Community Assessment Role Play Activity
Fundamentals of Community Service Engineering
Penn State University
Steve Marshall
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Breakdown of Document:

1) Goals and Purpose of Activity
2) Initial Background Information and Role Descriptions to be given to Students
3) Teacher Information for Class Discussion
4) Detail Participant Descriptions
**Goals of Activity:**
1. Identify human contacts
2. Identify non-human resources and data
3. Learn strategies for eliciting and gathering information
4. Demonstrate proper interaction with communities to facilitate decision making and gain leadership experience
5. Gain insight on perspectives from both sides

**Purpose of Activity:**

- Traditional engineering education tends to focus primarily on developing solutions for problems which are given to the engineer. This activity attempts to educate students about the importance of community assessment in order to define that problem, a step often overlooked in other classes.

**Students Role Relationship:**

**Purpose of Engineering Role:**
- To experience the frustrations and challenges associated with community assessment.
- To identify key informants and proper techniques for gathering information.

**Purpose of Local and International Participants and Community Member Roles (“Other”):**
- Students will most often play the role of the engineer in the future. This activity will allow them to experience the role of the community members and individuals who will be engaging with the engineers.
Int’l Participants:
- Matt Moran
- Onaje Jackson
- Leader of Church Service Group

Local Participants:
- JBI Representative
- Public Utilities Personnel (water and electric)
- Alvin Murray - Christiana Potatoe Growers

Community Members:
- Brother Anthony
- Jack Samwell
- Jacob’s Ladder Caretaker
- Clyde Ramkissoon
- Darcy Williams
- Jacob’s Ladder Gatekeeper

Engineers (3 groups of 2):
- Group 1 - Jamaican Engineering Firm
- Group 2 - Penn State Student Engineering Team
- Group 3 - Professional Engineers volunteering through EWB

Community Assessment Activity Structure:

Class #1

Hour 1
- Lecture about community assessment, techniques, and methods.
- Introduce activity and individual roles.

Hour 2
- Students will read over their role description and the overall background information on the project and community.
- “Engineer” students will wait outside.
- Head NGO Representative/the Father (the instructor) will hold a stakeholders meeting for the rest of the students to introduce the initial implementation plan for the community. Students will initially be frustrated with the plan and will voice concerns.
- Head NGO Representative/the Father (the instructor) will then meet with the “Engineers” and present his vision and need for help on the project.

HW #1

“Engineers”
- Students will continue to read over their role. “Engineers” will complete further research on the country and site. This information will be posted on ANGEL and will require students to sort through material to obtain key information.
- Information will be presented in such a way that it hints at what organizations and people are important to contact.

“Other”
- Students will be given access to more detailed information on ANGEL in which they must do further research about their individual
Class #2

Hour 1
- Head NGO Representative/the Father (the instructor) will hold a second project meeting with all students.
- “Other” students will present their viewpoint of the proposal. Meanwhile, “Engineer” students will discuss in the back of the classroom which people are most important to interview and talk with.
- Engineers will then present background information on themselves and discuss with everyone about potential options for the community.
- After all opinions are presented, the meeting will be opened up for a free-for-all discussion.

Hour 2
- Engineers will create an interviewing schedule and spend the rest of the class interviewing others to get a more thorough picture of the situation.
- “Other” students must remain in class and grouped together according to their role. The local community members will be together, the government official will be busy working on other work (possibly other homework).
- Throughout interview process, students being interviewed will sometimes suggest other people who would be valuable to talk with. This will ensure that the “Engineers” must talk with multiple people to eventually reach key informates.

HW #2
“Engineers”
- Using the information from the interviews, students will create their own proposal. If further interviews are needed, “Engineers” may contact other students in the class and setup interviews outside of class. Further research may be needed to obtain village-level knowledge.
- Students will then create a 10 min powerpoint presentation to be given as a group for the next class.

“Other”
- “Local” students will meet together and “Int’l” students will meet together to each define a list of needs and visions for the community based upon their role’s perspective. Each group will then create a 10 min powerpoint presentation on the needs and visions they have defined.

Class #3

Hour 1
- Presentations will be given in the following order: “Engineers”, “Participants”, “Community Members”.
  - These presentations will address the process and individual proposal.

Hour 2
- Group discussion about plan, perspectives, and important roles missing.
- Students will be able to evaluate whether the “Engineers” plan accurately met the needs of the various players.
- Students will vote on the winning proposal.

HW #3
“All”
- In their journal, students will summarize the process, key concerns, frustrations, and strong perspectives of the participants and community members (both positive and negative).
Goals and Purpose of Activity

Initial Information and Role Descriptions to be given to Students

Teacher Information for Class Discussion

Detailed Participant Descriptions
Community Assessment Role Play Activity

**Overall Description:**

In the following class periods, you will be participating in a role-playing community assessment. As you complete your engineering education, you’ll get quite used to solving clearly defined problem statements. Without a doubt, these types of problems occur; when the engine quits working, it must be fixed. Other problems, especially those encountered in Humanitarian Engineering and Community Engagement don’t have clear problem definitions. Often there are many layers of opinions, local knowledge, and complexity that must be understood before the true problem can be realized.

Through this simulation, you’ll be given the chance to experience multiple sides of problem solving and community assessment. First, read and familiarize yourself with your unique role described on the following page. These characters are based on real people that Penn State engineers are working with through a Mustard Seed Communities project in central Jamaica. Additional information is posted on your Angel account.

Mustard Seed Communities (MSC) is a faith-based non-profit organization working in central Jamaica to build Jacob’s Ladder, a sustainable village for 500 mentally and physically handicapped young adults. Jacob’s Ladder is located in a remote area of the Blue Mountains in Central Jamaica, just north of Moneague.

