

Project Proposal

1. Project Information

Date: 14 March 14, 2018

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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. New Hope Schools Society seeks to identify, partner with, and support local innovators to empower communities to realize their goals.

2. Project Overview:

Name of project: The Smoke-less Stove Initiative: Saving Trees and Empowering People (STEP) Project

Country: Haiti

Region & Town: Ouest and Sud Departments: Grand Goave and Les Cayes

Duration: 5 months (15 May 2018 – 15 October 2018)

Number of direct beneficiaries: 1,232

Amount requested (CAD): \$49,965.00

Project aim:

New Hope Schools Society (NHSS) proposes to pilot the introduction of an improved, energy efficient, smoke-less stove technology and companion education in the Ouest and Sud Departments of Haiti with the goal of reducing deforestation through decreasing the amount of wood and charcoal required for household cooking and to improve indoor quality through the use of a cleaner cookstove. The empowerment of women and girls is also a priority and will be achieved through engaging an equal number of male and female youths to be trained in the cookstove technology, a potential income generating activity, and through addressing an issue which disproportionately affects women – the adverse health effects of indoor air pollution.

Project strategy:

This project will embed two Canadian project interns in rural communities in Grand Goave and Les Cayes, Haiti to train 58 local youths in a clean and efficient smoke-less stove technology using locally sourced materials. These youths will provide 280 vulnerable rural Haitian households, who are using the traditional “three stone” open cooking fire technique, with an improved cookstove.

Youths who are interested in participating will nominate themselves and each community will vote to select 4 youths (2 male, 2 female) to participate. The interns will train these youths in how to construct the smoke-less stove. Additional training will cover key messages relating to respiratory illnesses and the impacts of deforestation and mitigation strategies, as well as basic training in project management and business skills like bookkeeping. As the youths build and install the stoves in vulnerable households

selected by their communities, they will also deliver messaging on health and environmental topics. The social acceptability of the stove as well as its potential market value will also be explored in order to promote stove construction as an ongoing income generating activity for the youths.

3. Project Narrative

a. Background/Problem statement:

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.¹ 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.² The Centre for Disease Control (CDC) estimates that lower respiratory infections, strongly linked to air quality,^{3,4} are the second leading cause of death in Haiti.⁵ In children under five, acute lower respiratory illnesses are the leading cause of death.⁶ 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.^{7,8}

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,⁸ which is traditionally done over an open fire, an estimated 12 million trees are cut each year to be used as fuel.⁹ 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.¹⁰ The smoke-less stove technology being proposed requires little to no outside inputs as it is made entirely from materials readily available in any community- clay, dung, sugar

¹ <http://cleancookstoves.org/country-profiles/102-haiti.html>

² World Health Organization. Country profile of environmental burden of disease: Haiti.

³ 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..

⁴ 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.

⁵ <https://www.cdc.gov/globalhealth/countries/haiti/>

⁶ <https://oig.usaid.gov/sites/default/files/audit-reports/1-521-14-005-p.pdf>

⁷ Hubbell, Alexander M., et al. "Smoke exposure among women in Haiti: The case for improved stoves." *Global public health* 8.7 (2013): 822-830.

⁸ <https://www.usaid.gov/haiti/environment>

⁹ <https://oig.usaid.gov/sites/default/files/audit-reports/1-521-14-005-p.pdf>

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

water, ash, and grasses. The simple molds required to make the bricks can be constructed with locally sourced wood.

4. Project strategy and activities

The proposed project will take place in three phases.

In Phase I, project interns will receive two weeks of training in Victoria, Canada on topics including materials selection, stove construction, community development models, monitoring and evaluation approaches, and NHSS organizational values. The interns will then depart for Haiti, where training will continue with a focus on acquiring a working knowledge of language and culture. Project interns will spend two weeks with the N a Sonje Foundation in Gwo Jam, studying Creole, living with local families, and constructing smoke-less stoves prototypes in order to become familiar with locally available materials.

In Phase II, project staff will move south to Grand Goave where they will remain for the duration of their time in Haiti. During this phase, staff will build relationships with communities and identify the 56 rural Haitian youths (28 male, 28 female) who will be trained to build the smoke-less stoves and deliver key educational messages relating to respiratory illness and deforestation. Additional training will cover small business skills like bookkeeping and basic project management concepts. Youths will be selected on a rolling basis from target communities. Interested youths will identify themselves, and their community will vote on who should participate in the program. As Phase II progresses, community members will also democratically select the 280 vulnerable households who will receive the smoke-less stoves.

The project interns will intensively mentor these youths as they begin to build and install the stoves in households and deliver educational messaging. As the youths become confident in their skills, ongoing mentoring will occur on a weekly or biweekly basis. Project staff and the youths will carry out joint monitoring and evaluation activities, which will also provide the youths with an opportunity to learn about the project life cycle and basic program management.

