**Student Title: Gomez, Ritter OL 341 Assignment 5**

**Student Date: October 1, 2013**

**Magee Example Project OL 341 Assignment 5**

**Online Learning: OL 341 From the Ground Up for Adaptation. Center for Sustainable Development** <http://www.csd-i.org/>

**Assignment 2. What’s your theory of a solution?**

**Part 1.**

**Searching for project activities; a list of colleagues and websites that you consulted for potential activities.**

I spoke with two colleagues in Guatemala City about developing a project based upon the needs assessment.

Joaquin Evans, Guatemalan Ministry of Agriculture

Tobin Nelson, Share Guatemala

Joaquin gave me a booklet they produced about establishing vegetable gardens at schools. Tobin gave me two booklets; one on starting a garden, the other on traditional food plants in Guatemala.

I also looked through the Internet for food security, and health and hygiene sites, and I checked the Links to Dev Sites and Documents page in the course menu to the left. I found the following sources:

FAO Improving nutrition through home gardening: A training package for preparing field workers in Africa (available in English, French and Portuguese: <http://www.fao.org/docrep/003/x3996e/x3996e00.htm>

SODIS Pure Water: <http://www.sodis.ch/index_EN> ; <http://www.csd-i.org/sodis-field-notes/>

FAO A Garden for Everyone: Self Tutorial Manual: <http://www.fao.org/docrep/008/ag002e/ag002e00.htm>

FAO Family Nutrition Guide:

ftp://ftp.fao.org/docrep/fao/007/y5740e/y5740e00.pdf

UNDP Food, Water and Family Health - A Manual for Community Educators <http://whqlibdoc.who.int/hq/1994/WHO_HEP_94.2.pdf>

UNESCO Community Participation in Nutrition Education: A Training Manual

<http://unesdoc.unesco.org/images/0008/000813/081336eo.pdf>

From reading through these sources and from ideas uncovered in my meetings, I chose what I thought were the 4 best intervention/activities to address the problems and their underlying causes, and then placed them within the problem list.

**Adaptation Component:** I looked through the Internet CBA situation activities, I checked the Links to Dev Sites and Documents page in the course menu to the left, and I scanned 300 Hands-on Field Activities for CBA projects. I found the following resource:

**Agriculture and Adaptation:**

IFPRI: Are Soil and Water Conservation Technologies a Buffer Against Production Risk in the Face of Climate Change? Insights from Ethiopia.

<http://www.ifpri.org/sites/default/files/publications/rb15_17.pdf>

The position of this paper is that soil and water conservation technologies have significant impacts in reducing production risk as part of a climate proofing strategy. The results also show that one-size-fits-all recommendations are inappropriate given the differences in agroecologies and other factors. Therefore, the performance of these technologies is location and context specific. This paper also details 10 activities that can be incorporated as adaptation's into agricultural systems at risk.

From reading through these sources and from ideas uncovered in my meetings, I chose what I thought were the 2 best adaptation intervention/activities to address the adaptation problem and underlying cause, and then placed them within the problem list.

**Part 2.**

**Important:** I cut and pasted the Problem Statement from assignment One. I then annotated the Problem Statement, the Project Outline, and the Goal statement so you can see how they interrelate and are parallel to each other. Please annotate yours in exactly the same way.

**Problem Statement:**

[Problems and underlying causes] 134 families in Union Huista, El Rodeo Esquintla, Guatemala, are suffering from (1) health problems caused by no safe drinking water and lack of knowledge of health, hygiene and nutrition;(2) low income caused by climate variability (unpredictable start of rainy season and unusual dry periods), and extreme weather events have reduced crop harvests and a lack of access to alternatives in income generation; (3) poor quality of education caused by lack of educational infrastructure and low parental awareness of the importance of education for the youth. [Negative Impacts] In terms of climate change impact, (a) heavy rainfall is overfilling the septic tanks/sewage system of the community and (b) increasing occurrence of leaf rust fungus (roya) that reduce crop productivity and damage land fertility—all exacerbated by an insufficient knowledge of climate change and its near and long-term impactsThese challenges lead to (c) chronic diarrhea, respiratory illness and other health issues and to malnutrition that reduce the children’s ability (d) to attend and concentrate in school, leading to a reduction in their ability to develop and prosper as adults, and also (e) reduces the ability of adults to lead the productive, meaningful, prosperous lives they need to leave the cycle of poverty and contribute to the development of their communities. Likewise, these climate change challenges will intensify over the next 40 years; without adopting adaptation strategies the community's suffering will increase

**Part 3.**

**Project Outline:**

**Problem list combined with potential interventions/activities/solutions that we chose**

[Problem 1]. Lack of knowledge of improved agriculture practices

**Climate Smart Coffee production Practices Programme** [solution to underlying cause: lack of knowledge of improved agriculture practice]:

[Activity 1]: Surveys and interviews to collect traditional knowledge on coffee growing, changes in agricultural cycles, vulnerabilities and coping strategies

[Activity 2]: Identify expert specialist/extension agent in soil, water and coffee growing to design and facilitate participatory workshops

[Activity 3]. Community workshop on participatory mapping of water and land resources and uses, agricultural challenges and vulnerabilities

 [Activity 4]. Extension agent visits most affected farmers to identify exact CC impacts to crop production and needs of farmers to adapt to the impacts (diseases and floods)

[Activity 5]: Develop plan that combines resilient and improved agricultural techniques with traditional knowledge for an overall improvement in productivity

[Activity 6]: Design program to equitably provide agricultural tools/inputs (payments over time, government support, microcredit NGO, village bank revolving account)

[Activity 7]: Establish pilot plots demonstrating better cultivation practices

[Activity 8]: Conduct Farmer workshops on soil restoration and conservation techniques

[Activity 9]: Conduct Farmer workshops on water conservation and management techniques

[Activity 10]. Workshops on crop diversification and disease resistant crops.