MSC is internationally based; however, multiple care sites are located in Jamaica. In 2001, Jamaica Bauxite Institute gave MSC approximately 100 acres of land located on a partially reclaimed mine. Since then, 20 cottages have been built, and residents are beginning to move in. There are currently 32 residents on site with 7 caretakers and staff working around the clock in shifts.

**Structure Overview:**

For more detail, refer to individual overviews presented on ANGEL

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*Foundations of Community Service Engineering - EDSGN 352*
Brother Anthony

Primary Concerns:

• Day to day operations of Jacob’s Ladder
• Resident care

Your Knowledge of the Situation:

A native Californian, you began work with Mustard Seed Communities nearly nine years ago. As soon as work started with the Jacob’s Ladder site in Haddon, you were appointed as the head spiritual and operational caretaker of the site. You live in one of the cottages in the resident village. Every day is spent managing and overseeing the care for the 32 residents that are currently living on site.

Mustard Seed Communities is a charity, and although you must keep providing food for the residents, it is sometimes difficult to keep the site operating. A large part of your day is spent driving to nearby grocery stores and shops to beg and to pick up food past its expiration date.

The worst problem on site is the lack of water. The entire community needs water for drinking, cooking, and for washing clothes. Currently the government provides a water truck that comes to the site every few weeks to fill up large containers. So far, the truck has always came just in time, but you’re worried that sometime it might not come soon enough.

Each day has enough troubles of its own, but the Lord has always provided, and has blessed your community abundantly. It’s your hope that you can show the handicapped children the love that they deserve.

Advice for interacting with others:

In the past, many groups have promised and not delivered. Therefore, you are often hesitant to believe the promises of people looking to help.
Jack Samwell

Primary Concerns:

• Future planning and development for Jacob’s Ladder
• Developing consistent, repeatable plans for Mustard Seed Communities

Your Knowledge of the Situation:

The climate of Jamaica is quite different than your homeland of Holland, where you were professionally trained as an architect. You’ve been working with Mustard Seed Communities (MSC) for many years. One of your first jobs was working to design a community housing arrangement for mentally and physically handicapped youth at the MSC Jerusalem site in Spanish Town.

The overall goal of housing at Mustard Seed is to provide a community living environment, and free residents from the institutional feeling of many traditional facilities. The current cottage design is your own, and provides the most cost effective living facilities for site residents. The cottages also all survived the hurricane Ivan that devastated large portions of the island in 2004.

You’ve been asked by the Father to construct a long term development plan for the site, based on your experience with Jerusalem, another MSC site operating near Kingston, Jamaica. The key aspect of the Father’s request is to incorporate 100 cottages into the rolling topography of the mined bauxite land.

You’re hoping to base many of the new developments at Jacob’s Ladder off of your successes at Jerusalem. You’ve always had success replicating designs that have worked in the past.

Advice for interacting with others:

You are very soft-spoken, and you frequently work with Clyde Ramkisson. With so many other projects on your plate, you prefer to be kept in the loop primarily through Matt Moran who provides you key project updates every so often.
Clyde Ramkisson

Primary Concerns:

- Organizing supplies and operations for all Mustard Seed Jamaica care sites
- Coordinating volunteers

Your Knowledge of the Situation:

It seems like you see every Mustard Seed Communities (MSC) site every day. You are responsible for coordinating most of the supply deliveries to each site. You also work with Jack Samwell to develop long term visions for the site.

Your main priority for future development is that the children are kept first in the future design. You’ve been working with your brother, Father Gregory Ramkisson, to create a site that allows mentally and physically handicapped youth and young adults to live in a community setting. You feel that the small cottage housing environment and spiritual guidance at the site help to promote healing.

Hopefully local and international aid groups will take interest in the site, and reach out in compassion toward the residents.

Advice for interacting with others:

You are very eager to talk to anyone working with the project. MSC is an exciting place to work, and Jah is doing exciting things through Mustard Seed.
Matt Moran

**Primary Concerns:**

- Future planning and development for Jacob’s Ladder
- Bringing grants and funding to the Mustard Seed Communities Projects
- Incorporation of sustainable designs and research opportunities to gain international interest in the project

**Your Knowledge of the Situation:**

A builder by trade, you work with Mustard Seed Communities (MSC) as a United States operations manager. Your main job is to gain funding and international participation for the Jacob’s Ladder project in central Jamaica.

Your goal is to work with research universities to garner international interest in the project through sustainable development. If the site becomes a pilot location for sustainable and alternative technologies, it may be recognized with grants that can further help development of the site.

Although you have visited the Jacob’s Ladder site a few times, you are living and working out of an MSC office in New York.

**Advice for interacting with others:**

You have been designated by the Father and Jack Samwell as the main contact person and organizer for the future planning of the site. Every so often, you provide key updates on the project to Jack and the Father. Having worked with numerous other NGO’s you are experienced in coordinating efforts between multiple groups.
Leader of Church Service Group

Primary Concerns:

• Developing ways in which to ensure that numerous churches have the opportunity to visit and assist Jacob’s Ladder.
• Making sure that the children are well cared for and truly loved for.

Your Knowledge of the Situation:

You are from Atlanta, Georgia and last year served as one of Jacob’s Ladder first service groups. You were appointed the project leader for your church’s mission trip to Jamaica and were responsible for organizing people and projects while on the island. All-in-all, a total of 13 other individuals joined you on the trip. Coincidentally, many of the participants had advanced experience with construction and you therefore felt it would be meaningful to use their skills to construct something on site for the residents of Jacob’s Ladder. As a group, you decided it would be nice to build two pavilions outside of the existing homes for the residents to go to during the day.

Before arriving in Jamaica, you pitched the idea to the director of the site and were very pleased to find that he was more than excited to have them help out. He told you that whatever you could provide would be greatly appreciated. After settling on a project, you worked with other members of the trip to design the structure and arrange details for obtaining materials while in the country.

