**A Field Guide to Community Based Adaptation**

**Example of Field Assignment 5, Chapter 5**

Tim Magee

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| **Text Box 5.1**  **Course Project Example**  **Field Assignment 5. Step 1: Researching Solution-based Project Activities**  **Activity 1. Searching for project activities: a list of websites that you consulted for potential activities.**  I searched the Internet for development resources on food security, nutrition and health and hygiene sites, and I checked the Chapter 5 Resources. I found the following sources for the health, hygiene and nutrition components of my project:  Food and Agriculture Organization of the United Nations (2001) Improving Nutrition through Home Gardening. A Training Package for Preparing Field Workers in Africa. Online. Available HTTP: <http://www.fao.org/docrep/003/x3996e/x3996e00.htm> (accessed 21 April 2012).    Burgess, A. and Glasauer, P. (2004) Family Nutrition Guide, Rome: Food and Agriculture Organization of the United Nations. Online. Available HTTP: < http://www.fao.org/docrep/007/y5740e/y5740e00.HTM> (accessed 21 April 2012).  UNDP-WHO (1994) Food, Water and Family Health - A Manual for Community Educators. Online. Available HTTP: <http://www.who.int/water\_sanitation\_health/hygiene/settings/wsh9204.pdf > (accessed 21 April 2012).  These papers discuss the success of home gardens in increasing food security and food diversity, but also discuss the importance of nutritional education as a part of developing these gardens. The last paper discusses the importance of properly disinfecting water and also the importance of clean, safe water storage. I chose what I thought were the best activities to address the problems and their underlying causes, and then wrote them down beneath the problems within the problem list.  **Adaptation Component:** I searched the Internet for development resources on adaptation and on the impacts of erratic rain and drought on agricultural productivity. I also checked Chapter 5 Resources. I found the following online resources:  **Agriculture and Adaptation:**  Kato, E., Ringler, C., Yesuf, M. and Bryan, E. (2009) Are Soil and Water Conservation Technologies a Buffer Against Production Risk in the Face of Climate Change? Insights from Ethiopia, IFPRI Discussion Paper No. 871. Online. Available HTTP: <http://www.ifpri.org/sites/default/files/publications/rb15\_17.pdf > (accessed 21 April 2012).  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 activities into agricultural systems at risk.  Food and Agriculture Organization of the United Nations (2010) "Climate-Smart" Agriculture. Online. Available HTTP: <http://www.fao.org/fileadmin/user\_upload/newsroom/docs/the-hague-conference-fao-paper.pdf> (accessed 21 April 2012).  This paper discusses the formidable task of increasing agricultural production in the face of both a growing world population and negative impacts from climate change. It argues that the use of improved and conservation agricultural practices can help farmers adapt to a changing climate and at the same time provide carbon sequestration in the soil of farmers fields. These practices will increase productivity, resilience, and will enhance food security. The practices they suggest include soil and nutrient management, water harvesting, pest and disease control, resilient ecosystems, genetic resources, improved post harvest processes, conservation agriculture, and agroforestry.  From reading through these sources and from ideas uncovered in my meetings, I chose what I thought were the best adaptation programs and activities to address the adaptation problem, and then placed them within the problem list. |

