Developing Ripples of Sustainability Through Community Water Projects
Dear Supporters,

Trailblazer Foundation’s efforts over the past ten years have significantly impacted thousands of lives with better water, sanitation, agriculture, education for their children, and economic opportunities. Our implementation method uses appropriate technologies and participatory practices for the greatest success. This bottom-up approach has empowered hundreds of individuals and families.

In September, the Board hired a Communications and Development Director, Tom Skeele. Tom brings 20 years of experience as a fundraising consultant, a lead development director and a grant writer. Additionally, his social media and storytelling experience enhances the organization with the skills to seek and secure longer-term financial stability.

In October, the Board of Directors held their annual Board retreat. During that retreat the Board revisited its mission statement, vision and programs to better define what we do, and committed to a 40% increase in our annual budget in order to meet the growing needs in 2016. The Board also re-established its commitment to education, pledging to construct at least one school per year.

- **Our new mission statement is:** To improve health, food security, education, and economic development in rural Cambodia in ways that are self-sustaining by the individuals and communities we serve.

- **Our renewed program areas are:** health, food security, education, and economic development. These four programs represent a well-rounded strategy for not just giving our partner communities a proverbial fish, but helping them learn how to live in ways that are self-sustaining.

Our partner villages value and trust our work, enough so, that they keep asking us to provide additional services, and new communities are asking for our help as well. Trailblazer will continue blazing a wider trail of rural community development in Cambodia, and we need your help to do so.

Trailblazer has been blessed to have the support of individuals, foundations and businesses wanting to be a catalyst for change. I wish to thank everyone who has participated in this change with us, investing your hard earned money to help resolve the issues poor and marginalized villagers face every day in rural Cambodia.

Sincerely,

Chris Coats
Health Program

In Cambodia, water-borne diseases are the greatest threat to health. Eighty percent of Cambodians live in rural areas, most of which lack access to even basic infrastructure. Almost half of those rural populations do not have access to safe drinking water, and a staggering 84% do not have access to adequate sanitation facilities.

Trailblazer’s Health program initially focuses on providing clean water to families and villages. This includes digging wells for access to water, and installing bio-sand water filters to purify it. Additionally, we work with our partner villages to build latrines, a critical step in advancing the health of our rural communities.

Clean water and latrines tie our work into a worldwide health strategy known as WASH. WASH stands for "Water, Sanitation, and Hygiene," a group of interrelated public health programs that improve health, life expectancy, student learning, gender equality, and other key benefits in developing countries. WASH is a complementary framework to Trailblazer’s focus on using water projects to advance sustainable community development as a whole.

Eighty-eight per cent of cases of diarrhea worldwide are caused by the consumption of unhealthy water, inadequate sanitation or insufficient hygiene. In Cambodia, a country of 14.8 million, there are over 9,000,000 cases of diarrhea. With 56% of post-neonatal deaths attributed, at least in part, to the onset of diarrhea it is the number one cause of death in children under 5 years of age.
To make water safe treatment is usually required. Large scale public treatment systems are scarce for much of rural Cambodia. In rural areas, a successful strategy for treating drinking water is point-of-use (POU) filtration, and bio-sand water filters are an effective low tech and affordable option as a POU filtration.

With a bio-sand water filter there is no need to boil the water after filtration to make it safe to drink. They are easy to use, save villagers’ time, money for firewood, not to mention reduces deforestation, and ultimately improve the overall health of the recipients and the environment. Because of Trailblazer’s implementation of bio-sand water filters over 100,000 people now have access to viable drinking water.

To ensure success of the project, bio-sand water filter recipients receive training in their indigenous language, Khmer, on the proper use and maintenance of the bio-sand water filter, proper filtered water storage techniques, along with basic hygiene and sanitation practices. Trailblazer trains a water filter steward to service each village so when villagers need any trouble-shooting the steward is there to help.

Finally, Trailblazer Foundation reduces diseases associated with insect bites and hook worms, by distributing mosquito netting for a family’s beds, and flip flops for their feet.
Along with clean water and reducing diseases, food security is one of the highest priorities for any human. One of the most telling indicators for a lack of development is water access, food security, nutrition, and health status of the people. Low agricultural productivity often means there is very little surplus produce available for income generation, and low income leads to poor nutrition and poor health. The combination of little to no water access, food shortage and lack of agricultural income link directly to poor health and poor nutrition conditions.