Since returning back home from the missions trip, you have felt that it is very important to share your experience with others. You wish that more churches could have the opportunity to take part in similar life changing activities.

Advice for interacting with others:

You are very eager to talk with others working on the Jacob’s Ladder project. Because communication between the US and the site is limited, you jump at any chance to hear more about what development plans are currently underway. You are always keeping your ears open to finding new ways to get involved with Jacob’s Ladder again.
Onaje Jackson

Primary Concerns:

• Developing sustainable energy plans for communities
• Pursuing profitable business opportunities to advance your company

Your Knowledge of the Situation:

You are the president of “Sustainable Systems and Design International” based out of St. Croix, Jamaica which specializes in technical consulting for sustainable development projects and alternative energy solutions. You are friends with Father Gregory Ramkissoon, director of MSC, and in March 2007 performed an analysis of the Jacob’s Ladder site and offered suggestions and recommendations for future energy infrastructure development.

Your proposal outlined a timeline of when to invest in various energy services/technologies and laid out how these would mesh together in the future to provide a sustainable energy plan for Jacob’s Ladder. Jack Samwel, a MSC senior project manager, helped you to finalize the details for the proposal.

Since submitting your proposal to Mustard Seed, you have not heard if anything has been done with respect to your recommendations. You have heard that more outside help has been recruited for the project and are somewhat upset that MSC did not take your proposal seriously. When it comes down to it, you are a business man and must invest in profitable opportunities. There is only so long that you can freely donate your time to MSC. You feel that this is a problem MSC often walks in to, trying to find as much donated services and items as possible without offering anything in return.

Advice for interacting with others:

You have spent quite a bit of time on the Jacob’s Ladder project in the past and have not seen any outcomes from your work. You are therefore unwilling to commit large portions of your time to the project once again.
Jamaican Bauxite Institute Representative

**Primary Concerns:**

- Preserving the public image of the ministry
- Meeting requirements for mine land reclamation

**Your Knowledge of the Situation:**

The Jamaican Bauxite Institute (JBI) is government operated arm controlling mining operations of Bauxite ore throughout the country of Jamaica. Bauxite is the ore material of aluminum, and is one of the countries largest exports.

Recently, environmental concerns surrounding mining activities resulted in the passing of new laws, regulating the reclamation of abandoned bauxite mines. In order to follow these new regulations, you must reestablish the mined land to gradual slopes and make it suitable for grazing.

Years after the last mining at the Haddon site, Father Gregory of Mustard Seed Communities (MSC) approached you about establishing a future community on the mined land. MSC is a well known charity in Jamaica, and receives much publicity in the national media. You realize that if MSC successfully creates a self-sustaining community on the abandoned mine land, it would reflect well on the ministry. It’s a gamble though, because a failure would show that mining has caused serious damage to the land.

To help guide MSC, you have been meeting with Father Gregory to develop a long term site plan. As part of your commitment to the site, you have agreed to construct two 30’x100’ high tunnels and see them through to one year’s crop rotation.

**Advice for interacting with others:**

The Jamaican government ministries are case studies in bureaucracy. In order to simulate this, whenever anyone approaches you, you will tend to have other work to accomplish. Meetings must be pre-established around your busy routine.
Alvin Murray - Christiana Potatoe Growers

Primary Concerns:

• Developing high-tunnel cropping programs in Jamaica
• Improving agriculture for Jamaicans

Your Knowledge of the Situation:

You have been experimenting with the use of high tunnels in Jamaica for the past 10 years. High tunnels appear to be very similar to greenhouses, but they have many different purposes. Greenhouses are often used in the states to keep plants warm in cool weather. This allows for the growing season to be extended, and keeps young plants healthy.

High tunnels can be used in Jamaica for many different reasons. One of the most important is for pest control. The enclosed high tunnel safeguards against unwanted insects. The tunnels also allow for a constant and controlled supply of water, since the covering blocks all rain. Fertilizer can also be delivered in proper doses in this manner.

You have been contacted by the Jamaican Bauxite Institute to build two 30’ x 100’ high tunnels at the Jacob’s Ladder Mustard Seed Site. Jacob’s Ladder plans to use these high tunnels to grow peppers for Jamaican jerk seasoning as well as other small vegetables.

The research has been exciting at the Devon, Jamaica location for the past few years. You hope that by adding the Jacob’s Ladder site as a research possibility, you can get better data for Jamaican climate response to the buildings.

Advice for interacting with others:

You would like to convince Jacob’s Ladder planners that high tunnels will benefit them at the Mustard Seed site. You will also work with JBI to attempt to find a location, funding, and anxious helpers to complete the project.
Public Utilities Personnel

**Primary Concerns:**

- Enhancing the public image of the government’s public utilities services
- Finding ways to tie the government to sustainability movements on the island.

**Your Knowledge of the Situation:**

You work for the Jamaican government and help coordinate efforts between the multiple public utilities divisions for the northern portion of the country. The majority of your work involves the Water Resource Authority and Jamaican Public Service, as well as communication between hotels in the tourism districts.

Mustard Seed Communities has approached you in the past to assist with some of their caring facilities. You are happy to help when you can because it gives the government a good reputation, however there are many times when it is economically not feasible. The most recent caring facility, Jacob’s Ladder, is located a good distance off the main road which makes it expensive to provide services such as water, energy, and communications. There has also been little attention towards Jacob’s Ladder on the island because of its remote location which gives you less of a reason to donate services to the site.

You have however talked with Onaje Jackson, an energy consultant on the island who assessed Jacob’s Ladder and recommended a plan for future development. You were excited by his enthusiasm and feel that it would be beneficial to bring the government on board if in fact Jacob’s Ladder is able to professionally demonstrate sustainable energy and development practices.

However, with so many other projects to keep you busy, Jacob’s Ladder has not received much of your attention.

