

# CAMBODIA

Sustainable Agriculture & Food Security: Community Development Project



By Brian Reyes  
On behalf  
Global Service Corps

## Global Food Security and Malnutrition

Food Security is one of the most pressing issues of our time and must be tackled to stem global hunger. Food Security is a little understood topic and rarely felt issue in the developed world, including the United States. Nevertheless, the lack of Food Security is a pestilent and global health problem causing undernourishment and malnutrition in the most impoverished regions of the world.

According to the United Nations FAO (2010), Asia and the Pacific region is currently the most food insecure region in the world where approximately 578 million people (nearly two times the population of the U.S.) experience malnutrition and lack the recommended daily caloric intake (Figure 1). One of the most food insecure countries in this region is Cambodia. The country is still recovering since 1979 from the effects of a brutal genocide by the Khmer Rouge, where an attempt at agrarian/agricultural reform led to widespread famine and death. Today, approximately 22% of the population remains undernourished and approximately 31% remain under the poverty line. In addition, nearly 1 in 2 Cambodian children under the age of five are malnourished (Cambodia Food Security and Nutrition government website, 2011).

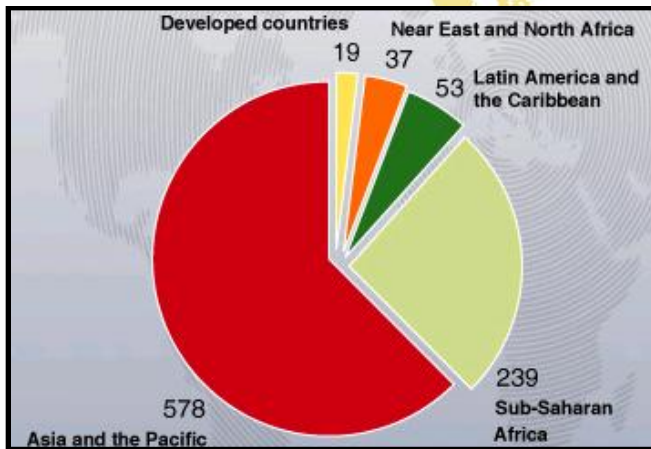


Figure 1. Undernourished countries by region in millions of people (UN FAO, 2010).

Food security and nutrition are at the forefront of discussions worldwide via the United Nations as well as Cambodian policy-makers. They understand the ramifications of a Food Insecure Cambodia and have established food security and nutrition-related goals and objectives. As part of a national strategy to combat hunger in impoverished rural areas, food security has been identified as a paramount issue to progress the country.

Below are details on how Global Service Corps and I will execute a Sustainable Agriculture program to bolster Food Security in Cambodia.

### Project Goal and Objectives

My vital work, on behalf of Global Service Corps (GSC), a San Francisco based non-profit NGO, will take me to the impoverished rural areas (Takeo Province) of Cambodia. To battle the adverse impacts of malnutrition, a Sustainable Agriculture and Food Security Pilot Project will be established via building a community educational garden and compost center.

The goal of this project is to stabilize food supply in one of the most impoverished rural areas in Cambodia through community development, education and training. GSC and I will establish this educational and training center where community leaders, schools, local teachers/educators, families and children can gather to learn about subsistence farming, crop diversification, feasible post-harvest (food preservation, food drying), and sustainable agriculture techniques such as bio-intensive agriculture (BIA) methods as described in the following section.

GSC and I will educate and inspire current and future community leaders to educate their own community, which will ideally perpetuate the basic understanding and necessity of Sustainable Agriculture and post-harvest techniques to achieve Food Security.

The following objectives and benchmarks are to be accomplished to meet this goal:

- 1) Prior to project start date, develop existing partners and identify potential partners (✓ accomplished)
- 2) Perform a needs assessment of the region
- 3) Establish a sustainable community garden (currently under construction) at the well-known and existing GSC orphanage facility in Takeo Province
- 4) Utilize the garden to educate, feed and meet the caloric demands of over 60 children and 25 adults currently living in the orphanage – many of whom are HIV/AIDS infected
- 5) Develop and coordinate with existing and potential partners currently working in nearby villages/communities
- 6) Engage adjacent villages/communities and build relationships with community leaders/farmers
- 7) Utilize the garden to conduct educational and training modules for orphanage families and children and community leaders/local farmers, which will be held year-round
- 8) Increase attendance and extend the coverage of the educational and training center throughout the region
- 9) Send service-learning volunteers monthly to aid staff in the training and education of orphaned children, families and community leaders/local farmers

## **Sustainable Agriculture & Food Security Techniques**

*GSC will draw from its 16 years experience in Kenya and Tanzania and transfer its successful community development model, Best Management Practices and techniques in Sustainable Agriculture and Food Security to Cambodia.* The following are brief descriptions of successful techniques GSC has been utilizing for the past 16 years in East Africa and could be deployed in Cambodia.