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| **Text Box 5.2**  **Example of Field Assignment 5**  **Field Assignment 5. Step 2: The Program and Activity Solution List—The Finalized Project Outline.**  **Problem Statement:**  [Problems and underlying causes] (1) 300 small children from 100 families in four Guatemalan villages are frequently ill with chronic diarrhea caused by little knowledge of health and hygiene and (2) are chronically undernourished caused by little knowledge of nutrition and less than 12 months of food reserves. These families also suffer from (3) insufficient agricultural incomes from (4) reduced crop harvests and access to water due to unpredictable dates for the start and end of the rainy season, intermittent drought and erratic rainfall during the rainy season, flooding and extreme weather events—all exacerbated by a (5) lack of knowledge of climate change and its near and long-term impacts. They contribute to [Negative Impacts] (a) stunting and restrict the ability of children to (b) attend and concentrate in school. These challenges also (c) reduce 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.  **Part 3.**  **Project Outline: Problem list combined with potential interventions/activities/solutions that I chose**  **[Problem 1]. Chronic diarrhea in small children**  **Health and Hygiene Program** [Solution to underlying cause: Lack of knowledge of health and hygiene]  [Activity 1]. Hand washing workshop and follow-up  [Activity 2]. Point of use water purification system workshop and follow-up  **[Problem 2]. Chronic under-nutrition**  **Family garden and nutrition program** [Solution to underlying causes: Lack of knowledge family nutrition; Overall shortage of food and specifically for the four months preceding the corn harvest]**:**  [Activity 1]. Workshop and follow-up in family nutrition and home garden planning for nutrition  [Activity 2]. Forming beds and planting seeds workshop and follow-up  **[Problem 3]. Insufficient income from agriculture**  **Agricultural Income Generation Program** [Solution to underlying causes: Unpredictable dates for the start and end of rainy season, intermittent drought and erratic rainfall during the rainy season, flooding and extreme weather events have reduced crop harvests and access to water]:  [Activity 1]. Facilitate the organization of a community based farmer’s association  [Activity 2]. Survey local/regional businesses or markets that buy and sell agricultural produce in order to determine products they need on a routine basis  [Activity 3]. Establish a market link and ask the businesses for their support in training programs and inputs for farmers to grow the products they need  [Activity 4]. Using this input, launch training workshops on improved agricultural practices for these new crops and markets  **Program related to climate change—but also in support of traditional development challenges above**  **Climate Smart Agricultural Practices Program** [Solution to underlying causes: Unpredictable dates for the start and end of rainy season, intermittent drought and erratic rainfall during the rainy season, flooding and extreme weather events have reduced crop harvests and access to water; Overall shortage of food and specifically for the four months preceding the corn harvest]**:**  [Activity 1]: Identify expert specialist/extension agent in soil, water and agriculture to design and facilitate participatory workshops  [Activity 2]. Participatory mapping and identification of local soil, water and crop challenges  [Activity 3]. Consciousness-raising workshop on soil and water conservation and improved agricultural practices  [Activity 4]. Farmer workshop on soil restoration and conservation techniques—including composting and mulching  [Activity 5]. Farmer workshop on water conservation and management techniques—including water harvesting techniques  [Activity 6]. Farmer workshop and follow-up on early maturing and/or drought resistant crops for adapting to climate variability  **Climate Change Awareness Program** [Solution to underlying causes: A lack of knowledge of climate change and its near and long-term impacts]**:**  [Activity 1]: Community based workshop and survey to identify their knowledge of climate change and its potential near and long-term challenges  [Activity 2]: Consciousness raising workshops about climate change, its near and long-term impacts, and the need for a long-term adaptation plan  [Activity 3]. Discussion and community prioritization of developing a long-term adaptation plan as a follow-up project to this project  **Part 4.**  **Goal Statement:** This is an exact positive reflection of the Problem Statement; paste in your problem statement and simply make it positive.  300 small children from 100 families in four Guatemalan villages will be able to [Underlying causes to problems as if they have been solved] (1) enjoy better health through a health and hygiene program, and (2) improved nutrition and 12 months of food security per year through a family garden and nutrition program. These families will also (3) enjoy increased agricultural incomes through an agricultural income generation program, and (4) increased crop harvests and access to water through a climate smart agricultural practices program and through a (5) climate change awareness program. These opportunities will contribute to [Positive Impacts] (a) improved growth and development for children, (b) better school attendance and performance—and will also increase the (c) 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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| **Text Box 5.3**  **Course Project Example**  **Field Assignment 5. Step 3: Verifying Activity Effectiveness through Evidence**  **Activity 1. Researching scientific documents for evidence of the effectiveness of your project activities**  I focused on finding scientific papers on the following two of my activities to see if they had shown evidence of solving my project challenge. I searched through the Internet, and Chapter 5 Resources.  **Project Activity 1. Family gardens and nutrition**  Key words: Increasing food security and nutrition with family gardens and small animal production in development.  Iannotti, L., Cunningham, K., and Ruel, M. (2009) Improving diet quality and micronutrient nutrition: Homestead food production in Bangladesh, IFPRI. Online. Available HTTP: <<http://www.ifpri.org/sites/default/files/publications/ifpridp00928.pdf>> (accessed 21 April 2012).  English R. M., Badcock, J. C., Giay, T., Ngu, T., Waters, A-M., and Bennett, S. A. (1997) Effect of nutrition improvement project on morbidity from infectious diseases in preschool children in Vietnam: comparison with control commune, BMJ Volume 315, 1 November 1997.  Bhattacharjee, L., Phithayaphone, S., and Nandi, B. K. (2006) Home gardens key to improved nutritional well-being, Bangkok: FAO. Online. Available HTTP: <<ftp://ftp.fao.org/docrep/fao/meeting/011/ag101e/ag101e00.pdf>> (accessed 21 April 2012).  **Summary Paragraph:**  These studies show that home gardens can provide 60 percent of leafy vegetables, and between 20 percent and 50 percent of all fruits and vegetables consumed by households. Home gardening families as a rule spends less on food than non-gardening families. Improved nutrition boosts the body's immune system protecting children against disease and can reduce the number of children with diarrheal infections from a total of 18 percent of the children down to 5 percent of the children. One study showed that after six months of a vegetable garden project, the number of malnourished children decreased from 23 percent in the communities to 16 percent and the number of severely malnourished children decreased from 9.5 percent to 2 percent. The studies all emphasized that vegetable gardens needed to be combined with nutrition education so that mothers could make sure that they were growing a variety of vegetables and fruit rich in vitamins and minerals, especially vitamin A. The gardens were a good source of protein through eggs and small animal production. The studies also concluded that even a small, 25 sq. meter garden can have a positive impact on nutrition, health and increased incomes.  **Project Activity 2. Hand washing for improving children’s health.**  Key words: What works in reducing diarrhea in developing nations?  Waddington, H., Snilstveit, B., White, H. and Fewtrell, L. (2009) Water, sanitation and hygiene interventions to combat childhood diarrhoea in developing countries, 3ie. Online. Available HTTP: <http://www.3ieimpact.org/admin/pdfs2/17.pdf> (accessed 21 April 2012).  Zwane, A. P., and Kremer, M. (2007) What Works in Fighting Diarrheal Diseases in Developing Countries? A Critical Review. World Bank Research Observer 22(1): 1-24.  **Summary Paragraph:**  Randomized control studies have shown that hand washing can reduce diarrhea in children in developing nations by between 30 percent and 53 percent. Hands can pick up pathogens that cause diarrhea in the latrine, by washing hands in infected water, by touching another person’s hands, and by touching the ground where someone has tracked fecal matter. Hand washing with soap is the number one prevention against the spread of person-to-person infection. Hand washing reduces the spread of germs that cause diarrhea, respiratory illness, and skin infection.  **Conclusion**  I was lucky that scientific evidence supported the fact that two of my project activities have shown evidence of having worked in a situation similar to my community’s situation. |

