

Project Proposal

1. Project Information

Date: 5 November 2016

Contact person: Mark Crocker

Designation: Executive Director, New Hope Schools Society

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Partner information: New Hope Schools Society exists to relieve poverty in developing nations by teaching sustainable improvements for the basic necessities of life, including food, clean water, health, security and shelter to individuals or families who are in need; and to educate the public about poverty and effective development

2. Project Overview:

Name of project: Educating Household Health in Haiti

Country: Haiti

Region & Town: Ouest Department: Grand Goave, Ivoire and Fon Baptis

Duration: 7 months (15 May 2017 – 15 December 2017)

Number of direct beneficiaries: 3,000

Amount requested (CAD): \$99, 718.65

Project aim:

New Hope Schools Society proposes to pilot the introduction of an improved, energy efficient, smokeless stove technology in the region of Ouest Department with the goal of improving health outcomes relating to air quality and respiratory illness and to reduce the amount of wood and charcoal needed for household cooking needs.

Project strategy:

This project will embed staff in rural communities in Grand Goave, Ivoire and Fon Baptis Haiti to introduce clean and efficient smokeless stove technology using locally sourced materials. The introduction of this technology will be accompanied with educational activities for the entire community focusing on the treatment and prevention of respiratory illnesses and the impacts of and mitigation strategies for deforestation. Youths elected by their communities will be trained to build the smokeless stoves, providing these individuals with an incoming generating skill.

3. Project Narrative

a. Background/Problem statement:¹

The nation of Haiti is the poorest country in the western hemisphere and faces ongoing issues of political instability, economic depression, natural disasters, and poor health outcomes. Out of a population of 10.5 million people, an estimated 9.5 million Haitians are affected by household air pollution.² Of the total disease burden in the nation, 24% is thought to be caused by environmental factors with indoor and outdoor air pollution as the second and third highest contributors, respectively.³ The Centre for Disease Control (CDC) estimates that lower respiratory infections, strongly linked to air quality,^{4,5} are the second leading cause of death in Haiti.⁶ In children under five, acute lower respiratory illnesses are the leading cause of death.⁷ A study published in 2013 found that Haitian women of childbearing age were disproportionately at risk to be adversely affected by indoor air pollution, likely due to their time spent preparing meals for their families.^{8,8}

Another pressing issue in Haiti, linked to poor air quality and adverse health outcomes, is deforestation. With approximately 90% of Haitians depend on wood or charcoal for their cooking fuel,⁹ which is traditionally done over an open fire, an estimated 12 million trees are cut each year to be used as fuel.¹⁰ The ongoing destruction of Haiti's forests leads to diminished or lost water shed capacity creating water shortages, soil erosion, decreased food production, and increased vulnerability to natural disasters.

b. Justification of proposed intervention

The introduction of more efficient and clean cook stove technology is a needed intervention in Haiti and has been attempted by other development actors, including the United States Agency for International Development (USAID). However, an audit of a recent USAID funded improved cook stove project found that one of the major barriers which kept individuals from moving from traditional cooking methods to an improved stove was the cost.¹¹ The smokeless stove technology being proposed requires little to no

¹ If we feel that we need to cite more evidence, here are some more papers to track down: The WHO has estimated that WHO (2012a) states that indoor smoke exposure is responsible for the deaths of two million people per year. This makes it the eighth most important risk factor of the burden of disease worldwide, responsible for 2.7% of this global burden (Desai, Mehta, & Smith, 2004). In fact, in developing countries with high mortality rate, indoor smoke exposure is responsible for 3.7% of the overall disease burden, making it the most lethal killer after malnutrition, unsafe sex and lack of safe water and sanitation (Bruce, Perez-Padilla, & Albalak, 2000). The recent landmark report on global disease burden, released by Lim et al. (2012), suggests these figures are underestimated, claiming 3.5 million deaths per year from household air pollution alone

² <http://cleancookstoves.org/country-profiles/102-haiti.html>

³ World Health Organization. Country profile of environmental burden of disease: Haiti.