[Problem 2]. Lack of access to alternatives in income generation

**Alternative Income Generation Program (Driving craftwomanship)** [Solution to underlying causes: Lack of income generation opportunities ]:

[Activity 1]. Facilitate the organization of a woman's Crafts Association

[Activity 2]. Survey local businesses/markets that buy and sell crafts in order to determine products they need on a routine basis

[Activity 2]. Survey international community members that buy crafts in order to determine their needs

[Activity 3]. Establish a market link and ask the businesses for their support in training programs and inputs craftsmen/women to manufacture the products they need

[Activity 4]. Using this input, launch training workshops on improved craftwomenship practices for these new products

**New program related to climate change that I added to outline since the community did not identify this in assignment 1**

[Problem 3]. Increasing occurrence of leaf rust fungus (roya) that reduce crop productivity and damage land fertility

**Farmer Adaptation to Roya Program** [solution to underlying cause Increasing occurrence of leaf rust fungus (roya) that reduce crop productivity and damage land fertility:]:

[Activity 1]: Surveys and interviews to collect traditional knowledge on agriculture, changes in agricultural cycles, vulnerabilities and coping strategies

[Activity 2]: Identify expert specialist/extension agent in soil, water and agriculture to design and facilitate participatory workshops

[Activity 3]. Participatory mapping and identification of local crop and buffering challenges

[Activity 4]. Farmer workshop and follow-up on early maturing and Roya resistant crops/varieties for adapting to climate variability

[Activity 5]. Farmer workshop and follow-up on buffering against the late arrival of rain and/or an early end to the rainy season

[Activity 6]: Develop plan that combines resilient and improved agricultural techniques with traditional knowledge for an overall improvement in productivity

[Activity 7]: Establish pilot plots demonstrating better cultivation practices

**Part 4.**

**Goal Statement:**

134 families in Union Huista, El Rodeo Esquintla, Guatemala, [Underlying causes to problems as if they have been solved] will benefit from (1) better health through health and hygiene program; (2) better education and (3) increased income caused through climate smart coffee production practices program andAlternative Income Generation Program (Driving craftwomanship**)** [Positive Impacts] In terms of climate change impact, through a (a) farmer adaptation to Roya program they will be able to find alternative crop production adapted to climate variability. These programs will lead to improve their (b) health condition that will enable children to (c) to attend and concentrate in school, leading to an increase in their ability to develop and prosper as adults, and also (e) enhancing the ability of adults to lead the productive, meaningful, prosperous lives they need to leave the cycle of poverty and contribute to the development of their communities.

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| Adapting to Climate Thumbnail 90 | **Adaptation.** **1.** I chose a soil and water conservation program which would fit the scope and context of my project and would help the farmers adapt to a variable climate situation.  |
| News Home 2 | **CSDi Development Community Posting.** Because my login name falls within A-F, I joined the CSDi Development Community and then I joined the Adapting to Climate Change group. I posted this on the Adapting to Climate Change group page: My Posting (<http://developmentcommunity.csd-i.org/group/adaptingtoclimatechange/forum/topics/request-for-resources-about> )Request for project design ideas on food security and adaptation to climate changeGood Morning Adapting to Climate Change Group,I am part of an online adaptation course OL 341 (http://www.csd-i.org/ol-341-adapting-climate-change/ ) where I am developing a project in the Highlands of Guatemala working with subsistence farming families that are suffering from food security problems:100 subsistence farm families in the highlands of Guatemala, in four villages of Comalapa, are suffering from reduced crop harvests due to extreme weather, an unpredictable rainy season, and extended periods of drought. This is leading to a reduction of food security, increased malnutrition, and increased poverty.I'm posting to this group today to see if any of you have found any resources that could help me in the development of my project—including links to websites or scientific papers that would help me find intervention activities that I could use in my project, or links to sites where I can download how-to field guides or manuals on implementing these activities with my community?**In exchange, I would like to share with you a link that I found:** IFPRI: Are Soil and Water Conservation Technologies a Buffer Against Production Risk in the Face of Climate Change? Insights from Ethiopia. http://www.ifpri.org/sites/default/files/publications/rb15\_17.pdf Possibly the best paper that I found this one that gets into discussions about which soil and water conservation technologies are the most appropriate and have the greatest impact in which geographic regions that they are used in -- such as areas with low rainfall versus areas with high rainfall. It gets into detail about using bunds and grass strips for containing water, waterways, shade trees, contours, the use of traditional versus improved seed, irrigation, and a combination of fertilizer, improved seed, and irrigation. Sincerely, Tim Magee |