Malnutrition is a leading cause of sickness and death in Cambodia, and access to beneficial foods is the most direct route to countering this threat. An estimated 50% of underweight or malnutrition children are a result of unsafe water, inadequate sanitation or insufficient hygiene. In the hierarchy order of needs, water must be met first before one can address the next level. When there is access to water, associated developments can occur to improve livelihoods and establish sustainable commerce. Trailblazer provides accessible water for agriculture, as well as trainings in growing abundant and healthy crops.

First, we build wells that villagers can use for their agricultural pursuits. Without a nearby well, most villagers need to transport water long distances. This is time consuming, and limits how much a family can grow. Our goal is to dig a well for every 3-5 families in a rural village. Having a well resolves the issue of little or no access to water. A well gives villagers the ability to irrigate gardens, and/or create fish ponds, whereby improving their food securities, ultimately their health, as well as building their earning capacity with the sale of excess provisions. To date, we have drilled 712 wells, and counting.
Next, Trailblazer provides villagers with training on best agricultural and aquaculture practices. We test organic fertilizers, pesticides and compost, crop rotation, re-germination rates, and soil management. Our knowledge about these techniques comes from our own test plots, where we research how to grow which crops for the best yield.

With increased yields of produce for meeting their family’s needs and excess for sale, improved health and income conditions can occur. As the nutrition and health status of the community improves, villagers have more time, energy and money to invest in private enterprise. Trailblazer has witnessed once their basic needs are met, there is evidence of internally generated economic progress activity: i.e. transportation, technology and other aid involvement.

### 2015 Cost per Beneficiary

<table>
<thead>
<tr>
<th>Number of Wells Installed</th>
<th>Total Cost</th>
<th>Based on Users Per Unit</th>
<th>Cost per Person</th>
</tr>
</thead>
<tbody>
<tr>
<td>66 @ $220/ea</td>
<td>$14,520</td>
<td>66 x 18 users per Well = 1,188 users</td>
<td>$12.22</td>
</tr>
<tr>
<td>Number of Bio-Sand Water Filters Distributed</td>
<td>$33,600</td>
<td>420 x 15 users per BSF = 6,300 users</td>
<td>$5.33</td>
</tr>
</tbody>
</table>
One way to break the cycle of poverty is to give children the opportunity to go to school. In fact, Trailblazer Foundation’s first project, in 2004, was to build a school. Since then, Trailblazer has constructed six schools and two libraries. These schools have been well-received enough – by villagers and the federal government alike – that in Fall 2015, Trailblazer’s Board of Directors redoubled the organization’s commitment to school construction as one of our four major programs.

Once completed, Trailblazer signs the deed over to the appropriate government agency, which is then responsible for providing the staff, salaries, and curriculum. This is critical to ensuring that the school will be sustained over time.

Finally, Trailblazer reduces another barrier to education: transportation. We provide hundreds of bicycles to our partner villages so students can travel to school. This is particularly true of students in junior and senior high school, as not every village has one of these schools (they are often shared between villages). Without a bicycle, many students would simply drop out, because their secondary level school is just too far away.
Siem Reap province is one of two provinces in the country identified by the Cambodian Government and the World Food Program as significantly poor and food insecure. Access to water and sanitation, adequate food supply, education and economic opportunity is a challenge millions of Cambodians continue to face every day.

One of the greatest challenges to a family’s economic development is access to capital, even small amounts of funding, to start a new business or turn a craft into an income.

To address this, Trailblazer pursues two strategies. First, we help our partner villages establish a Village Fund. These are village-owned and managed microfinance programs, which enable villagers to get the capital they need to start or grow a business. To support these funds, we require villagers to make a contribution to the Fund whenever they receive our assistance in other program areas.

Village Funds loans provide an opportunity for villagers that they did not have before, to advance their livelihood and exponentially multiply success, not only through economic growth but by inspiring and motivating others to do the same. Trailblazer provides training and oversight to Village Finance Committees for the management of their Village Fund. These leaders ultimately manage the sustainability of projects without the need for ongoing international aid.

We also monitor loans by conducting routine audits and provide loan books to track savings and loan payments. Village Funds are a clear indicator of the economic health of the village as a whole and its ability to maintain economic sustainability, reducing long-term dependence upon international aid, and indirectly benefits every person in the vicinity of the village.