⁴ Bruce, Nigel, Rogelio Perez-Padilla, and Rachel Albalak. "Indoor air pollution in developing countries: a major environmental and public health challenge." *Bulletin of the World Health Organization* 78.9 (2000): 1078-1092..

⁵ Po, June YT, J. Mark FitzGerald, and Chris Carlsten. "Respiratory disease associated with solid biomass fuel exposure in rural women and children: systematic review and meta-analysis." *Thorax* 66.3 (2011): 232-239.

⁶ <https://www.cdc.gov/globalhealth/countries/haiti/>

⁷ <https://oig.usaid.gov/sites/default/files/audit-reports/1-521-14-005-p.pdf>

⁸ Hubbell, Alexander M., et al. "Smoke exposure among women in Haiti: The case for improved stoves." *Global public health* 8.7 (2013): 822-830.

⁹ <https://www.usaid.gov/haiti/environment>

¹⁰ <https://oig.usaid.gov/sites/default/files/audit-reports/1-521-14-005-p.pdf>

¹¹ <https://oig.usaid.gov/sites/default/files/audit-reports/1-521-14-005-p.pdf>

outside inputs as it is made entirely from materials readily available in any community- clay, dung, sugar water, ash, and grasses. The simple molds required to make the bricks can be constructed with locally sourced wood. The design of the smokeless stove will be tested to ensure that it meets the international criteria for being both efficient and clean.

4. Project strategy and activities

The proposed project will take place in four phases.

In Phase I, project staff will receive training in Victoria, Canada on topics including materials selection, stove construction, community development models, sustainability, monitoring and evaluation processes reporting and equipment, and New Hope Schools Society organizational values for a duration of 10 days at which point they will depart for Haiti. Upon arrival in Haiti, training will continue with a focus on acquiring a working knowledge of language and culture. Project staff will spend one month with the N a Sonje Foundation in Gwo Jam, studying Creole, living with local families, constructing smokeless stoves prototypes in order to become familiar with locally available materials, and to conduct tests on smokeless stove prototypes to measure whether the stoves constructed and installed in Haiti can be considered clean and efficient.

In Phase II, project staff will move south to Grand Goave where they will remain for two months. During this phase, staff will build relationships with communities and begin intensely field testing the design of the smokeless stove and the accompanying educational materials. At the close of this phase, project staff will have determined which stove design is most appropriate to the context (bricks vs an adobe style) and will have refined their educational tools to ensure that they will be understood and well received by future communities. Ongoing testing of the efficiency and cleanliness of the smokeless stoves will continue.

In Phase III, project staff will move to rural communities in the Archahaie region. For the next three months, project staff will work with communities to build smokeless stoves and to provide accompanying education on respiratory illness and the environmental impacts of deforestation. Staff will work with selected communities to identify 20 unemployed youths to be trained in the construction of the smokeless stoves. These youths, upon completion of their training, will be given the opportunity to “earn” the molds needed for the construction of the stoves if they build stoves for two vulnerable households in their community. Vulnerable households will be identified in consultation with local leadership in each community. During this phase, ongoing monitoring and evaluation will measure indicators relating to health seeking behavior and respiratory illness and household fuel consumption.

In Phase IV, project staff will return to Canada for debriefing and to present the findings and impact of the project to donors and other interested parties.

See Annex C for detailed activity plan.

5. Project Results

a. Immediate outcomes

The proposed project will result in increased health seeking behavior relating to respiratory illness by 20% and will decrease the amount of wood fuel used by rural household utilizing the smokeless stove by 10%.

These immediate outcomes will be achieved through the installation of smokeless stoves in 360 homes and a 50% increase in knowledge amongst community members relating to the prevention, recognition and treatment of respiratory illness and the impacts/mitigation strategies for deforestation.

