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Final Report
Class of 1995 Summer Service Fund

Guiding Light:
A Summer of Solar In The Philippines

Nestled in a valley three hours from Manila lay the small village of Apia in Antipolo, Philippines. At the heart of the village are two small schools, a high school and an elementary, which support a total of 307 students. The amount of students in the elementary school is double that of the high school, since many students choose not to continue studying and opt instead to work the fields with their parents. Nevertheless, thirteen dedicated teachers live in the village throughout the week, with no electricity and little communication with their loved ones, to educate the students at Apia.

A hanging bridge; just part of the daily two kilometer walk to school for many students.

Each day, the students make a five kilometer trek up into the valley through muddy roads and rainforest and across a wood and metal hanging bridge to reach the school. These are simply the conditions for a normal commute from the mountain-side, where many of the families live, to the school's campus. Arched high over the valley are power lines, giving grid-scale support to the larger city of Antipolo several kilometers away, but with no hope of ever connecting to Apia. There are too few citizens to ever make the town a profitable consumer of electricity for electricity companies to run lines down into the valley. This was the context for the summer work that I was able to accomplish with the support of the Class of 1995 Summer Service Fund.

Stiftung Solarenergie Philippines is a company that provides off-grid villages with access to renewable forms of electricity to encourage sustainable change. Under the leadership of alumni Jim Ayala, Stiftung Solarenergie Philippines has been providing solar panels and support to areas of the Philippines affected by Hurricane Yolanda and regions of the Philippines without access to power. Apia is a village with multiple possibilities for solar installations.

During the rainy season, mud is part of the commute as well.

First, we installed two We Care Solar Suitcases and solar panels to the roof of the teachers' quarters. Thirteen teachers live at Apia during the weekdays while the students commute back and forth. At the school, they cannot communicate with their loved ones. With the reliability of the solar suitcase, they now have three lights in their building – one each for the kitchen, bathroom, and bedroom – and can charge their cellphones and laptops for use both in and out of the classroom.

To get the panels into the village, we crossed rivers and rode on horseback. After arriving in the village, we fashioned our own drill bits and climbed the roof to install the panels. Hamish, a worker at Stiftung from New Zealand, is as handy as they come. Together we installed the solar system with the help of some local

Hamish, a fellow Stiftung Solarenergie employee, crossing the river with our panel, solar suitcase, Marcello (our guide) and Brownie the horse.

craftsmen. The thrilled faces of Apia's teachers and a warm lunch were our reward.

Me, on the hike into Apia with the first panel.

At Stiftung Solarenergie, one of the most important lessons I learned was that it is easy to donate, but much more difficult to make a lasting impact in a developing country. No initiative exemplifies this better than the Light for Education program that I was lucky enough to spearhead. Recently, Stiftung Solarenergie Philippines began the first renewable energy education initiative in the Philippines, known as Light for Education. The program plans to start solar libraries at schools throughout the Philippines, with a goal of 10 libraries in the next three years.

Me, Hamish, and a class of 4th graders at Apia Elementary School after a lesson in solar energy.

A solar library is a body of solar lamps that students can rent from on a weekly basis for a small fee. The fee is agreed upon by the villagers and pays for the maintenance cost of buying new lights after a few years, or in the event of a lost or broken lamp. Members of the Parent Teacher

Association at each school collect the money and the teachers run the library; during my stay at Stiftung, I piloted and launched the first two of these libraries, which are still running smoothly.

The solar library open for business!

To begin a solar library and launch it successfully, many moving parts need to be coordinated. Teachers need to be trained on how to collect and maintain the lights. Students need to be educated on solar power, the rules of the program, and how to take proper care of their new study tool. Parents, especially those that are simple farmers or mountain workers, need to understand that this light is for home-use, but must be returned to the school. It is not their property to keep, even though they get to keep it at home; this is a foreign concept in many ways. Additionally, the training needs to be done in Tagalog, since most of the parents cannot speak any English. Some parents are completely illiterate, and all of these considerations must be taken into account. Happily, during the 8th week of my internship, we were able to launch the first two solar libraries after much training and preparation. Seventy percent of the student body returned signed forms and opted to rent a light. This was a monumental showing of participation for a small, rural village, and the program has only continued to grow since then.

Thanks to the support of the Class of 1995 Summer Service Fund, I was able to take part in founding an initiative that will continue to grow. The work that I left behind in the Philippines was the start of a program that will continue to impact the lives of students in a developing nation, and I could not be more grateful for the experience. Thank you so much for your support.

Please do not hesitate to email me at ttamasi@princeton.edu about the experience.

Thank you!

Sincerely, from Princeton to the Philippines, thank you for your support!