

Biogas for Making Lives Better
Nepal
Westminster College, MO
Tenzing Dhakhwa, Nepal, Westminster College
Jack Easterly, United States of America, Westminster College
Tripti Giri, Nepal, Westminster College, Li Po Chun United World College
Utsav Malla, Nepal, Westminster College
wcproject4peace2013.blogspot.com

Biogas for Making Lives Better provided two communities, in rural Nepal, the utensils to live a more educational and environmentally sustainable life. In addition to the \$10,000 grant from the *Davis Foundation*, Biogas for Making Lives Better raised money through three separate events; two dumpling sales, and a traditional Nepali dinner on our *Westminster College* campus. The Westminster Student Government Association sponsored these three events. All proceeds, a total of \$2,000, went directly towards the budget for the construction of biogas plants, rainwater collection systems, solar panels, and the distribution of school supplies.

The greatest challenge we faced was finding time-conscious specialists who could install the biogas plants, rainwater collection systems, and solar panels. The six week time limit proved to be difficult to communicate. Due to how long the first contractor took, we were forced to hire another for the second location. Luckily, the second contractor hired, working in Kabhre, understood the urgency, and finished the project in a timely manner.

We were rather disappointed with how little project members were able to take part in the actual construction. The work was much more technical than we had originally anticipated, and with the slow performance of the first contractor, travel and communication restraints, it was difficult to coordinate when the actual construction would be taking place.

That said, we were very pleased with the interactive distribution of school supplies. Our budget was used to hire a travel van for the four project members and family volunteers of the Nepali students. Project members distributed supplies at each school, and conducted workshops on environmental sustainability. These specific areas had very little exposure to the concept.

Through our tour of the local schools, we were able to provide five hundred children school supplies, including pencils, notebooks, and crayons all inside one backpack. We hoped this would be a financially beneficial incentive for students to attend school. Saving families' money on school supplies allows the community to put their finances towards the larger goals of furthering education or maintaining adequate food supplies. The Nepali students shared inspiring testimonies of their furthered education and encouraged the students to continue to apply themselves to their school work. We hope our discussions of sustainability help to develop a generation of environmentally-minded youth.

Though the exact number of those affected would be very hard to predict. We estimate for each village 200-300 people will be impacted. Before the project the *Narayansthan Lower Secondary School* burned wood, coal, or manure for heat and cooking. This facility, like many others, did not have proper ventilation systems. Now, with the use of methane gas produced by the biogas plants, the school is a safer and more sustainable place for students and faculty. Alongside the increased safety measures, they will have the power and resources they need, through the repurposing of animal waste, to fuel the biogas plants.

Our biogas units are only one example of the community's efforts to become more sustainable. The biogas plant at the agricultural school in Pharping has bolstered their attempts at environmental conservation. Prior to the beginning of our project, they built a community building out of recycled plastic bottles. Our long-term goal coincides with their institutional purpose to train the Nepali people about the concepts of environmental responsibility and agricultural sustainability.

Along with the biogas plants, the project also incorporated some other aspects of a sustainable environment, including solar panels and rainwater harvesting. Small-scale solar panels were installed in the two locations. These are used to heat water, which would otherwise be done using energy such as firewood. Also, since the locations had sloped roofs, we could fit in rainwater collection initiative without

altering the infrastructure too much. The water is collected from these roofs into a tank that is then used for washing and cleaning purposes after natural sedimentation processes. Under the feasibility of these two places, we found that there were no water sources near enough for easy access. The water collected can also be used for drinking purposes after it is boiled and filtered. The Nepali government does not have the capabilities to supply continuous safe running water to all citizens. In these rural communities, where no running water is available, access to water can be very challenging, especially outside of the roughly 2 month long rainy season. We were very honored to provide a sustainable foundation for these communities. The project also combined necessities of biogas such as construction of compost pits. All these components completed our integrated project for healthier environment.

The entire process of this project completion has increased our awareness of the inner workings of Nepal, as well as the importance of educational advancement in these communities. Without more significant funding to install more plants, the projects' future would rely on giving sustainability talks in more schools, if possible. In addition, following up with the instructors at schools already visited, which would further any developments from this trip. While a continuation of the project will require significant funding, it definitely would be something that Making Lives Better would feel very positively about pursuing.

We believe peace is defined by people living in a community, coexisting interdependently, and living in harmony with each other. We were deeply impacted by seeing the everyday challenges these institutions faced and have determined to continue similar work in the future. Our project initiated the conversation of sustainability and left these communities with the tools needed to continue pursuing environmental conscientiousness.

"The needs of the people, and the opportunity provided to us by *Davis Projects for Peace*, has inspired us to dedicate ourselves to the betterment of others."

--Jack Easterly, Tenzing Dhakhwa, Tripti Giri, and Utsav Malla

