

**S.H.I.N.E. On The Gambia: Solar Harnessing for Income, Nutrition, and Empowerment**  
**Tawuto, The Gambia**

**Overview:**

Solar dehydrating is a highly efficient way to preserve overabundant harvest for later use before it spoils. Dehydration removes moisture, decreasing the likelihood of dangerous mold, yeast, and bacteria growth, while preserving nutritional value. This project will be a proof of concept and training program based on a solar dehydrator that I have been modifying over the last four years. The dehydrator that I have identified has higher capacity and efficiency than any other home dehydrator that I have found, and can be built in a matter of hours. I used this dehydrator successfully in my own backyard in Massachusetts during summer months.

With overabundant harvest, sunshine, and the dehydrator (with no recurring cost of operation), users have what they need to increase food security, decrease food waste, generate income, and become empowered entrepreneurs. I visited The Gambia twice in the past year, partnering with Women's Initiative The Gambia (WIG), a Gambian NGO, to develop this project in a locally sensitive way. The training program will have a curriculum that includes locating food safe building materials and actual building, to marketing the prepared dried goods and re-investing. Group workshops focused on women and youth empowerment, community building, nutrition, environmental protection, and general business skills, are also integral to the training curriculum.

**Project:**

This Project for Peace will take place in Tawuto, The Gambia, from May 27-July 31, 2016. Eighteen participants who have already trained on fruit drying will participate, representing four villages from the West Coast and Central regions. The group will train together for two weeks on building, solar food processing, diverse uses of dried goods, food and equipment handling, saving and banking, and generally preparing to sustain their businesses independently. Using local materials that can easily be acquired, assuring that trainees can repair their own dehydrators, and providing a network of support are important factors to the sustainability of this project. I have identified local, food safe, building materials and a Gambian builder who is familiar with solar drying. We will work together during the first weeks, prior to training the participants, to practice building the dehydrator. He will co-lead the construction and maintenance training in Wolof, the predominant local language, to ensure understanding, and be available for follow up support through WIG.

In addition to solar dehydrating, there is a solar cooking component. Participants will learn how to use a solar box cooker to reconstitute their dehydrated goods in a locally desirable way—such as solar baked mango cakes made with coconut flour. This additional skill will help with marketing products to the local market as well as the tourist market, where dried fruits in their dehydrated state have proven more desirable than they are with locals. Upon completion of the program, each village group will receive the dehydrator that they built, tools, a locally purchased solar box cooker, and equal shares of provisions and food preparation supplies to get started.

**Project Planning:**

I began thinking of this solution during my family's own immigration process. Due to a lost passport, my husband was facing removal to his home country of The Gambia. As a young family with small children, we planned to remain together—even if that meant in The Gambia. I

began researching how I would sustain my family and generate income, which led me to solar drying. I returned to academia in 2012 after my husband's removal was reversed, and I have been building this project since.

This proof of concept phase builds on assessment and training that I have completed with Isatou Ceesay, Director of WIG, over the past year. I spent two months on the ground interacting through focus groups and candid conversations, determining that solar drying and cooking will be useful, sustainable, and profitable for participants—provided there is a comprehensive, culturally informed, training curriculum. When I returned, I enrolled in a Wolof class to study Gambian culture and language, develop an effective curriculum, and increase my ability to communicate independently.

Isatou is an incredible resource and mentor. She is a recipient of a World of Difference award from The International Alliance for Women, she was named a Climate Hero by French NGO Climate Heroes, and has a children's book, *One Plastic Bag*, written and published in the US about her work in Njau, among other awards and recognition. She is respected and trusted in her country, and sought by women's organization leaders from Senegal, Cameroon, South Africa, and Ghana as well as volunteers from the UK and US, university students, NGOs, and environmentalists. WIG's recycling and waste management projects have been repeatedly supported by the EU, Unicef, UNDP, and Concern Universal, among others. Most recently, a proposal we submitted to Engineers Without Borders USA for a water project in Njau was adopted on January 1, 2016.

**Follow Up Project Assessment:**

During the month after training I will organize weekly workshops to address problems and progress as participants begin using their equipment at home. Monthly meetings will be held by WIG after my departure to assess if participants are able to make repairs when needed, save money, keep provisions stocked, be consistent in using and maintaining the equipment, be profitable, and be willing to network and share ideas. I will remain updated by Skype and email to plan monthly trainings with Isatou based on issues that arise until I can return.

**Impact:**

Income is a benefit of solar drying and cooking, as is addressing deforestation, reducing toxic household air pollution (HAP) caused by traditional cooking methods, and increasing nutrition and food security. However, beyond these benefits lies the most enduring one—building a sustainably peaceful community across ethnicities, languages, religions, and cultural beliefs.

This project encourages peace by creating an intentional community of people chosen for their differing and diverse components of Gambian identity. Recently some ethnic cleavages have widened through political action for, and against, various traditional practices. With a shared goal, the group can become cohesive in their efforts despite individual differences, and in turn have a positive inter-ethnic, inter-cultural, experience. Bringing people together to learn from each other allows them to see beyond their Wolof, Mandinka, or Pular identity, and to instead see their potential as Gambians, united. As the Wolof proverb explains best: “Nit, nit ay garabam”—people are people's best medicine.