**Advice for interacting with others:**

You are busy coordinating and communicating between different organizations and businesses. It is difficult for you to find time to meet spontaneously with others and prefer to have meetings planned well in advance.
Jacob’s Ladder Caretaker

**Primary Concerns:**

- Caring for and assisting with the daily needs of the residents of Jacob’s Ladder.
- Ensuring that future plans address the physical, mental, emotional, and spiritual needs of the handicapped residents.

**Your Knowledge of the Situation:**

Last year, Mustard Seed Communities (MSC) approached your local village in Haddon, Jamaica explaining that they were working on a new project which would be built just down the road from your village. The project intends to care for roughly 500 handicapped young adults and was therefore in need of caretakers to work at the site. One month later, you were hired by MSC and began working at Jacob’s Ladder caring for the first group of children to arrive on site.

Over the past year, the site has grown to hold 32 residents and now employs 7 other caretakers for the children. Although the pay is nothing special, you believe that it is crucial to assist these children and care for their daily needs. Since you have been involved with Jacob’s Ladder since the opening of the site, you have served as the supervising caretaker; advising new caretakers and staff in proper ways to deal with the children.

You have heard speculation that MSC plans on housing as many residents as quickly as possible over the next 2 months and are worried that the staff will be unable to properly care for all the children. You have heard promises of outside groups assisting with the development of the site but have seen too many promises in your time working for MSC. You know from past experience that the common trend tends to be that groups promise to help but rarely provide any tangible results.

**Advice for interacting with others:**

Over the past year, you have seen 3 different groups visit Jacob’s Ladder. All three of the groups were from the United States and each promised to help the site. Most of these promises however were left as just words, and you never saw practical results. Therefore, you are very hesitant about help from outside people. When talking with such people, you are somewhat reluctant about sharing information. You feel much more comfortable talking with other Jamaicans and people in your community.
Jacob’s Ladder Gatekeeper

Primary Concerns:

• Supporting family
• Keeping Jacob’s Ladder secure

Your Knowledge of the Situation:

Although security for public buildings in the United States is often minimal, Jamaican’s have many people that function as security guards. Nearly every building has a small guard house with a gate. Sometimes visitors sign in, At other places, the guard will simply lift the gate and let allow the visitor to pass. This is a part of the Jamaican culture.

Jacob’s Ladder hired you soon after residents began moving into the site. You’ve seen lots of growth since then. While tending the gates, you have also taken notice of almost all the people coming and going from the site. Many volunteer groups have come into the site and given their labor. These people have done some fabulous things for the site. About a year ago, a group came that built a small shade portico for the residents to sit under. Everybody has really enjoyed the benefits of this simple gift.

You are confused why your bosses at Mustard Seed would feel the need to keep paying for college trained thinkers, when you feel that volunteer groups like the one that built the shade pavilions did a great job. Over the years, you’ve also seen many groups come and go through the site that have never actually done anything. Hopefully Jack and the Father can get what they need to help the children.

Advice for interacting with others:

Try to persuade Jack to only accept help from volunteer groups. Everything else is too expensive.
Primary Concerns:

- Caring for Residents at Jerusalem!
- Improving the lives of the handicapped
- Planning for Jacob’s Ladder before the site gets to be too big, unorganized, and too far along to change.

Your Knowledge of the Situation:

10 years ago, you began working with Mustard Seed Communities. It all started with a one week service trip to the island when you were in the youth group at your church. The plight of the children with disabilities, and the mission of Mustard Seed, to care for them, enthralled you, and after graduation you moved to Jamaica to work full time with MSC.

You have been working with Jerusalem! one of the largest MSC sites in all of Jamaica. Jacob’s Ladder was originally modeled off of this site. Jerusalem! was the first site that used cottage style housing for a large percentage of the residents. You feel that the community built through this atmosphere of care is very important for the healing of the residents.

You hope that anything built or operated on the site is easy to use and maintain. You’ve seen difficult things to manage fall by the wayside before like the fish ponds at Jerusalem! that never quite worked. They were supposed to provide a constant source of fish for the community. The fish never multiplied in the pond, resulting in continually decreasing yields.

You’ve heard many of the Mustard Seed leaders talking about alternative energy for the Jacob’s Ladder site. You are concerned that this is setting the entire site up to similar failures as those of Jerusalem’s fish program.

Advice for interacting with others:

Talk to Matt Moran, and explain your concern about utilizing alternative energy technologies within the final solution. You should also make sure to meet the caretaker from Jacob’s Ladder.
Engineer A - Jamaican Engineering Firm

*Primary Concerns:*

- Creating a proposal for the community development project taking place at Jacob’s Ladder which addresses the primary concerns for the community.
- Identifying key informants and material to best identify the problem.

*Your Knowledge of the Situation:*

You work for an engineering firm based in Kingston, the capital of Jamaica. Your company was recently approached for the first time by Mustard Seed Communities (MSC) to assist in a new community development project taking place in Haddon, roughly 2.5 hours northwest of Kingston. Having grown up in Jamaica, you know that MSC is a respectable organization which strives to care for the handicapped of Jamaica and are therefore very excited to help on this project.

Your engineering firm works primarily on large-scale city development projects in Kingston and as a result are well connected with government officials and local business leaders. MSC is also a well-connected organization and has many ties with influential members of Kingston. Your task is to assess the existing Jacob’s Ladder community and develop a proposal which will identify what projects and efforts should be focused on for future development. Next week your boss has lined up a project meeting with community members and participants in which you will be able to discuss the project with those involved.

For this project, you will be working with Engineer B to perform the community assessment and create a proposal for Jacob’s Ladder.
Engineer B - Jamaican Engineering Firm

Primary Concerns:

- Creating a proposal for the community development project taking place at Jacob’s Ladder which addresses the primary concerns for the community.
- Identifying key informants and material to best identify the problem.