Monitoring and evaluation will be integral components of Phase II. More detail on the proposed approach can be found in Section 8: Monitoring and Evaluation.

In Phase III, 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 A for detailed activity plan.

5. Project Results

56 youths will be trained in the construction and implementation of the smoke-less stove approach, in key messages relating to deforestation and respiratory health, and in small business skills. Engaging in meaningful and productive work can be a positive and empowering experience. The proposed project will maximize the empowering potential of this opportunity by promoting the election of an equal number of male and female youths.

280 vulnerable households will receive smoke-less stoves and the accompanying educational inputs, for a total of 1,232 household members reached by this initiative. Increasing awareness about deforestation while delivering a feasible means of addressing the issue (utilizing a more efficient, low cost, easy to maintain cookstove) will encourage an environment conducive to positive behavior change and address some of the barriers experienced by previous cookstove initiatives in Haiti (e.g. high cost). It is anticipated that 80% of these individuals will demonstrate an average of 50% increase in knowledge relating to the impacts of and mitigation strategies for deforestation as well as the prevention, recognition and treatment of respiratory illness.

The amount of wood fuel used by rural households utilizing the smoke-less stove will reduce by a minimum of 10%. With such prevalent use of wood and charcoal for household cooking needs, even a 10% decrease in fuel consumption will be very meaningful. Improved cookstove technology will especially benefit women who, due to their homemaking responsibilities, are especially vulnerable to the impacts of indoor air pollution.

6. Project Beneficiaries

a. Beneficiary description:

In addition to building the capacity of 56 Haitian youths, this project will benefit 280 vulnerable rural Haitian households using the traditional “three stone” open cooking fire. With an average of 4.4 individuals/household, a total of 1,288 individuals will benefit directly this initiative. It is estimated that 648 project beneficiaries will be female.

b. Beneficiary selection:

Project interns will work with community leaders to select the youths who will be. At a community meeting, youths who are interested in being selected will nominate themselves and the community will vote to select an equal number of male and female youths to participate. Project interns will then work with the youths and community leaders to identify the most vulnerable households in the community who would benefit from a smoke-less stove.

c. Beneficiary total:

	Men	Women	Boys	Girls	Total
Number of individuals	444	454	195	194	1,232

d. Inclusion of beneficiaries in project design:

In November 2017, NHSS sent a team in Haiti to building prototype stoves and conduct interviews with community members to understand perceptions around smoke/health outcomes, and the barriers to adopting new stove technology. Lessons learned through these activities have shaped the proposed project design. The input of community members will be continuously sought as they provide input in to which youths should participate in the program, which households should be considered vulnerable and receive a stove, and in other program components such as exploring the possibility of smoke-less stove construction as an income generating activity.

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 strategies, and project management strategies.

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 Phase II 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.

8. Monitoring and Evaluation

NHSS utilizes 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.

In the early weeks of Phase II, the impact of the stoves on fuel consumption will be evaluated using the protocols for the Kitchen Performance Test or Controlled Cooking Test provided by the Global Alliance for Clean Cookstoves (<http://cleancookstoves.org/>). This process will allow for small modifications will be made to the design of the stove to enhance its efficiency. In parallel, the social acceptability of the stove prototype will be explored in order to promote its feasibility as an income generating activity.

Pre and posttests among randomly selected individuals will provide data on whether the educational component of the proposed project in 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 smoke-less stoves constructed. Members of the NHSS board will be tasked with verifying the data recorded in the field.

9. Cross-cutting Themes

a. Sustainability

As described previously, the smoke-less stove technology will be field tested in Haitian communities early in Phase II. Ensuring that the final design of the smoke-less stove is guided by the advice of community members will ensure that the technology is easily replicable without any ongoing external inputs and will result in a prototype that will be affordable and desirable to the larger community. Because the materials required to build the stoves are available locally, youths will be able to construct additional stoves at the request of other community members once the project has closed. By training local youths and having these individuals instigate the roll out of the smoke-less stove technology in their communities, local ownership of this initiative will be fostered.

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*¹¹, 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*¹². Introducing a smoke-

¹¹ <https://sustainabledevelopment.un.org/sdg3>

¹² <https://sustainabledevelopment.un.org/sdg13>

less 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 sustainable development priorities.

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 smoke-less stoves. Of the 56 youths expected to be trained, 28 will be male, and 28 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. In addition, it is not uncommon for the most vulnerable homes in any community to be female-headed, and as such this project may deliver additional assistance to women and children as vulnerable households receive stoves.

10. 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 smoke-less stove are readily found in any community and their acquisition will not contribute to the degradation of the natural environment.

11. Budget

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

Budget Summary	
1. Salaries	\$ 20,125
2. Benefits	\$ 930
3. Travel & Transport	\$ 17,430
4. Program Equipment & Supplies	\$ 5,270
5. Training	\$ 1,100
6. Other Direct Cost	\$ 5,110
TOTAL PROGRAM	\$ 49,965.00