projects is attributed to the failure to fully assess local environment and culture, a lack of accountability for success both in the community and at the individual level and finally, the failure to factor in self-interested human behavior. The paper then presents two case studies that show attempted sustainable community development in two Rwandan villages. The first case study conducted in the rural village of Muramba, ultimately failed due to the non-profit organization’s inability to correctly assess the local environment and the failure to take human self-interest into account. The second case study was conducted at an orphanage in Muramba. Due to the non-profit organization’s trust in local leadership and attention to local conditions, the project was deemed successful. This paper is a useful source because it contains a case study of a failed non-profit initiative

along with a clear explanation of the local environment and culture. This case study will be beneficial in providing evidence for the central argument of a paper.

USAID. (2013). USAID Water and Development Strategy 2013-2018. *United States Agency of International Development*, 1-30.

This source is USAID's most recent report regarding water development strategies. Not only will this source provide extensive facts about the water crisis in developing countries, it will also inform about the most recent thoughts in regards to development theory. Explicit targets of reaching 10 million beneficiaries within this time frame are set, and longer terms of monitoring and evaluation of each water activity is to be documented.

Outline

I. Introduction

A. Background:

1. Introduce the need for water aid in Africa (Amount of people with out access to clean water)
2. Health issues that result from unclean water
3. How access to clean water relates to poverty reduction

B. The Role of NGOs in providing water aid in Africa

1. Ways NGOs can be beneficial to the local community
2. Ways NGOs can be detrimental to the local community

C. Introduce thesis/ how this will be proven and supported

1. Thesis: This research proposes to investigate the ways in which Non Governmental Organizations (NGOs) can be both beneficial and detrimental to the local population they aim to help.
2. How to prove thesis: Overview of NGO work, benefits, detriments, commonalities.

II. First Section- An Introduction of the Case Studies, the Local Contexts and Target Populations

A. Malawian Case Study

1. Save the Children Fund company background
2. Background on culture and location
3. Full review of project in Mchinji
 - Problem: high rates of water borne illness
 - Solution: drilling of boreholes
 - Result: unsustainable clean water source

B. Senegal Case Study

1. World Vision company background
2. Background on culture and location, geology
3. Full review of the project in Louga Province
 - Problem: Lack of clean drinking water due to the aridity of the region.

- Solution: wells drilled all across the region
- Result: geology produced water of different tastes. Bad tastes led to community-wide abandonment of the well.

C. Rwandan Case Study

1. Engineers Without Borders company background
2. Background on culture and location, geology
3. Full review of the project in Muramba
 - Problem: unsanitary water, high rates of water borne illnesses
 - Solution: UV water disinfection system
 - Result: fell into disuse

III. Second Section- Contributions of Each Case Study

A. Malawi Case Study

1. Positive Effects:
 - Water borne illnesses were reduced during the span of the project
 - Boreholes made water more accessible
2. Negative Effects:
 - Due to lack of proper community education on safe/unsafe water, many community members were not willing to pay the price to use the borehole. Instead used old water source.
 - Not sustainable in the long run.
 - Possible negative effect on children who increasingly had the task of gathering water.
3. How Failure Could Have Been Avoided:
 - The local people were not educated on the benefits of clean water, hygiene and sanitation.

B. Senegal Case Study

1. Positive Effects:
 - 212 rainwater catchment tanks were constructed all across the province
 - Project included education of the locals and establishing well committees.

2. Negative Effects:

- Local geology made the water taste bad.
- Villagers would not drink the water and instead used previous, unclean water source.

3. How Failure Could Have Been Avoided:

- Better understanding of the local geology

C. Rwanda Case Study

1. Positive Effects:

- Disinfection system was put in place in the community.

2. Negative Effects:

- After multiple attempts at repairing the system, the community still let it break and was not used.
- Water borne illness rates resumed to previous levels after system broke down

3. How Failure Could Have Been Avoided:

- Always involve the community in their own development.

IV. Conclusion

1. Restate main points

2. Go beyond main subjects to address how failure is perceived in the current Development model.

Introduction

Clean water is one of the most essential of needs all human kind. Many attempts at social or economic development would be futile without clean, accessible water. Currently, 783 million people worldwide are without access to safe drinking water (USAID, 2013). In many underdeveloped countries, it is common for women and children to walk miles each day in order to collect water, often from an unclean and contaminated water source.