Your Knowledge of the Situation:

You work for an engineering firm based in Kingston, the capital of Jamaica. Your company was recently approached for the first time by Mustard Seed Communities (MSC) to assist in a new community development project taking place in Haddon, roughly 2.5 hours northwest of Kingston. Having grown up in Jamaica, you know that MSC is a respectable organization which strives to care for the handicapped of Jamaica and are therefore very excited to help on this project.

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For this project, you will be working with Engineer A to perform the community assessment and create a proposal for Jacob’s Ladder.
Engineer C - Penn State Student Engineering Team

**Primary Concerns:**

- Creating a proposal for the community development project taking place at Jacob’s Ladder which addresses the primary concerns for the community.
- Identifying key informants and material to best identify the problem.

**Your Knowledge of the Situation:**

Last semester, Mustard Seed Communities (MSC) approached Penn State Engineering professors seeking help on a new community development project they were working on based in Haddon, Jamaica. You are a student at Penn State and as part of one of your classes you were assigned the MSC project. You and your classmate, being the first students to work on this project, must assess the community to determine what problems must be addressed and which issues are most important to focus on.

Having never been to Jamaica, you will first need to conduct sufficient background research on the geography, organization, and project. You have been told that Jacob’s Ladder has yet to receive electricity or communication means on site which makes it difficult to reach many of the community members. In order to assist in the project, your professor has lined up a meeting next week which will permit you to travel to Jamaica to meet with some of the community members and local participants.

For this project, you will be working with Engineer D to perform the community assessment and create a proposal for Jacob’s Ladder.
Engineer D - Penn State Student Engineering Team

Primary Concerns:

• Creating a proposal for the community development project taking place at Jacob’s Ladder which addresses the primary concerns for the community.
• Identifying key informants and material to best identify the problem.

Your Knowledge of the Situation:

Last semester, Mustard Seed Communities (MSC) approached Penn State Engineering professors seeking help on a new community development project they were working on based in Haddon, Jamaica. You are a student at Penn State and as part of one of your classes you were assigned the MSC project. You and your classmate, being the first students to work on this project, must assess the community to determine what problems must be addressed and which issues are most important to focus on.

Having never been to Jamaica, you will first need to conduct sufficient background research on the geography, organization, and project. You have been told that Jacob’s Ladder has yet to receive electricity or communication means on site which makes it difficult to reach many of the community members. In order to assist in the project, your professor has lined up a meeting next week which will permit you to travel to Jamaica to meet with some of the community members and local participants.

For this project, you will be working with Engineer C to perform the community assessment and create a proposal for Jacob’s Ladder.
Engineer E - US Engineer volunteering through Engineers Without Borders (EWB)

**Primary Concerns:**

- Creating a proposal for the community development project taking place at Jacob’s Ladder which addresses the primary concerns for the community.
- Identifying key informants and material to best identify the problem.

**Your Knowledge of the Situation:**

You work for an engineering firm based out of Philadelphia, PA specializing in wastewater and storm-water management. You have always been interested in service engineering projects and as a result have been connected with Engineers Without Borders (EWB) for the past few years.

EWB’s newest project is based in Haddon, Jamaica and is a community development project organized by Mustard Seed Communities (MSC). You have been given the task of working on the community assessment to properly identify the needs and areas of focus for the future. EWB has set aside money to allow you to travel to the site next week to perform the community assessment. You will be accompanied by a second engineer to help with the process. EWB will then use your recommendation to begin work on the design and planning for the community.

For this project, you will be working with Engineer F to perform the community assessment and create a proposal for Jacob’s Ladder.
Engineer F - US Engineer volunteering through *Engineers Without Borders (EWB)*

**Primary Concerns:**

- Creating a proposal for the community development project taking place at Jacob’s Ladder which addresses the primary concerns for the community.
- Identifying key informants and material to best identify the problem.

**Your Knowledge of the Situation:**

You work for an agricultural engineering firm based out of Lancaster, PA which works primarily with local farmers. Over the past 4 years, you have worked primarily on developing and implementing anaerobic digestors into farm systems. Although you enjoy your job, you have always desired to work on international projects and have therefore got involved with Engineers Without Borders (EWB) 2 years ago which works with multiple developing countries.

You meet once a week with other professional engineers. Your newest project is based in Haddon, Jamaica and is a community development project under the direction of Mustard Seed Communities. You have been chosen to travel to Jamaica next week to assist in a community assessment to determine the needs and issues which must be addressed. You will be traveling with a second engineer whom you will assist during the week. Using the information you gather from you trip, EWB will then begin working on the design and planning for the community.

For this project, you will be working with Engineer E to perform the community assessment and create a proposal for Jacob’s Ladder.
Goals and Purpose of Activity

Initial Information and Role Descriptions to be given to Students

Teacher Information for Class Discussion

Detailed Participant Descriptions
Stakeholders Meeting Outline
Class #1, Hour 2

Those Present:
Community members, international participants, local participants, the Father

Discussion:

My name is Father Gregory Ramkissoon and I am the founder and chairperson of Mustard Seed Communities. The reason I have gathered all of you here today is to discuss the specifics and future plan for Jacob’s Ladder, the newest and largest caring facility to be undertaken by MSC yet. A few years ago, the Jamaican government passed a new law stating that children’s homes across the island can no longer care for individuals above the age of 18. Not only affecting MSC but many other caring facilities on the island as well, I began to envision a new community for these individuals in which they could live in their own homes and would still have caretakers present to assist and care for them.

After discussing the idea with the Jamaican Bauxite Institute, they donated 100 acres of mined-out bauxite land in central Jamaica in which I could use to physically build this vision. This site was soon dubbed Jacob’s Ladder and is now host to 32 residents and 7 caretakers. However, as the site grows, basic necessities have become difficult to come by; including water, food, and electricity. At the same time, there is an increasing demand to create a community for the people who can no longer stay in the children’s homes.