A potential secondary outcome of the proposed intervention relates to the creation of income generating activities. Youths trained in the construction of the smokeless stoves will be able to replicate this technology in other homes without any external support, if there is demand from other community members. In theory, this could result in increased household income for the 120 youths trained through the proposed project.

b. Development objectives

Improving health outcomes and responsible environmental stewardship are top global priorities shared by many high level development actors. The third Sustainable Development Goal (SDG), *Ensure healthy lives and promote well-being for all at all ages*¹², includes targets for the reduction of illness and death caused by infections, non-communicable diseases, and environmental hazards. The 13th SDG sets out the challenge to *Take urgent action to combat climate change and its impacts*¹³. Introducing a smokeless stove technology which will improve air quality and reduce the amount of wood fuel required for cooking will contribute to the achievement of these two global priorities. In addition to SDGs, the Global Alliance for Clean Cookstoves, a public-private initiative launched by the United Nations Foundation in 2010, has the goal of 100 million homes adopting clean cookstove technology by 2020. While the Global Alliance for Clean Cookstoves (GACC) is not presently active in Haiti, the proposed intervention aligns with the goals of the GACC.

c. Logic model

Please see Annex B for detailed logic model.

6. Project Beneficiaries

a. Beneficiary description:

This project will target 360 rural Haitian households who are using the traditional “three stone” open cooking fire technique to receive a smokeless stove. With an average of 4.4 individuals/household, an estimated 1,584 individuals will benefit directly from the smokeless stove technology. In addition, 1,146 community members will benefit from the accompanying education activities

b. Beneficiary selection:

Project staff will work with community leaders to select the youths who will be trained in the construction of smokeless stoves. At a community meeting, youths who are interested in being selected will nominate themselves and the community will vote to select 20 youths (10 male, 10 female) out of this group. Project staff will then work with community leaders to identify the most vulnerable households in the community who would benefit from a smokeless stove. Youths wishing to earn brick molds by building stoves to vulnerable individuals will be directed to households on this list.

c. Beneficiary total: Specific number of men, women, boys, girls

	Men	Women	Boys	Girls	Total
Number of individuals	1,014	1,038	475	473	3,000

¹² <https://sustainabledevelopment.un.org/sdg3>

¹³ <https://sustainabledevelopment.un.org/sdg13>

d. Inclusion of beneficiaries in project design:

In integral component in the early months of the proposed project will be to field test the smokeless stove technology and accompanying educational modules in Haitian communities before a large scale roll out of project inputs begins. Feedback from community members will determine both the style of smokeless stove to be promoted and the content and presentation of accompanying educational materials. The individuals selected to directly benefit from the smokeless stove technology will be elected through a democratic process in each community.

7. Implementation and Management of Project

a. Experience/Capabilities of primary implementing partners

Mark Crocker, executive director of NHSS, has broad experience in directing the work of international relief and development projects. Work experience includes management of projects and coaching teams in a range of sectors including food aid and food security projects of the Canadian Foodgrains bank in war-affected areas in eastern Democratic Republic of the Congo (DRC), HIV/Aids programming in Sierra Leone, OVC support in sub-Saharan Africa, Micro-credit, Disaster response in Haiti and Japan, and WASH programming in Haiti. Mr. Crocker has wide-ranging experience in mobilizing, training and deploying field staff and will provide oversight to all project components.

Keren Massey, board member, is an international public health specialist with extensive experience in international relief and development. Work experience has included direct management of emergency programming with budgets upwards of 13 million USD and developing complex, multisectoral proposals for high level donors such as the USAID and the Canadian government. Ms. Massey will provide direct support to the proposed project in the areas of behavior change communication, monitoring and evaluation, and implementation.

b. Additional partner information:

Please list all partners involved in implementation of this project:

1. Organization: Haiti ARISE

- Mailing Address: Box 85267, Albert Park PO, Calgary, AB T2A 7R7
- Street Address: #50 Rue de Taino, Thozin, Grand-Goave, Haiti WI
- Telephone: 1- 403-272-6493 (Canada), 011-509-4165-0844/ 011-509-4187-7769 (Haiti)
- Email: info@haitiarise.org (Canada) ,haiti@haitiarise.org (Haiti)
- Contact Person and Title: Marc and Lisa Honorat - founders

2. Organization: N a Sonje Foundation

- Mailing Address:
- Street Address:
- Telephone: (509) 370-292-34 (Haiti)
- Email: nasonje@gmail.com
- Contact Person and Title: Carla Bluntschli – Executive Director

c. Role of partners in project implementation

While NHSS will retain overall responsibility for the implementation, monitoring, and evaluation of activities, the successful roll out of the proposed project will also require coordination with two main local partners: the N a Sonje Foundation and Haiti ARISE. Partnerships with established local entities will contribute significantly to the successful implementation of project activities through the provision

needed logistical support but, more importantly, these agencies offer a wealth of knowledge regarding the Haitian context and have existing relationships with target communities.

