

The Analysis of Trash Disposal Habits in Dangriga, Belize (Summer 2013)

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Background

Although once referred to as a third-world nation, Belize is now recognized as a developing nation high in natural foliage and underwater novelties. It is a small open economy supported primarily by its natural resource base. Belize's environmental capital demonstrates real potential in driving the country's development, but there is a clear need to standardize the sustainable development framework for the entire country. A change is completely necessary in the society. One of the most noticeable examples of the need for intervention in Belize concerns the overall handling of trash and other waste. The public has no idea how to deal with their trash and the natural resources that are being damaged and destroyed because of the people's habits (Figs 1 and 2). There is a lack of emphasis on social sustainability. There is also a lack of available managed systems to support sustainability. The trash pickup system is far from developed and the landfills are far from safe for the environment.



Figure 1. Trash Accumulation on the Beaches of Dangriga
(Photo Courtesy of Addison Walker)



Figure 2. Dangrigans Under Shade on the Trash-Infested Shores of North Stann Creek
(Photo Courtesy of Addison Walker)

Procedure

- An assessment was conducted about the waste management and social systems of Dangriga
- A survey that comprised of five concise questions that were to be answered on a scale from 1 to 5, one "yes" or "no" question, and one opened ended question was developed from a prior assessment
- The survey was reviewed and revised by a project leader
- The survey was explained to 50 random individuals and the individuals were asked to answer the questions to the best of their abilities so that this information can be used to inform future studies conducted on a representative sample of individuals.
- Analysis of the survey was conducted after the return from Belize
- The exact survey is shown on the right (Fig. 3)

Dangriga Sustainability Survey—Summer 2013
The scales below are rated 1 through 5, 1 being "not at all", and 5 being "every time" or "very strongly"

1. How often do you throw away trash into a trash can/bin?
1 2 3 4 5

2. How often do you reuse bottles or containers?
1 2 3 4 5

3. How often do you recycle glass bottles?
1 2 3 4 5

4. How often do you recycle other goods?
1 2 3 4 5

5. It is important to protect the environment.
1 2 3 4 5

6. Do you have access to the landfill or any other means of properly disposing your trash?
YES NO

7. In what ways do you dispose of your waste/trash?

Figure 3. The Sustainability Survey



Figures 4 & 5. Students Play on a Trash Infested Schoolyard
(Photos Courtesy of Leah Miramontes)

Data:

Table 1: Results from Sustainability Survey

Survey Questions	Rating					YES	NO
	1 Never/ Strongly Disagree	2 Usually not/ Disagree	3 Sometimes/I ndifferent	4 Nearly always/ Agree	5 Always/ Strongly Agree		
How often do you throw away thrash into a trash can/bin?	1	3	5	9	32		
How often do you reuse bottles or containers?	9	7	12	13	9		
How often do you recycle glass bottles?	11	4	11	12	12		
How often do you recycle other goods?	15	7	10	7	11		
It is important to protect the environment.	3	-	1	7	39		
Do you have access to the landfill or any other means of properly disposing your trash?						41	9

Data Analysis

Results of this survey are as follows. It was found that thirty-two of those surveyed claimed to always throw away their waste. Those who answered with a 1 or 2 (that is, rarely or never properly disposed of trash) were under 20 years old. This suggests that among those surveyed there was not a conscious recognition of the need to dispose of waste properly until the individual reached adulthood. Many of the adults over age forty stated that when there is no trash receptacle near, they either hold on to it in their pocket or purse until they get home, where they can ensure its disposal.

The opinion question inquiring about how important protecting the environment is to the respondents indicated that he majority (thirty-nine) of people surveyed strongly agreed it was important to protect the environment. This answer validates that Belize has a sustainable conscience, but the wide range of answers to previous questions verifies that there is a clear difference between thoughts and actions, and perhaps availability to proper waste disposal/recycling access. The final open ended question, "In what ways do you dispose of your waste/trash" really gave better insight of the managed systems occurring within the community. People's responses ranged from utilizing the local sanitation service to burning and/or burying his/her waste.

The social system amongst those surveyed signified a large range in waste management and awareness. It was deemed by many to be socially acceptable to not properly dispose of their waste, much in part to the lack of waste management offered to the respondents.

Conclusion

The Sustainability Minor at the University of Arkansas has established foundational knowledge related to four main sustainability areas which include: social systems, natural systems, built systems, and the managed systems. Particularly, the survey and research conducted in the town of Dangriga, Belize, encompasses the social and managed systems. The social aspects of Dangriga included trying to understand the relationship between the citizens and their environment. The managed system in Dangriga was explored by studying waste management business foundations, policies, and consumer preferences. The analysis of the surveys and the conversations gave immense insight about how citizens of Dangriga contribute to the environmental issues and how they feel about the waste management system. Although the number of surveys does not give statistically significant data due to the limited sample size, an overview of how the people in Dangriga manage trash and feel about the environment can help inform future studies. Education is key to initiate a social movement in Dangriga that promotes sustainability. In the future, sustainability students have immense potential to help lead Dangriga to a sustainable lifestyle.