Due to the complexities of this problem, I have recognized the fact that Jacob’s Ladder will require special attention to ensure that the site will be able to run and adequately meet the needs of the residents in the future. For this reason, MSC has approached the following three separate engineering teams and asked for assistance in designing the future plan of the site:

• Jamaican Engineering Firm located in Kingston
• Penn State University Student Engineering Team
• Volunteer engineers from Pennsylvannia through Engineers Without Borders

These three teams will each be working in Jamaica next week to perform a community assessment of Jacob’s Ladder and to gather information pertinent to their design. I have given the engineers all of your contact information so they will be able to get ahold of you if they need further information.

Next week, we will be holding a Project Meeting in which all of you will be present and will have the chance to formally voice your concerns and interests with the future project. I would ask that all of you be able to voice your opinion for 2-3 0minutes on your concerns and interests for the project. I have provided each of you with a more
detailed description of your role on ANGEL which will help you properly voice your concerns and views at the Project Meeting.

The engineers will be present and will have the chance to introduce themselves to you as well. After the meeting, the engineers will begin their interviewing process and ask to meet with many of you.
Those Present:

Engineers, the Father

Discussion:

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MSC is an organization that specializes in caring for handicapped children, however with a project the size of Jacob’s Ladder, we will need outside help and expertise in assuring the proper development of the site. For this reason, I have contacted all of you and am asking for your help designing future plans for the site. Each team will bring a unique perspective to the project and will therefore bring new views on solving the problems.

Next week I have scheduled a Project Meeting which will include all of you as well as some community members, international and local participants. Here you will be able to hear the direct concerns and views of those present and will have a chance to introduce yourself. I’m asking that each engineering team would come prepared to provide a brief description (2-3 minutes) of your experience and purpose for traveling to Jamaica and sitting in on the meeting.

I have gathered together a few electronic resources relevant to the site which you will each be able to access on ANGEL. To best prepare yourself, please look over that information before the Project Meeting. There is also further information describing your specific roles which will be found on ANGEL.
Following the *Project Meeting*, you will have roughly 1 hour to perform interviews with those present at the meeting. You will be working in your teams to gather relevant information and views. Using the results from the interviews and electronic data, you will then have one more week to put together a proposal of your vision for the site. This proposal will then be presented to the stakeholders present at the *Project Meeting*. 
Project Meeting Outline
Class #2, Hour 1

Those Present:
Community members, international participants, local participants, engineers, the Father

Discussion:

I’m glad that we were able to get everyone here together to discuss the possibilities about the development of our newest community, Jacob’s Ladder. I have brought together today members of the community, interested local and international business men, government officials, and organizers, and the engineers that are going to help us develop potential solutions to the current problems.

Before I open the floor up to all of you to share your concerns and views, I’d like to brief everyone briefly on why we are here and what we are trying to accomplish over the next week.

As many of you know, a few years ago we were told that individuals older than 18 were no longer able to stay in the current facilities because they were no longer considered children. Wanting to still provide a home for these individuals, Mustard Seed began working with the Jamaican government to create a community solely for those no longer to stay in the current facilities, including individuals from other organizations as well. Around this time, the Jamaican Bauxite Institute kindly donated 102 acres of an abandoned bauxite mine to Mustard Seed for the purpose of creating this village.

We soon set to work to develop a plan and began the construction of the first 20 homes which are currently on site. We have also begun the construction of a chapel and administration building. The chapel is envisioned to be the central focus of the site and is the point in which we hope to build the rest of the site around.

After a few months into the project, we began to see the need for outside help, and this is when we started contacting local contractors and consultants to offer their expertise. It was at this point that we began to envision something larger. Recognizing the fact that Jacob’s Ladder would soon require more money and resources than we were able to provide, we decided to source additional help. This is when we contacted the three engineering groups which are joining us today.

Their job is to help us design Jacob’s Ladder in such a way that will be sustainable, economically feasible, and most importantly, appropriate for the children. Our desire is that Jacob’s Ladder will be a site which will be able to grow their own food, generate their own power, and collect their own water. This project has the potential to be an excellent role model for similar organizations around the world in how to create sustainable communities.

Teacher Information for Class Discussion

Foundations of Community Service Engineering - EDSGN 352
The reason that I have brought all of you together today is because you each provide a unique view at the site. In a few seconds I’m going to open up the platform for all of you to share your thoughts and then the engineers will come up and introduce themselves to everyone and share their background. Afterwards, the engineers will most likely want to gather some further information from all of you and will be conducting interviews. Next week we will meet together once again and the engineers will deliver their proposals.
Goals and Purpose of Activity

Initial Information and Role Descriptions to be given to Students

Teacher Information for Class Discussion

Detailed Participant Descriptions
Engineer A - Jamaican Engineering Firm

Prior Projects:

• August 1999: Consulting for the design of the Kingston Harbor Bridge.
• January 2000: Design and implementation of HVAC system for the new Ministry of Water facility.
• April 2000: Designed and patented new retrofitting system for solar water heaters to residential roofs.
• April 2001: Worked on planning of new city development project located in southern Jamaica. Project involved construction of a new sports stadium.
• January 2003: Consulting for Kingston Airport redesign.
• June 2004: Design and planning of improved public transportation for Kingston.

Connections:

• A peer of yours from the University of Technology eventually became a professor of Civil Engineering at CASE University and has recently been working on developing an Agricultural Engineering program in conjunction with the University of Technology.
• Your father works for the Rural Agricultural Development Association in Kingston and specializes in rainwater harvesting design as well as proper irrigation techniques for small farmers.

Relationship to Mustard Seed Communities:

• Your family is Catholic and your mother insisted growing up that the entire family attend church together. The Mustard Seed site Sophie’s Place was just down the road from your church so your church was actively involved with MSC. Every now and then your Sunday School would visit the site to play with the residents. One Christmas a group from your church went to Sophie’s Place and made Christmas cards and sang Christmas carols with the residents. Based from the smiles on all of the children’s faces, you were convinced that this was one of theirs (and yours) best Christmases.