Waterborne illnesses and contaminants can cause serious health complications across entire populations if said population is without proper knowledge regarding the negative health outcomes of consuming unclean water. The majority of health issues in underdeveloped countries result from ingestion of water that is contaminated with fecal matter. Illnesses related to fecal contamination include diarrhea, cholera, guinea worm, schistosomiasis, trachoma and typhoid. According to the World Health Organization, more than 3.4 million people die each year due to waterborne related illnesses, making it the leading cause of disease and death in the world (World Health Organization, 2009). Diarrhea is the most common and widespread of all the waterborne illnesses. Every year, food and water tainted with fecal matter cause up to 2.5 billion cases of diarrhea among children under five, resulting in 1.5 million annual child deaths (USAID, 2013).

By improving water quality through the installation of proper water infrastructure, waterborne disease rates can be drastically reduced. It has been repeatedly seen in developing areas that an improved water supply also leads to a reduction of poverty. Equipping a village with proper water infrastructure relieves women and children of the daily burden of traveling far distances to gather water for the household. Instead, a

women's time is freed to pursue other activities that increases her perceived worth and dignity such as income-generating opportunities. Similarly, children's time is free to attend school so that they can increase their knowledge and contribute to society in a productive manner. A sanitary water source that does not cause waterborne illness reduces a family's annual medical costs dramatically. This allows a family to alternatively invest their money towards lifting themselves out of poverty rather than on expensive health treatments (Barton, 1997). An improved water source allows for countless poverty alleviating opportunities for a community. Unfortunately, acquiring appropriate water infrastructure often requires more money and expertise than local communities have at their disposal.

One way a community can acquire an improved water source is through the collaboration with a Non-Governmental Organization (NGO). Many NGOs are based internationally but dedicate their work effort in local underdeveloped communities abroad. The goal of non-profit work is to manage, fund, and implement development projects that will transform and improve the quality of life of those living in poverty. The work of NGOs can have many beneficial and lasting effects on a community. When development is achieved through a community-led process, the intertwining factors of poverty are weakened, community members become empowered and overall quality of life improves. Sustainable development that is effective and appropriate for the culture at hand can be achieved through the utilization of local knowledge and skills.

Despite the many successes a NGO can have in a community, many failures can also be experienced when the complexities of culture are not well understood. An unsustainable and ineffective development strategy usually results when full knowledge

of the local culture and environment is underappreciated, undervalued and misunderstood. Further, if the local population is not consulted or included in their own development, local empowerment does not occur and the participatory nature does not ensue. Ultimately, this leads to development that tends to be ineffective and unsustainable.

The following research has been conducted in order to better understand the complex factors that contribute to the failure or success of Non-Governmental Organizations in Africa. This paper aims to examine different methods in which Non-Governmental Organizations have been both beneficial and detrimental to the local population they aimed to help and to examine the reasons for differing project efficacy outcomes.

Three case studies of NGO work in Malawi, Kenya and Rwanda will be analyzed in order to determine the factors that contribute to a NGO's effectiveness. An in-depth overview of each case study will provide a summary of the NGO's work and an investigation of the intricacies of each unique location and culture. In examining the similarities between these diverse cultures, locations, and development strategies, the contributing factors to a NGO's success or failure will be identified. Not only does this paper aim to identify the successes of sustainable and successful development strategies, it also intends to serve as a record of past mistakes. Only by learning from the errors and successes of previous NGO programs can future improvements be made. Lasting change can be seen in empowered communities that enjoy a better quality of life and a freedom from the constraints of poverty on the continual progression of water development strategies.

An Introduction of the Case Studies, the Local Contexts and Target Populations

Several areas of interest must be explored in order to form an accurate conclusion about the impact of a development project. First, a clear understanding of the Non-Profit Organization which is implementing the project must be acquired. Not only is the background of the company important, the company's goals should also be scrutinized. Perhaps most important is a detailed account of the work completed during the project. Through this information, it is possible to form a better idea about the NGO's intended results.

The location in which the project takes place is of equal importance. The continent of Africa is composed of a large range of drastically varying physical landscapes. Each geographic region introduces certain challenges and advantages to a water development project. For example, when drilling for water points, the physical geography of a certain location determines the type, depth, and feasibility of a well. For these reasons, without an accurate analysis of a location's physical geography, an NGO's entire water development project can result in failure.