The N a Sonje Foundation will provide initial support in the areas of language learning and cultural orientation for project staff upon their arrival in Haiti. The N a Sonje Foundation specializes in hosting visitors, groups, volunteers, researchers, and journalists to share in the history, language and culture of Haiti as well as connecting them with communities, groups, and organizations in order to provide tools for a meaningful, respectful and impactful visit.

In the second phase of the project, staff will base out of the Haiti ARISE compound in Grand Goave. Founded in 2000, Haiti ARISE works at the community level to improve the health and economic status of individuals. Haiti ARISE will provide necessary logistical support. Project staff will also be able to leverage existing relationships between Haiti ARISE and surrounding communities in order to intensely field test the smokeless stove technology and accompanying educational materials in mountain communities.

8. Cross-cutting Themes

a. **Sustainability**

As described previously, the smokeless stove technology will be extensively field tested in Haitian communities prior to the main roll out of activities. Ensuring that the final design of the smokeless stove is guided by the advice of community members will ensure that the technology is easily replicable without any ongoing external inputs. In addition, unemployed youth will be selected by their communities to be trained in the construction of the smokeless stoves. Youths who receive the training will be given the opportunity to “earn” a set of brick molds if they build smokeless stoves for two other households in their community who have been identified by community leaders as most vulnerable. Because the materials required to build the stoves are available locally, the youths will be able to construct additional stoves at the request of other community members. By training local youths and having these individuals instigate the roll out of the smokeless stove technology in their communities, local ownership of this initiative will be fostered.

b. **Gender Equality**

Project staff will work with community members to ensure a gender balance in the youths selected to be trained in the construction of smokeless stoves. Of the 200 youths expected to be trained, 100 will be male, and 100 will be female. Additionally, as women of childbearing age are disproportionately affected by indoor air pollution, a technology which improves indoor air quality will directly benefit the demographic most disadvantaged by poor air quality in the home.

9. Environmental Responsibility

As over 90% of Haitians use wood fuels for cooking, introducing a technology which requires less wood fuel will contribute to slowing deforestation. In addition, the materials required to build the smokeless stove are readily found in any community and their acquisition will not contribute to the degradation of the natural environment.

10. Monitoring and Evaluation

New Hope Schools Society utilized a results based management model to ensure that project activities and outputs are successfully contributing to the achievement of higher level outcomes. Project staff on the ground in Haiti will be responsible for timely and accurately data collection. Lot quality assurance

sampling will be used to measure whether the immediate outcomes of the proposed project are being achieved, specifically, whether there is a decrease in the use of wood fuels and whether there is an increase in health seeking behavior relating to respiratory illnesses. Pre and posttests among randomly selected individuals will provide data on whether the educational component of the proposed project is increasing knowledge amongst community members. Field visits and training reports will be utilized to track the number of youths and community members who receive training and education, and to record the number of smokeless stoves constructed. Members of the NHSS board will be tasked with verifying the data recorded in the field.

11. Budget

The table below summarizes the total anticipated cost of the proposed project in Canadian dollars. A full detailed budget can be found in Annex A.

Budget Summary		
1. Salaries		\$35,600
2. Non-employee Labor		\$4,900
3. Benefits		\$1,250
4. Travel & Transport		\$27,340
5. Program Equipment & Supplies		\$5,280
6. Other Direct Cost		\$18,825
Subtotal		\$93,195
7. Indirect Costs		\$6,523.65
TOTAL PROGRAM		\$99,718.65