To best prepare yourself for next week’s meeting, you may want to familiarize yourself with the following information. Use these websites to obtain the necessary background information.

http://www.mustardseed.com/
http://en.wikipedia.org/wiki/Jamaica
Engineer B - Jamaican Engineering Firm

Prior Projects:

- August 1999: Consulting for the design of the Kingston Harbor Bridge.
- January 2000: Design and implementation of HVAC system for the new Ministry of Water facility.
- April 2000: Designed and patented new retrofitting system for solar water heaters to residential roofs.
- April 2001: Worked on planning of new city development project located in southern Jamaica. Project involved construction of a new sports stadium.
- June 2004: Design and planning of improved public transportation for Kingston.

Connections:

- You grew up on the other side of the island just outside of Ocho Rios. Ocho Rios is the tourism capital of Jamaica and is where many of the cruise ships docks and hotels are located. Your ex-girlfriend’s father happens to be the owner of one of the larger hotel chains in the region. You manage to keep in touch with their family whenever you travel back to your home town.
- You studied at the University of North Carolina and met some dude…

Relationship to Mustard Seed Communities:

- Growing up in Jamaica, you have always heard of the projects and activities that MSC has been involved with.

To best prepare yourself for next week’s meeting, you may want to familiarize yourself with the following information. Use these websites to obtain the necessary background information.

  http://www.mustardseed.com/
  http://en.wikipedia.org/wiki/Jamaica
Engineer C - Penn State Student Engineering Team

Out of all the roles in this activity, your and your partner’s role require the least amount of acting. For this community assessment, you are to use whatever experience and knowledge you currently have which may help you interact with the community. You can use any class work, personal experience and intuition to help you collect information and create a final proposal. To better prepare yourself for next week’s meeting, you should familiarize yourself with the following websites:

http://www.mustardseed.com/
http://en.wikipedia.org/wiki/Jamaica
Engineer D - Penn State Student Engineering Team

Out of all the roles in this activity, your and your partner’s role require the least amount of acting. For this community assessment, you are to use whatever experience and knowledge you currently have which may help you interact with the community. You can use any class work, personal experience and intuition to help you collect information and create a final proposal. To better prepare yourself for next week’s meeting, you should familiarize yourself with the following websites:

http://www.mustardseed.com/
http://en.wikipedia.org/wiki/Jamaica
Engineer E - US Engineer volunteering through *Engineers Without Borders (EWB)*

**Prior Projects:**

- December 2004: Consulting advice for construction of shopping center addition.
- February 2005: Study on effects of pollution levels within Delaware River after completion of development project.

**Personal Experience:**

You attended Rice University and received a degree in Civil Engineering. Towards the end of your junior year, you began getting involved with the student chapter of Engineers Without Borders. You were involved with a project in Mali in which you focused primarily on the design of wells to be built for the village. Ever since your involvement with EWB you have been deeply interested in assisting groups who work at providing clean water to developing countries. Because your job is fairly time-consuming you mostly donate money to these organizations, however EWB recently approached you asking for assistance in mentoring a team working on the Jacob’s Ladder project.

You were excited about the project because just last year you traveled to the caribbean for a vacation with your family. You were on a cruise ship which traveled to St. John, St. Martin, and Barbados.

To prepare yourself for next week’s meeting with the community members and stakeholders, a few websites are provided which may contain information pertinent to the project.

- [http://ewb.rice.edu/pastproject.php](http://ewb.rice.edu/pastproject.php)
- [http://www.mustardseed.com/](http://www.mustardseed.com/)
Engineer F - US Engineer volunteering through Engineers Without Borders (EWB)

Prior Projects:

- July 2007: Manure Storage Tank Consulting for farmers of New York
- December 2007: Soil Conservation Plans
- April 2008: Redesign of Poultry and Beef Expansion for Lancaster, PA farmers
- May 2008: Methane Digester Research

Personal Experience:

You are a recent graduate of Cornell University with a degree in environmental engineering. During your junior year, you studied abroad in China looking at local agricultural practices and the impact globalization has had on rural farmers. Specifically, you focused on how the fishing industry has changed over the past 10 years. Since your experience in China, you have been very interested in international projects.

After obtaining your agricultural engineering job in Lancaster, you began to realize that you truly desired to work on international projects. A friend suggested that you look into Engineers Without Borders which worked on numerous projects in the developing world. You joined EWB and serve as a mentor to student teams throughout Pennsylvania.

To prepare yourself for next week’s meeting with the community members and stakeholders, a few websites are provided which may contain information pertinent to the project.

http://en.wikipedia.org/wiki/Agriculture_in_China
http://www.mustardseed.com/
http://en.wikipedia.org/wiki/Jamaica
http://en.wikipedia.org/wiki/Agricultural_engineering
Jacob’s Ladder Caretaker

Typical Daily Schedule:

6:30 - Wake up.
7:15 - Leave home and walk to main road to catch a taxi.
8:00 - Arrive on site at Jacob’s Ladder. Relieve caretakers working night shift.
8:15 - Work with residents and assist those who need help to bath and get ready for the day.
9:00 - Get breakfast from kitchen and feed to children inside the cottages.
9:45 - Take kids outside to pavilions.
9:45 - 11:45 - Entertain kids through singing.
11:45 - Get lunch from kitchen and feed children outside under pavilions.
12:30 - 16:00 - Entertain kids through singing.
16:00 - Take children back into cottages and assist them in cleaning their rooms.
17:30 - Get dinner from kitchen and feed children inside the cottages.
18:30 - Prepare kids for bed by helping them bath.
19:00 - Finish putting kids to bed.
19:00 - 20:00 - Monitor kids sleeping and help those who can’t sleep.
20:00 - A new caretaker arrives on site for the night role and you head to the main gate to call for a taxi.
20:45 - Arrive back at home.