Finally, a region's local culture can also have an enormous impact on the outcome of a development project. Each development strategy must be specific to the target location and culture due to the vastly different social behaviors, languages, and ethnic groups that can coexist within small regions of Africa. A deep understanding of the local cultural practices, customs, beliefs, and livelihoods in an area is essential to improve the prospects of success of a development program. This can be extremely difficult for an

outsider to obtain, therefore, partnerships with organizations local to the area can be helpful.

Involving the local community in every aspect of the project design and implementation is essential in creating a sustainable and empowering development project. Without knowledge of the target population, the project will not address the unique needs of the people and it is likely that meaningful and lasting development will not be achieved.

Three case studies will be explored to serve as examples of ways in which Non-profit Organizations can be both beneficial and detrimental to the local populations they aim to serve. In the following section, an extensive analysis will be compiled about each organization, the local context in which this work was completed, and the development work they performed. Once an overview of each case study is compiled, further analysis will be conducted on the effects of these NGOs on the local population.

Case Study 1: Mchinji District, Malawi

The first case study that will be examined is a water development project in Malawi that was completed by the Save the Children Fund. The Save the Children Fund (SCF) is primarily a relief organization whose mission is to provide children around the world with a safe and healthy life that fosters learning and development (Save the Children Fund, 2014). SCF was founded in 1919 by two sisters as an effort to alleviate starvation of children in Germany and Austria-Hungary following World War I. In the following years, the organization expanded into different regions of Europe and eventually began work in developing countries where armed conflict and natural disasters

were frequent occurrences. SCF is currently based in London, but works in over 120 countries worldwide (Save the Children Fund, 2014). Despite SCF's primary focus in relief work, SCF has also established a number of projects aimed towards community development.

One of the early development projects SCF launched was a project centered in the Mchinji District of Malawi. Mchinji is located in Central Malawi along the boarder of Zambia. The largest ethnic group in Mchinji is the Chewa, a traditionally matrilineal society. Women in Chewa society are referred to as 'Mbele', or 'the reproducers of the lineage' and therefore play an honorary role in society (Mtika, 2003). This trend has been changing over the years as globalization has influenced the ways of this culture. Today, the Chewa follow a patrilineal social structure in which most women are not included in community decisions or allowed to hold positions of authority (Mtika, 2003).

Agriculture is the main economic activity in the Mchinji District. The World Bank has reported that over 90% of the population depends on rain-fed agriculture for livelihoods, income and employment (IFAD, 2002). Despite this, Mchinji struggles with food insecurity. The World Bank has estimated that by January of each year, about 50% of the farmers in this district will run short of maize which is the staple crop for these rural farmers (IFAD, 2002). This is due to a lack of stable income and water resources. Mchinji is a drought prone region that experiences frequent water shortages throughout the dry season. This district has experienced several periods of extreme water scarcity over the years, which have contributed to the poverty of this rural population (IFAD, 2002).

The dominant geology of Mchinji is made up of clays with some areas of poorly sorted sands. This district appears to have abundant sources of groundwater that are generally safe for human consumption (Mleta, 2010). Despite this, the existing aquifers are unconnected to each other and therefore highly localized. Careful planning of shallow or deep wells must be completed in order to correctly access these resources. In the Geological Survey of Malawi completed in 1969, it was reported that deep wells produce a better water quality than shallow wells in this region (Mleta, 2010). Due to the shallower source for these wells, uncontained fecal matter from both humans and livestock present on the ground can easily contaminate the water source and cause water-borne diseases. As a result, deep wells are the most effective and sanitary water source for this region (Mleta, 2010).

The Save the Children Fund initiated a project in this region in 1993 in attempts to address the lack of water in this drought prone region while also reducing the high rates of water-borne illnesses in Mchinji. Through a partnership with a local organization called the Mchinji Primary Healthcare Program, SCF initiated a three-year program that continued until 1996 (Smout, 1998). This project aimed to improve water access and quality through the construction and rehabilitation of 250 deep wells throughout the region. During the course of this project, SCF and the Mchinji Primary Healthcare Program (MPHP) repaired broken wells that were already present in the region, drilled 250 new boreholes and conducted 249 total trainings for selected groups of villagers on how to correctly maintain and repair the wells (Smout, 1998). These groups of individuals were nominated by the community to be the Borehole Committee Members and were given the task of raising funds in the community for the periodic maintenance

and repair of the borehole. At the completion of the project in March of 1996, a total of 524 villages had received access to safe water.