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| **Text Box 5.4**  **Course Project Example**  **Field Assignment 5. Step 4: Community Ownership, Feedback, Input and Engagement**  **Activity 1. Feedback from the community**  I met with six participants of the last workshop and discussed the project with them. This particular group has been my most consistent set of contacts over the past few months as the project has been developing. On the one hand they seem to have the best grasp of the project, on the other hand they seem to have the community's interest in mind. So they're a good group and I enjoy working with them.  They seemed happy that I was pursuing the needs that they had identified and had come up with practical activities. They understood all of the activities. As I suspected, there weren't any surprises since they have seen this project slowly unfold over several months. They seem happy that I have stayed with this project for so long, and have been consistent in pushing the project forward and keeping them informed. In these meetings I try to represent myself as someone who's just temporarily in support of what they're trying to do—this is, after all, their project. |

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| **Text Box 5.5**  **Course Project Example**  **Field Assignment 5. Step 4: Assessing NGO Expertise**  **Activity 1. List of project consultants and working partners**  I had a heart-to-heart look at my project outline and realized that I wasn’t an expert in water filters nor nutrition—and even though I am an expert in home gardens, I am not 100 percent familiar with what would be appropriate to grow in Guatemala. So I listed those three things in column one.  I realized that I have a colleague who’s NGO manufactures reputable water filters and provides training for the communities as part of their service. Partnering with them would bring the expertise I need.  I have worked on projects with a number of nutritionists in Guatemala and they really know their stuff. They will know exactly what to do within the different cultures in Guatemala as well as what nutritious things are acceptable to indigenous communities. The nutritionists can not only help us choose nutritious fruits and vegetables, they can work with mothers on gaining a better understanding of family nutrition, meal planning, and cooking.  I have also worked with agronomists who have the knowledge that bridges the gap between pure nutrition and planting a family garden. They will be able to help train our field staff to lead workshops, work with us on making the final selection of crops, and keep an eye on the progress of the workshops and the growth and maintenance of the gardens.  INSERT TABLE 5.5 NEAR HERE   |  |  |  | | --- | --- | --- | | **Table 5.5. Course project example. Assessing NGO Expertise. Project consultants and working partners.** | | | | **Activity needing Expertise** | **Consultant or NGO Partner?** | **Who/Where?** | | Water Purification | NGO Water Filter Partner | Local NGO that makes, supplies and trains communities in the use of water filters | | Family Nutrition | Nutrition Consultant | In-country consultant who understands local cultures, and teaching nutrition.  I will contact a local university or the Ministry of Health. | | Home Gardens | Agricultural Consultant or the Ministry of Agriculture | The local Ministry of Agriculture will be able to introduce me to a consultant who knows the cultures, the different in-country ecosystems and appropriate plants. | |

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