Second, for each product we deliver, and each training we offer, we require the recipients to “put some skin in the game.” Specifically, we ask them to pay a small fee, as an investment into the development of their family. Trailblazer Foundation does not keep this money. Instead, we direct our beneficiaries to put their contribution into their local “Village Fund” – a microloan program we helped their village establish. Loans from these Village Funds are given to support such enterprises as buying livestock or fertilizers for their crops, securing medical care, starting a small business, or purchasing a motorbike or bicycle so they can have better access to work and school. In 2015 there were 44 active loans secured from 20 village funds. The total capital amount for these village funds was $2,083 USD.

Thirdly, we offer agricultural training in five areas – soil management, horticulture, mushrooms, livestock and fish farming. As well, we have supported a local women’s development center with needed machinery and other materials. In 2016 we will be collaborating with them to develop new markets through which the center’s sewing and textile graduates to sell their wares.

Equally important is our commitment to building self-sustaining programs, which we pursue in two ways. First, we not only provide wells, water filters and other products to our rural village constituents, we also teach them how to use and maintain these products. As well, we provide a suite of skills development trainings in food security and economic development. Doing so allows us to help our constituents meet and maintain their basic needs, so we can move onto other villages and other needs.
According to a UN declaration that resulted from the World Summit on Social Development in 1995, absolute poverty is "a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to services. In Cambodia, populations living under the poverty line of US$1.25 per day is defined as the poor, essentially lacking the sufficient resources to meet their daily needs.

Many of the rural villages in Siem Reap Province had little to no access to international aid prior to Trailblazer Foundation’s arrival. The result was residents of these villages suffered a high rate of disease, illiteracy and other devastating effects of lack of water, sanitation and food. Being the first to go into villages where there were no other Non-Government Organizations (NGOs), is a true definition of "trailblazing".

Communities are identified through the existing priority development matrix standards set by local and national government protocol allowing for villagers to identify their needs. Because of Trailblazer’s reputation for keeping its commitments Trailblazer is invited to the annual Integrated District Workshops to review the lists of identified needs and sign agreements to help using a participatory model of community-based development, funding permitting.

Trailblazer provides our constituents with both the products they need (water filter, well, or latrine), and the skills development they want (horticulture, or establishing food cooperatives).

Our definition of ‘trailblazing’ goes much deeper. Our bottom-up approach gives villagers ownership and pride, and leads to permanent success in sustainable projects by ensuring villagers are invested in the successful outcome of the project. Once we arrive within an identified village we then work within the context of the Cambodian and village culture, establishing trust, fostering relationships, and supporting the village infrastructure. Because we work within the government development process our project activities can be tracked, monitored and documented by the government for inclusion in their reporting. Our effective implementation method of community-based development projects is a long-term solution to alleviating poverty and increasing the quality of life in a sustainable manner.

**Trailblazer accomplishments in 2015 include:**
Delivered 420 Bio-sand Water Filters, and re-installed 54 Bio-sand Water Filters
Conducting 4 BSF and hygiene training courses
Drilled 66 wells, and repaired one
 Constructed 62 latrines and held 1 latrine and hygiene training
Delivered 2660 boxes of PUR, providing 6,384,000 liters of clean drinking water
Delivered 20 bags of fish fingerlings for fishermen
Completed 240 meter fence around a kindergarten including the fence, gate, and school sign
Conducted 1 Oyster Mushroom Training for 20 villagers
Delivered 215 pairs of flip flops
Delivered 375 solar lanterns
Delivered 116 bicycles
Delivered 8 sewing machines to HUSK and 1 sewer near Husk community
Construction of 1 new Kindergarten school
As you can see from the Income chart, we rely on Institutions providing a substantial amount, Individuals provide nearly 20% of our funding, with a smaller percent provided by Business Supporters.

On the expenses side, 77% was used to foster projects in the field; including 39% toward our Health Program, and nearly 20% toward our Food Security Program. Development and Administration rose to 23% due to the Board of Director’s commitment to bolster program expansion increasing our annual budget 40% to meet the growing needs in 2016, requiring the hire of a Communications and Development Director.
Leadership and Staff

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Keo Vichet, Bio-Sand Water Filter Assistant
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