Despite this encouraging result, upon SCF's return to Mchinji after the conclusion of the program, it was found that the long-term sustainability of this project was uncertain. To the surprise of SCF, many people in the villages continued to use their traditional water source in addition to the new sanitary borehole (Smout, 1998). This was attributed to the fact that the community members had no knowledge about the difference between the two sources. As a result, both sources were used indiscriminately. The Borehole Committees that SCF had established were also on the verge of disbanding due to their inability to gather funds from community members. The committees could not properly care for and maintain the boreholes due to the lack of funds and village participation causing the boreholes to break down and remain out of use. Without functioning boreholes from which the community could access clean water, water borne disease rates remained the same and the sustainability of this project was seriously compromised.

Case Study 2: Louga Region, Senegal

The second case study involves the United Kingdom's development agency, World Vision. World Vision is a high profile Christian development organization whose mission is the elimination of poverty through the empowerment of the poor. World Vision's work focuses around child-sponsorship where donors fund the education, health and security of a child in a developing country (World Vision, 2014). Reverend Bob Pierce initially founded World Vision out of his desire to help improve the lives of those who live in

rural, underdeveloped areas. Over the years, World Vision has improved upon this mission and now focuses on larger issues of community development and advocacy for the poor. World Vision now aims to help poor children and their families to build a sustainable future for themselves and their communities through community development (World Vision, 2014).

One of World Vision's early programs was aimed at community development in the semi-arid Louga region of Senegal in 1996. Despite having one of the most stable economies in the region, Senegal still has widespread unemployment and debilitating poverty in rural areas. Located in the northwestern region of Senegal, the Louga region has a population of around 97,000 people (Senegal Country Profile, 2012). The two main ethnic groups in this region are the Fulani, a pastoral nomadic group, and the Wolof, who are sedentary farmers.

The traditional Fulani lifestyle is pastoral and centered around the needs of their livestock. Some have maintained this nomadic lifestyle but others have become sedentary and either live in cities or farm in rural areas (Iro, 1981). The Fulani practice Islam and have an egalitarian social structure in which Polygyny is common. The Wolof are the largest ethnic group in Senegal and make up around 43.3% of the total population of Senegal. Traditional Wolof society was based on a class system of social importance, however, this model is disappearing with increased globalization (Iro, 1981).

Louga is a mainly agricultural region where the majority of people are peasant farmers who mainly grow peanuts, a cash crop in Senegal (Seavey, 2009). The many difficulties these rural farmers face can be seen through Louga's poverty index rating of 59% and the small average income of \$670/year (Seavey, 2009). The majority of the

agriculture in this region is rain-fed, however, droughts are common. With limited access to alternative water sources, crops commonly fail and leave the rural populations in additional poverty.

Within Senegal, the access to clean water differs greatly depending upon the region. In the capital of Dakar, the Senegal River that flows through the city is the main source of fresh water (Barron, 2007). While fresh water near this main river is abundant, access to drinkable water in many other regions of Senegal is scarce. For example, water is fairly scarce in the semi-arid region of Louga located in the northern part of Senegal.

This region is geologically complex and composed of two different rock types. The western part of Louga has a limestone base that is fairly easy for deep borehole drilling. The eastern part, however, is composed of quaternary sands. These sands have a higher iron composition than many other geologic types and present several complications to wells drilled in the area (Smout, 1998). The iron content of the sands cause corrosion of the well main, which leads to the increased need for repairs and maintenance. Without knowledge of this unique geologic situation, wells could be left out of service for long periods of time if not consistently maintained (Smout, 1998).

World Vision's program in 1986 aspired to provide clean drinking water to this area to alleviate the lack of water in the Louga Region. Additionally, hygiene and sanitation trainings were held in order to improve the health and hygiene of the community. Through the provision of clean water, World Vision hoped to decrease rates of water-borne diseases in the region. They also hoped to empower and involve the community in their own development by educating the public on the importance of clean water and the practice of hygiene and sanitation.

Over the course of the project, World Vision drilled over 520 wells across the region and held community trainings to promote health and sanitation practices (Smout, 1998). To ensure the sustainability of the wells, a ‘bush technician’ was chosen to be responsible for the upkeep of 10-12 different wells in his surrounding area. World Vision held trainings for these technicians and equipped them with the knowledge and skills needed to keep the wells functioning correctly (Smout, 1998).

At the final assessment of World Vision’s project in the Louga region, some aspects of the project had been successful, but others had not had the impact World Vision had anticipated. It was found that the majority of villages in the western part of the region were using their new water sources as anticipated but many in the eastern region had returned to using the previous, contaminated water source (Smout, 1998).