### ***Bio-intensive agriculture (BIA)***

Bio-intensive agriculture (BIA) is a method of small-scale organic farming that involves using double-dug beds, composting, intensive planting, and companion planting. GSC has been using this method for over 10 years in Tanzania. Made popular by John Jeavons of the GROW BIOINTENSIVE Mini-Farming Program for Ecology Action, BIA focuses on building reusable and healthy soil and increasing the efficiency of the land used to increase crop yields for subsistence and community farmers (for more information about BIA and GROW BIOINTENSIVE Mini-Farming, visit [www.growbiointensive.org](http://www.growbiointensive.org)).



### ***Post-Harvest Techniques: Food Drying and Improved Grain Storage***

Typical on-farm losses from field to table exceed 50% due to the lack of food preservation knowledge and methods. GSC trainings include alternative low-cost drying structures, education about appropriate drying methods, and information sessions on how to reconstitute the dried foods for preparation and use in cooking.



GSCs grain storage training helps rural communities alter their traditional grain stores and reduce their current average food losses, which exceeds 40% from field to table. Training the local community on improved grain storage techniques and tools allows them to reduce field-to-table losses.



### ***Rainwater Catchments***

In Tanzania, they are called Hafirs. In many areas of Tanzania, water shortage is a serious problem. It is impossible to grow home gardens and keep livestock alive without water. Building a hafir, a 12 m<sup>3</sup> water storage trench lined with plastic or clay, can collect enough rain water to maintain a garden or sustain livestock through the dry season. This may be a useful feasible technology in Cambodia, which experiences monsoonal downpours during the rainy season (June – October), but experiences a largely rainless, cool and dry season during the winter (November – June).



### ***Other Methods/Techniques***

Other methods and techniques may have to be developed on the ground based on a needs assessment and distinct geographic, climatic, soil and cultural make-up of the community and region.

For example, Newcastle Disease kills 70% of the chicken population in Tanzania, which has an especially significant impact on poor households that rely on chickens for food and income

generation. GSC has provided and disseminated vaccination of poultry against this life threatening disease. Chickens have lived longer, thereby, being able to produce more eggs and grow larger for eating.

Another example is a Sack Garden. In Tanzania, GSC has trained families with limited space and resources on how to build sack gardens, which provides them with a sustainable means of growing vegetables and improving their diets. Sack gardens are popular in urban and limited space gardens. They are typically made by enclosing a growth medium (soil/compost) mixed with seeds in a burlap and woven plastic bag.

## **Global Service Corps, 501(c)(3), non-profit**

Global Service Corps is a fiscally-sponsored project of Earth Island Institute. GSC has 501(c)(3) non-profit status through Earth Island Institute. Founded in 1993, Global Service Corps (GSC) is a non-profit leader in service learning and overseas volunteer programs and international internships in Tanzania, Thailand and Cambodia. Working from offices on three continents, GSC's mission is to design and implement service-learning community development programs that benefit the volunteers and positively impact the communities they serve.

### ***Africa***

Since 1994, GSC has sent over 1,000 service-learning volunteers to East/Sub-Saharan Africa. Resulting from a two three-year rural development project funded by the United States Department of Agriculture (USDA) and Canadian Foodgrains Bank, and in collaboration with Partners for Development, an international partner NGO, Global Service Corps (GSC) has expanded its work to include a package of community trainings to villages in rural areas of Tanzania. Since 2001, GSC has successfully crafted and disseminated a community development program, which centers on the education and training of the indigenous and rural (Massai) population in HIV/AIDS Prevention Education, Sustainable Agriculture and Food Security, and Subsistence Farming. In 2002, GSC was officially recognized by the Tanzanian Government as an NGO. Today, GSC has successfully build capacity in Tanzania with 37 local staff hired. GSC has sent students, mid-career professionals and retiree volunteers to Tanzania to aid in-country GSC staff to train and educate community members and leaders about these vital topics.