Daily Challenges and Struggles:

- Due to the remoteness of Jacob’s Ladder, it is very difficult to get to the site from your home which is 6 miles away. Currently, the only option is to hire a taxi to drive you to and from the site. However, because the taxis know that there is no one else to pick up on the other end, they charge a much higher fee to drive all the way out to Jacob’s Ladder. As a result, you must spend ¼ of your salary on taxi fees.
- The ratio of caretakers to residents continues to widen and you fear that soon it will be too difficult to properly meet the needs of all the residents. Within the last few months, you have had to resort to bringing all the residents out to the pavilions and singing to them in order to entertain them. No longer are you able to solely focus on individual needs of the children because their are not enough caretakers.
- It can be very difficult to help the children take baths because some of them are bedridden and unable to make it to the bathroom. Therefore, you must pick these children up, who can weigh around 115 lb., and carry them into the bathroom.
- Many of the light-switches within the cottages are extremely fragile. Because their is very little to do inside the cottages, many of the children flick the light-switches violently and break them off.
Journal Entry: January 4, 2008

This morning, I woke up with the sun, and began making my rounds. It's past due for the water trucks to show up again from Moneague. The tank by the resident houses is still about 1/4 full, so it'll last for a few more days, but the tank by the kitchen is running very low. Hopefully help will come quickly. I heard from Clyde Ramkissoon and Jack Samwell in Kingston that a group of medical missionaries will be coming to the site today to work with the children. We always look forward to a group of helpers. They invigorate the workers here, and inspire us all to keep doing what we're doing.

The mechanic came yesterday to fix the car, so I'll be able to get into town again today. The old car keeps breaking, I don't know how much longer we'll be able to fix it. The road into the site is really a problem. It's filled with deep potholes that do a number on a car real quick.

We're running low on food too. I'll be going into town today, hopefully to get some day old bread from Rolly Brown down at the bakery. In general, Jamaicans are very supportive of Mustard Seed because they know we're doing good things for the kids. It's hard to keep asking for things day after day, even if it's for a good cause.

Schedule January 4, 2008:

6:00 Wake up
6:15 Prayer
7:15 Breakfast
7:30 Morning rounds
8:15 Lead singing with children in pavilions
9:30 Drive into town
10:15 Drop by Rolly Brown
12:00 Lunch
12:15 Welcome visiting medical missionaries
2:00 Tour site, and assign duties/room assignments
2:30 Help caretakers with children
5:00 Dinner with staff
5:30 Evening prayers / reading
7:15 Bed
Clyde Ramkissoon

Journal Entry: January 4, 2008

Yesterday I picked up a group of medical missionaries at the Norman Manly Airport. Since then, they’ve stayed here at My Father’s House, the Mustard Seed site in Kingston. They stayed here over night, and I’m planning to run them up to Brother Anthony at Jacob’s Ladder sometime later today. I do most of the missionary coordinating work for MSC. I also run lots of the supplies around. Between supplies and people, there’s always enough for a full van.

When I’m back at My Father’s House, Jack Samwel and I have been working on the master plan for Jacob’s Ladder. If all goes well, we’ll be able to get our goal of 500 kids in that site soon. The project has to move quickly though. I get around to all of the MSC sites, and I see firsthand how desperate we are. Almost all of our sites are at maximum capacity, and we quickly need to find places for all of the children. I would be in favor of anything that gets the children moved into the site quickest.
Alvin Murray

Additional Materials:

To familiarize yourself with the benefits of high tunnels, explore this site from the Rural Agricultural Development Authority (RADA), one of the supporting partners of the Jacob’s Ladder site. Notice the mention of Christiana Potato Growers in the article.

Darcy Williams

Additional Materials:

Use these Mustard Seed websites to learn about the Jerusalem! village:

http://www.mustardseed.com/children/jerusalem.html
Journal Entry: January 4, 2008

Today a group of international college students dropped by my office to discuss plans for future housing at Jacob’s Ladder. I worked with Father Gregory in the beginning to plan a living arrangement that gave the residents the greatest amount of freedom, and helped them to live a life filled with joy, though handicapped. We felt that a community situation helped to facilitate this because it gives residents the chance to depend on each other, and live like normal people.

The college students and Matt Moran have been pushing sustainability in all of their designs. I think this must be a result of the ever-popular green movement back in the states. The thing that they don’t realize is that there is absolutely no way we could ever afford the up front costs of an alternative energy based system. There’s money back in the states, and in Europe where these things are popular. I don’t think they’re coming to our level and thinking about what we’re going through.

All in all, their designs were ok, but it just seems like all the things they’re adding are just adding complexity and problems that we can’t fix. I’m very nervous about getting started in projects that aren’t centered around the needs for the site.
Jamaican Bauxite Institute Representative

Mustard Seed is doing many great things for the people of Jamaica. I've been to a number of their sites on the island, and the smiling faces of the children tell the stories of the amazing care they receive.

A few years ago Father Gregory came to me and requested land for the site that is now Jacob’s Ladder. At that point, I had two options for him: either an abandoned mine near Faith Pen on the main road between Kingston and Ocho Rios, or the Haddon site deep in the forested regions of the Blue mountains. In the end, I chose the Haddon site because it is hidden from the main road, and the public eye.

Father Gregory wanted to build an agriculturally based, sustainable community for 500 kids on an abandoned strip mine. The project will be a very big task, and I'm worried that they might not be able to do it. The soil on site is thin, and probably has lost much of its original fertility. If the project would fail, and they were located on the main road to Ocho Rios, every Jamaican, and every tourist to Jamaica would believe that bauxite mining operations were destroying the nation.

We've put together a small team of workers dedicated to seeing the Jacob's Ladder project through to successful completion because our reputation depends on it.