Case Study 3: Muramba, Rwanda

The third case study takes place in Rwanda, a very small country with a fast growing population of over 10 million. A genocide in Rwanda, beginning in 1994, resulted in the killing of an estimated one million Rwandans and has had a large impact on the social, political, and economic wellbeing of the country. In the aftermath of this event, Rwanda has struggled to regain lost social and cultural structures along with economic and political stability. Rwanda is the most densely populated country in Africa where more than 90% of the population is subsistence farmers (World Factbook, 2014). The three main ethnic groups that live in Rwanda are the Hutu, the Tutsi, and the Twa Pygmies. In the mountainous region of western Rwanda lies the village of Muramba. The people of this village are predominantly Hutu who mainly practice Christianity and speak

the Bantu language. The Hutu are traditionally farmers who primarily produce Rwanda's cash crops of coffee and tea.

The northwestern region of Rwanda, where Muramba is located, is a very mountainous region composed of granite (Twagiramungu, 2006). Rwanda has a relatively large quantity of lakes and rivers that run through the small country (Twagiramungu, 2006). As a result, access to water is fairly widespread throughout the country but the water is often contaminated. Due to a lack of overall knowledge regarding sanitation and hygiene, water sources in rural areas are frequently contaminated by surface runoff and contact with feces.

An international Non-Profit Organization called Engineers Without Borders (EWB) initiated a water development project in 2004 in an attempt to address the contamination of the water sources in the village of Muramba (Thomas, 2009). EWB is a nonprofit humanitarian organization that seeks to partner with disadvantaged communities to improve the quality of life of the locals through the implementation of sustainable engineering projects (Engineers Without Borders, 2014). EWB works in a number of countries and uses engineering techniques to provide communities with solutions to their most pressing problems. These projects range from constructing schools to improving homes to constructing water points.

Engineers Without Borders is unique in that it is not composed of one consistent organization, rather, there are thousands of small satellite groups all over the world that are united under the title of EWB (Engineers Without Borders, 2014). Each of these groups has diverse structures, aims and activities but are united under the common goal of serving the needs of disadvantaged communities throughout the world.

During EWB's initial analysis of the water situation in the community of Muramaba, it was concluded that the people were in great need of a water purification system. Water was accessible but, due to their remote location in the highlands, was deemed unsanitary. EWB initiated a small-scale project in which a water purification system was constructed at the local health clinic in a village (Thomas, 2009). The health clinic was located in a central place in the village with a steady source of water so EWB reasoned that surrounding families in addition to clinic patients could access and benefit from the purified water.

The EWB trained the Muramba Clinic staff on how to run and maintain the purification system so they could keep it functioning. After the conclusion of the project in 2006, EWB conducted a follow-up analysis on the impact that the water purifier had made on local health (Thomas, 2009). It was discovered that the purification system had fallen into disrepair from lack of use and hadn't been used by the community for the last year. In attempts to revitalize the project, EWB repaired the system and again taught the clinic staff how to properly care for the purification system. Despite this second attempt, upon EWB's return the next year, the purification system was found broken and abandoned once again (Thomas, 2009).

Contributions of Each Case Study

The successes each non-profit accomplished in the three case studies detailed previously will now be identified. A better understanding of the positive impacts a NGO can have on a local community will then be reached by analyzing the successes of each program.

Positive Effects in Malawi

In the Mchinji District of Malawi, The Save the Children Fund's primary goal was to improve the people's access to clean, safe water. SCF aimed to reduce the high rates of sickness and death caused by water-borne diseases. For a number of years, SCF was very successful in achieving this goal. SCF ultimately succeeded in drilling and repairing a total of 250 wells, which provided clean drinking water to 524 villages throughout the Mchinji District (Smout, 1998).

In a water-scarce region such as Mchinji, access to a reliable, clean water source close to ones' home improved the overall quality of life. Not only did the uncontaminated, clean water reduce water related diseases in the district, the close proximity of the village to the water source made gathering water for the household a less time-consuming task (Smout, 1998). Previously, when one had to walk long distances to the water source, women were the main water providers for the homes in this area. After the construction of a close, pump-style well, children became the prominent water gatherers for the home. Relieved of this time-intensive burden, women were increasingly able to peruse other activities that generated income for their families.