### ***Cambodia***

After 3 years of community development work in and sending volunteers for over two years to Cambodia, Global Service Corps (GSC) has realized the critical need for integrating a Sustainable Agriculture and Food Security module with its existing HIV/AIDS prevention education, secondary school education, and orphanage care programs. Currently, there is an ever-growing demand from the rural population and recognition by the Cambodian government to enhance Food Security and bolster agricultural resources in a sustainable manner. To meet this demand, ***GSC will draw from its 10 years experience in Kenya and Tanzania and transfer its successful community development model, Best Management Practices and techniques in Sustainable Agriculture and Food Security to Cambodia.***

GSC has offered me, Brian Reyes, a 6 month fellowship to assist in transferring, planning, developing and deploying the Sustainable Agriculture and Food Security Program as well as build long-term capacity in the region. Brian Reyes' resume as well as other key personnel's qualifications vital to making this project a reality are described below.

## **Key Personnel**

### ***Brian Reyes, Cambodia Fellow & Program Developer***

Brian received his B.S. in Soil Science with a minor in Water Science from California Polytechnic State University San Luis Obispo. After several years in the environmental services industry, Brian went on to pursue and complete a Master's of Science in Environmental Management from the University of San Francisco. During his master's program he studied a variety of environmental issues including: climate change and policy, greenhouse gas emissions/inventories, sustainable agriculture, and environmental justice. Currently, Brian has more than five years of Project Management and Planning experience. Brian is a licensed Associate Professional Soil Scientist as well as a LEED (Green Building) Accredited Professional. Brian considers himself an environmental generalist, but he shares his unique passion with Global Service Corps (GSC) to bolster the underserved international community through subsistence agriculture and food security education and training as well as community empowerment through sustainable development.

### ***Rick Lathrop, Executive Director (San Francisco/Cambodia/Thailand)***

Prior to forming GSC, Rick had experience as a high school teacher, a Navy Officer, a print advertising account representative, a non profit administrator, and an adult holistic educator and leadership trainer. Rick's graduate studies were part of the Human and Organization Development Ph.D. program at The Fielding Institute in Santa Barbara, California. At Fielding, Rick became interested in global studies, particularly in the area of sustainable development, and discovered that there were few educational programs available for adults to gain firsthand experience in the field of international development. With the assistance of a small startup grant from Fielding, he began the development of a program of short-term, "mini Peace Corps" types of experiences to provide Fielding students and others international grass roots exposure to global issues. The concept soon expanded to include participation of adults from all walks of life interested in this kind of experience. Rick continued developing the GSC program part time while completing his studies, and finished his Masters degree in Organization Development in August of 1994. He has been working full time on this endeavor since that time.

### ***Sophak Touch, In-country Program Assistant (Cambodia)***

Prior to joining GSC in 2009, Sophak completed his B.A. in English Literature at Asia Euro University. He most recently worked as an English teacher at Cambodia International Cooperation Organization and KLT Training Center at Panha Chiet University. His three years working at Youth for Peace allowed him the opportunity to complete and participate in various workshops focusing on leadership trainings, conflict management and intervention, monitoring and evaluation, and the promotion of human rights. In his spare time, Sophak enjoys playing football and tennis, reading and playing guitar. As a GSC Program Assistant, Sophak helps to facilitate volunteer placements and is an invaluable resource for our volunteers.

***Maxine Lathrop, Assistant Director (San Francisco/Tanzania)***

Following four years studying liberal arts at California State University-Fullerton, Maxine worked in the food service industry that led to a career including menu design, consulting, event planning, cooking for internationally known leaders and managing the food service operation at a wellness conference center on an organic farm. From 1992 to 2006, Maxine embarked on a property management career that included managing a 73-unit property in San Francisco. During this time she also acted as a consultant and supporter of Global Service Corps and became a full-time GSC staff member in 2007.

***Stephanie Sybert, International Special Projects Manager (San Francisco)***

After completing a B.S. degree in Public Relations at Syracuse University, Stephanie went on to get her Master's in Public Health at San Diego State University. Shortly after graduation from her Master's program, she began working as Public Relations Manager for RealAge, Inc. and publicist for Dr. Michael Roizen and Dr. Mehmet Oz. Her love for international cultures and travel led Stephanie to spend 16 months abroad teaching English and traveling. She explored 15 countries throughout Europe and Asia, including Thailand and Cambodia. Upon return to the United States, she began her work with Global Service Corps as International Special Projects Manager.