Another important aspect of this project was the participatory nature that SCF fostered. During the implementation of the project, SCF involved the village communities in the building and maintenance of the wells constructed. The participation of the community allowed for a sense of ownership over the new water points to develop. Through the formation of the Borehole Committees in each village, SCF helped to promote the empowerment of women in the community. During the formation of these

committees in the various villages, SCF ensured that at least two of the 4-5 members were females (Smout, 1998). Not only was this an attempt to increase women's perceived worth in the Chewa society, it was a way for women to gain access to technical training that they might otherwise not receive. Community participation was a key aspect in SCF's project that had a positive impact on the local culture overall. The integration of the communities encouraged local pride and responsibility in caring for the new well. Local quality of life was improved for a period of time through SCF's actions.

Negative Effects in Malawi

SCF had many successes during the initial implementation of their project in Malawi. Unfortunately due to one missing component, the program proved to be unsustainable in the long-term. This program's primary mistake was that it lacked an educational component that taught the community the health impacts of clean water, hygiene, and sanitation. A basic knowledge about the importance of hygiene and sanitation is needed before widespread behavior change can occur in a community. The people of Mchinji were not provided with this knowledge, and therefore saw no reason to change their current behavior. As a result of the lack of education, the community was not aware of the health benefits that could be achieved from the new source of safe water in their village.

In SCF's follow-up monitoring in Mchinji, it was found that some individuals still used the old water source (Smout, 1998). If education regarding the effects of drinking unsafe water were taught in the community, it is likely that the previous water source would be abandoned in preference for the new sanitary source. If training in sanitation

and hygiene practices were also provided, this also would drastically reduce the rates of water borne disease.

SCF observed the dissolution of many of the water committees that had been set up to maintain the water sources (Smout, 1998). These water committees were unable to gather funds from community members to pay for the repairs necessary to keep the wells functioning. The community was not invested in the maintenance or upkeep of the well because the incentives to do so were not known. The improved water sources had not been enough to make a noticeable change in community health before they ceased to function, therefore, there was no reason to donate one's scarce money to repair the wells.

Another aspect of the project that was not anticipated was the effect that the new water points would have on children. The new water source may have led to an increased burden on children. Gathering water used to be a task primarily done by woman when the water was far away and difficult to access. Once a closer source was constructed, this task was largely transferred onto children (Smout, 1998). This transfer of responsibility relieved women of a task allowing them to pursue more productive activities, but simultaneously stuck children with the burden. This could possibly lead to a drop in school attendance rates especially for girls. Since SCF did not gather any further statistical data on this issue, the full impact on children in Mchinji cannot be assessed.

How Failure Could Have Been Avoided in Malawi

The primary shortcoming of SCF's development strategy was their failure to educate the population on the importance of clean water, hygiene and sanitation. This example shows that education is the key to human-centered development. When

attempting to reduce a population's rate of water-borne diseases, a basic knowledge of the causes of disease is essential for behavior change to occur. The communities in Mchinji indiscriminately used both sources because they were not provided with knowledge regarding the health benefits of drinking from a pure water source. This resulted in a lack of significant changes in the rates of water-borne disease in the communities.

For effective and sustainable changes to be made in a community, human-centered development is extremely important. Education acts as a stimulant for future development (Browne, 1991). The failure to educate a population undermines all other development efforts and prevents the formation of a self-empowered community (Browne, 1991). A lack of education can also have negative effects on economic factors as well. The World Bank has stated that economic returns from education are higher than for most other kinds of investment (WB, 1988). Not only would education help to further development initiatives in the community of Mchinji, it would help prevent the chronic illness and death that result from consuming an unclean water source.

Positive Effects in Senegal

In World Vision's project in Senegal, many achievements in improving the local quality of life were also accomplished. World Vision's project in the Louga region succeeded in drilling 520 wells during the span of the project as well as providing trainings in sanitation and hygiene for each village (Smout, 1998). World Vision's goal to provide clean drinking water for both the Fulani and Wolof people of the Louga region was considered an overall success. As stated in the program's final assessment, 92% of

the boreholes drilled were still functioning, and the communities that used the boreholes as their sole source of water had drastically reduced water related illnesses (Smout, 1998).

Despite the many differences between the Fulani and the Wolof cultures, both ethnic groups benefited from the increased access to water. The pastoral Fulani were able to access more sources of water throughout their travels and the sedentary Wolof people benefited from a water source that was close to their farm lands. Perhaps the most sustainable aspect of World Vision's program in the Louga region was the sanitation and hygiene trainings held in each village where a water point was established. Through these trainings, the community learned the importance of drinking from a clean water source, the effect of washing one's hands with soap, and the health benefits of defecating in a latrine instead of the fields. Not only were the people provided with the ability to drink clean water, they understood the reasons for doing so.

In addition, World Vision trained elected individuals how to repair and maintain the wells. This aspect of the program ensured the long-term maintenance and functioning of the water points even after the involvement of World Vision. For these reasons, World Vision's project had considerable positive impacts on the local people of the Luga region.

Negative Effects in Senegal

Although World Vision's project in Senegal had many positive aspects, it ultimately suffered from a lack of knowledge about the local geology. World Vision's project was extremely successful from a social standpoint. Not only were the communities involved in well construction and trained in well maintenance, the

educational component also gave families knowledge of the health benefits a clean water supply provides.

Unfortunately, the environmental context of the Louga region was not as well understood. Even though the geological differences were known, the effect these differences would have on the behavior of the local population was not anticipated. Due to the differences in geology, the water that was obtained from each region's respective boreholes had different mineral compositions and therefore tastes. The water from the boreholes drilled in the western Limestone region tasted similar to any other water source in Senegal. On the other hand, the boreholes drilled in quaternary sands produced water with a larger concentration of iron (Smout, 1998). As a result, the water obtained from these boreholes had a very objectionable taste. Even though each village had been trained in the countless benefits of consuming clean water as opposed to unsafe water, many individuals in the eastern region returned to their old water source instead of using the new water sources (Smout, 1998). World Vision failed to take into account the effects that local geology would have on water quality in this instance. Regardless of the health benefits, many community members were not willing to drink unpleasant tasting water.

A second instance in which World Vision's project proved to be unsustainable in the long term involved local access to pump repair parts. Without the assistance of World Vision, pump parts were hard to access in Louga. Even though World Vision had elected and trained "bush technicians" in how to maintain and repair boreholes, the parts needed for repair were not readily accessible in the Louga region (Smout, 1998).

Due to the geologic composition of the eastern sand region, the wells in this area were in greater need of regular maintenance and repair than traditional wells. As a

result of the lack of available parts, some boreholes would break and would remain out of use until the correct part could be accessed a number of months later. In this case, the local population would be forced to return to an alternate, contaminated water source.

How Failure Could Have Been Avoided in Senegal

Due to a lack of complete knowledge regarding the local geology in the Louga region of Senegal, World Vision's project experienced some major difficulties. Knowledge about the local environment is critical in completing a successful development project (Clayton, 2001). Before project implementation, a thorough assessment of the local topography, land used systems, geology, and vegetation is important (Clayton, 2001). Through consultation with the local people, one can learn about the strengths and weaknesses of each unique location. The failure to perform proper research of the local context can result in a failed project. During a water development project, local geology is especially critical (Clayton, 2001). Not only does one need to know about the local geology, the effect that this geology has on the groundwater is equally important. Even if the water is drinkable, the taste of it can have considerable repercussions like World Vision experienced during their project. The failure of a water point can result in the instability of all other development initiatives. To prevent this, one must ensure the local context is fully understood.

Positive Effects in Rwanda

Despite the smaller scale of the Engineers Without Boarder's project in the mountainous region of Rwanda, the community of Muramba also benefited for a short

time from the improved water quality in their village. Upon EWB's first visit to Muramba, it was clear that even though the village had access to water, the water was not sanitary (Thomas, 2009). The result of the unclean water source could be seen in the health of the villagers. In order to improve the health of the villagers, EWB constructed a water purification system that was located at the clinic in the center of the village (Thomas, 2009).

The purification system was used during the extent of the two-year program but was abandoned by the community after the end of the program (Thomas, 2009). Due to the short time that the purification system was in use, it was hard for EWB to assess the health benefits of the system. Perhaps the largest success of this failed project was the lessons that EWB learned from their failure. Since this failure, EWB has openly admitted their mistakes in hopes that they can be learned from and not repeated by other development agencies. EWB believes that the "only truly "bad" failure is one that's repeated" (Admitting Failure, 2014).

Negative Effects in Rwanda

At the start of each project, the initial assessment of the most prominent issues of a particular location is crucial. Without an accurate identification of the problem, a suitable solution cannot be formulated. In Rwanda, EWB started their program with an inaccurate assessment of the local condition, and therefore experienced subsequent problems throughout the remainder of their project (Thomas, 2009).

Upon arriving in the rural mountainous village of Muramba, the workers falsely identified that the main water source used in the village was a network of deteriorating

pipes supplied by surface runoff. In reality, the main water source was later revealed to be a nearby natural spring. EWB's wrong initial assessment was the result of too few volunteers, a quick assessment time and a lack of clear communication with the local people (Thomas, 2009). Not only did the remainder of EWB's project fail to address the village's real water needs, the solution that EWB implemented was essentially useless to the village.

The water purification system that EWB constructed for the network of pipes was intended to provide clean water to the health clinic located in the center of the village. Even though EWB provided the clinic workers with the knowledge of how to repair and maintain the purification system, it was no longer in use when EWB returned to assess the program a few years later (Thomas, 2009). EWB's project ultimately failed due to the lack of community involvement in the project.

Another shortcoming of EWB's project was their failure to involve the local population in the development initiative. In consulting and working with the local community, EWB may have learned that their initial assessment of the communities' water situation was not correct. Despite EWB's incorrect solution, the water purification system could have been beneficial to the village of Muramba if implemented correctly. Through educating the locals on the benefits of sanitary water, the village could have been mobilized towards the effort of supplying clean water for themselves with the help of EWB. Only when the local population is involved in the implementation of the program will the community gain a feeling of ownership and responsibility over the product. This involvement fosters a sense of community empowerment that leads to the project's long-term sustainability.

How Failure Could Have Been Avoided in Rwanda

EWB's project in Rwanda was unsuccessful primarily due to the lack of community development. To create lasting change in a community, bottom-up, locally based approaches are necessary (Cernea, 1985). When a community is the primary driver of change, this effort tends to be long lasting and sustainable. This form of development often leads to wider benefits in a community such as economic, political, social, and cultural transformations (Cernea, 1985). Without the input and involvement of the local people, many projects fail to work once the developer leaves. In order to ensure the sustainability and long-term success of a project, locally supported and integrative processes must be adopted.

Conclusion

Stories of failure are just as important as stories of success when it comes to furthering the development field. By observing the failures of the case studies explored above along with analyzing future case studies, mistakes can be identified and learned from in order to prevent similar mistakes in the future. Unfortunately, in the development field, admitting to mistakes made by an NGO many times means losing donations and other forms of financial support. Mistakes are a frequent component of development and should therefore be identified and improved upon instead of punished. A free and open environment needs to be endorsed in order for learning to occur. Instead of the current model, a non-profit organization should be rewarded for tracking the progress of the program even after its completion date. When a program does not go as planned, an NGO must be inspired to not only analyze their failures, but to reevaluate their preconceived

ideas and search for the root cause of the failure. Through such a model that encourages innovation yet accepts failure, the development field can be furthered.

The process of rural development can have many unintended consequences and challenges that arise during the course of a program. To solve these problems in a culturally sensitive way, a complete understanding of the local context is necessary. When a development program fails, it is many times a result of incomplete knowledge about the local people. Adopting a bottom-up, participatory method that incorporates local ideas and knowledge is necessary in promoting local empowerment. If the development effort is not motivated and stemmed from the local people, it will not be long lasting or successful.

Knowledge about the local environment is also critical in completing a successful development project. Each location has numerous geologic, ecological or topographical components that must be taken into consideration. Certain geographic aspects may pose a problem to the success of a project if adequate planning is not conducted prior to project inception. In rural areas the people significantly rely on the land for many different aspects of life. To fully understand the local environment, the people and their lifestyle must also be considered. A program that successfully incorporates the local environment and land-use lifestyles will be better prepared for working in the area, and ultimately more successful.

Finally, this research has consistently shown that one of the most important factors to a successful development project is that education is the key to human-centered development. Knowledge provides a community with the power and skills needed to change their current situations. When the importance of clean water, hygiene and

sanitation are taught, one has the ability to change their behavior and experience better health as a result. Education stimulates and supports all current and future development initiatives, making it a necessary part of ending poverty. Educating a community allows for community-level empowerment and provides for a more sustainable future.

Rural development is a constantly evolving field in which there are many conflicting strategies. One method does not fit every location due to the vast differences between places, people, and culture. However, when the place, people, and culture is correctly taken into account and paired with proven educational techniques, the benefits of development programs can be realized. Finding the correct way to improve a community's quality of life, while also fostering local empowerment is essential. By acknowledging success while also improving upon past shortcomings, this developing field can become progressively more efficient at helping the less fortunate people of the world.

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